

Hypertext marks in L^AT_EX

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

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1 Documentation overview for hyperref

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

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

ChangeLog This file records the version history.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hyccheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\expandafter \cmd@to@cs \string \checkcommand` that is more powerful than L^AT_EX's `\expandafter \cmd@to@cs \string \CheckCommand`, because it takes `\expandafter \cmd@to@cs \string \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 `\expandafter \cmd@to@cs \string \checkpackage` is the package name without extension optionally followed by a release date.

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

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

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

`\HyC@checkPackage`

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

```

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

```

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

```

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

```

`\HyC@checklong` The definition command `\expandafter \cmd@to@cs \string \def` or `\expandafter \cmd@to@cs \string \edef` is read.

```

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

```

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

```

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

```

`\HyC@check` The macro `\expandafter \cmd@to@cs \string \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 \expandafter \cmd@to@cs \string \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 \expandafter \cmd@to@cs \string \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 \expandafter \cmd@to@cs \string \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` `\expandafter \cmd@to@cs \string \DeclareRobustCommand {\cmd}` makes the command `\expandafter \cmd@to@cs \string \cmd robust`, that then calls `\cmd_` with an space at the end of the command name, defined by `\expandafter \cmd@to@cs \string \newcommand`. Therefore the further parsing is done by `\expandafter \cmd@to@cs \string \HyC @nc@opt` or `\expandafter \cmd@to@cs \string \HyC @nc@noopt` of the `\expandafter \cmd@to@cs \string \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 `\expandafter \cmd@to@cs \string \def` or `\expandafter \cmd@to@cs \string \edef` is stored in the token register `\HyC@Tok`.
`\HyC@edef` `\expandafter \cmd@to@cs \string \def` is stored in the token register `\HyC@Tok`.

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

```

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

\HyC@checkOk The result, if the check succeeds.
              154 \def\HyC@checkOk#1{%
              155 \typeout{\space\space`\HyC@string#1' ok.}%
              156 }

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

\Hy@SetCatcodes
181 \def\Hy@SetCatcodes{%
182 \@makeother`\%
183 \@makeother\=%
184 \catcode`\$=3 %
185 \catcode`\&=4 %

```

```

186 \catcode`\^=7 %
187 \catcode`\_ =8 %
188 \@makeother\| %
189 \@makeother\:%
190 \@makeother\(%
191 \@makeother\)%
192 \@makeother\[ %
193 \@makeother\] %
194 \@makeother\/ %
195 \@makeother\! %
196 \@makeother\< %
197 \@makeother\> %
198 \@makeother\. %
199 \@makeother\;%
200 \@makeother\+ %
201 \@makeother\- %
202 \@makeother\" %
203 \@makeother\' %
204 }

```

\Hy@RestoreCatcodes

```

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

```

231 \Hy@SetCatcodes

change 2020-07-24: require newer pdftexcmds and remove fallback code for version older than 2010. change 2021-08-14: require expl3

```

232 \ifx\ExplSyntaxOn\undefined \RequirePackage{expl3}\fi
233 \RequirePackage{ltxcmds}[2010/11/12]

```

```

234 \RequirePackage{iftex}[2019/10/24]
235 \RequirePackage{pdftexcmds}[2018/09/10]

236 \RequirePackage{infwarerr}[2010/04/08]
237 \RequirePackage{keyval}[1997/11/10]
238 \RequirePackage{kvsetkeys}[2007/09/29]
239 \RequirePackage{kvdefinekeys}[2011/04/07]
240 \RequirePackage{pdfescape}[2007/11/11]
241 \RequirePackage{hycolor}
242 \RequirePackage{letltxmacro}[2008/06/13]
243 \RequirePackage{auxhook}[2009/12/14]
244 \RequirePackage{nameref}[2012/07/28]
245 \def\Hy@Error{\@PackageError{hyperref}}
246 \def\Hy@Warning{\@PackageWarning{hyperref}}
247 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
248 \def\Hy@Info{\@PackageInfo{hyperref}}
249 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
250 \def\Hy@Message#1{%
251   \GenericWarning{%
252     (hyperref)\@spaces\@spaces\@spaces\@spaces
253   }{%
254     Package hyperref Message: #1\ltx@gobble
255   }%
256 }

```

4.2 Version check

\Hy@VersionChecked

```

257 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

258 \def\Hy@VersionCheck#1{%
259   \begingroup
260   \ltx@ifundefined{ver@hyperref.sty}{%
261     \Hy@Error{%
262       This should not happen!\MessageBreak
263       Missing hyperref version%
264     }\@ehd
265   }{%
266     \ltx@ifundefined{ver@#1}{%
267       \Hy@Error{%
268         This should not happen!\MessageBreak
269         Missing version of `#1'%
270       }\@ehd
271     }{%
272       \def\x##1##2##3{%
273         \expandafter\expandafter\expandafter\Hy@@VersionCheck
274         \expandafter\expandafter\expandafter##2%
275         \csname ver@##3\endcsname##1##1\@nil
276       }%
277       \x{ }\y{hyperref.sty}%
278       \x{ }\z{#1}%
279       \ifx\y\z
280         \else

```

```

281 \edef\@{#1}%
282 \edef\b{\HyOpt@CustomDriver.def}%
283 \ifx\@b
284 \Hy@WarningNoLine{%
285 Version mismatch (custom driver)!\MessageBreak
286 * \y: hyperref.sty\MessageBreak
287 * \z: \a
288 }%
289 \else
290 \Hy@Error{%
291 Version mismatch!\MessageBreak
292 * \y: hyperref.sty\MessageBreak
293 * \z: \a
294 }\@ehd
295 \fi
296 \fi
297 }%
298 }%
299 \endgroup
300 \chardef\Hy@VersionChecked=1 %
301 }

```

\Hy@@VersionCheck

```

302 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
303 \def#1{#2 #3}%
304 }

```

4.3 Checks with regular expressions

```

305 \ltx@ifundefined{pdfmatch}{%
306 \def\Hy@Match#1#2#3#4#5{%
307 }{%
308 \def\Hy@Match#1#2#3{%
309 \begingroup
310 \edef\~{\ltx@backslashchar\string~}%
311 \edef\.\{\ltx@backslashchar.}%
312 \edef\[\{\ltx@backslashchar[% ]%
313 \edef\$\{\ltx@backslashchar$}%
314 \edef\(\{\ltx@backslashchar(%
315 \edef\)\{\ltx@backslashchar)%
316 \edef\|\{\ltx@backslashchar|}%
317 \edef\*\{\ltx@backslashchar*}%
318 \edef\+\{\ltx@backslashchar+}%
319 \edef\?\{\ltx@backslashchar?}%
320 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
321 \edef\}\{\ltx@rightbracechar}%
322 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
323 \let\ \ltx@space
324 \ifcase\pdfmatch#2{#3}{#1} %
325 \endgroup
326 \expandafter\ltx@secondoftwo
327 \or
328 \endgroup
329 \expandafter\ltx@firstoftwo

```

```

330 \else
331 \Hy@Warning{%
332 Internal error: Wrong pattern!\MessageBreak
333 --> #3 <--\MessageBreak
334 Pattern check ignored%
335 }%
336 \endgroup
337 \expandafter\ltx@firstoftwo
338 \fi
339 }%
340 }

```

4.4 Compatibility with format dumps

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

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

```

341 \@ifundefined{AfterBeginDocument}{%
342 \def\AfterBeginDocument{\AtBeginDocument}%
343 }{}%

```

`\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.

```

344 \def\Hy@AtBeginDocument{%
345 \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
346 }

```

`\Hy@AtEndOfPackage`

```

347 \def\Hy@AtEndOfPackage{%
348 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
349 }

```

`\Hy@AtBeginDocumentHook`

```

350 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

351 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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

```

352 \AtEndOfPackage{%
353 \Hy@AtEndOfPackageHook
354 \let\Hy@AtEndOfPackageHook\@undefined
355 \AfterBeginDocument{%
356 \Hy@AtBeginDocumentHook}%
357 \let\Hy@AtBeginDocumentHook\@undefined
358 }%
359 }

```

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

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

4.5 Switches

```

361 \newif\ifHy@stoppeadearly
362 \newif\ifHy@typexml
363 \newif\ifHy@activeanchor
364 \newif\ifHy@backref
365 \newif\ifHy@bookmarks
366 \newif\ifHy@bookmarksnumbered
367 \newif\ifHy@bookmarksopen
368 \newif\ifHy@breaklinks
369 \newif\ifHy@pdfcenterwindow
370 \newif\ifHy@CJKbookmarks
371 \newif\ifHy@colorlinks
372 \newif\ifHy@destlabel
373 \newif\ifHy@draft
374 \let\Hy@finaltrue\Hy@draftfalse
375 \let\Hy@finalfalse\Hy@drafttrue
376 \newif\ifHy@pdfescapeform
377 \newif\ifHy@hyperfigures
378 \newif\ifHy@pdffitwindow
379 \newif\ifHy@frenchlinks
380 \newif\ifHy@hyperfootnotes
381 \newif\ifHy@hyperindex
382 \newif\ifHy@hypertextnames
383 \newif\ifHy@implicit
384 \newif\ifHy@linktocpage
385 \newif\ifHy@localanchorname
386 \newif\ifHy@pdfmenubar
387 \newif\ifHy@naturalnames
388 \newif\ifHy@nesting
389 \newif\ifHy@pdfnewwindowset
390 \newif\ifHy@pdfnewwindow
391 \newif\ifHy@ocgcolorlinks
392 \newif\ifHy@pageanchor
393 \newif\ifHy@pdfpagelabels
394 \newif\ifHy@pdfstring
395 \newif\ifHy@plainpages
396 \newif\ifHy@psize
397 \newif\ifHy@raiselinks
398 \newif\ifHy@seminarslides
399 \newif\ifHy@setpagesize
400 \newif\ifHy@texht
401 \newif\ifHy@psdextra
402 \newif\ifHy@pdftoolbar
403 \newif\ifHy@unicode
404 \newif\ifHy@pdfusetitle
405 \newif\ifHy@verbose
406 \let\Hy@debugtrue\Hy@verbostrue
407 \let\Hy@debugfalse\Hy@verbostrue

```



```

408 \newif\ifHy@pdfwindowui
409 \newif\ifHy@pdfdisplaydoctitle
410 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

411 \Hy@backreffalse
412 \Hy@bookmarksnumberedfalse
413 \Hy@bookmarksopenfalse
414 \Hy@bookmarkstrue
415 \Hy@breaklinksfalse
416 \Hy@pdfcenterwindowfalse
417 \Hy@CJKbookmarksfalse
418 \Hy@destlabelfalse
419 \Hy@pdfescapeformfalse
420 \Hy@hyperfiguresfalse
421 \Hy@pdffitwindowfalse
422 \Hy@hyperfootnotetrue
423 \Hy@hyperindextrue
424 \Hy@hypertextnamestrue
425 \Hy@implicittrue
426 \Hy@linktocpagefalse
427 \Hy@localanchornamefalse
428 \Hy@pdfmenubartrue
429 \Hy@naturalnamesfalse
430 \Hy@nestingfalse
431 \Hy@pdfnewwindowsetfalse
432 \Hy@pdfnewwindowfalse
433 \Hy@pageanchortrue
434 \Hy@pdfpagelabelstrue
435 \Hy@pdfstringfalse
436 \Hy@plainpagesfalse
437 \Hy@raiselinksfalse
438 \Hy@setpagesizetrue
439 \Hy@texhtfalse
440 \Hy@psdextrafalse
441 \Hy@pdftoolbartrue
442 \Hy@unicodetrue
443 \ifx\kanjiskip\@undefined
444 \else
445 \ifx\forcecjktoken\@undefined
446 \Hy@unicodefalse
447 \fi
448 \fi
449 \Hy@pdfusetitlefalse
450 \Hy@verbosefalse
451 \Hy@pdfwindowuitrue
452 \Hy@pdfdisplaydoctitlefalse
453 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

`\Hy@GlobalStepCount`

```
455 \def\Hy@GlobalStepCount#1{\global\advance#1 by 1 }%
456 \newdimen\@linkdim
457 \let\Hy@driver\ltx@empty
458 \let\MaybeStopEarly\relax
459 \newcount\Hy@linkcounter
460 \newcount\Hy@pagecounter
461 \Hy@linkcounter0
462 \Hy@pagecounter0
```

5.1 Macros for recursions

```
463 \let\Hy@ReturnEnd\@empty
464 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
465 \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.

```
466 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
467 \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 `\expandafter \cmd@to@cs \string \hypercalsbp` can be used, for example, inside option values:

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

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

Example (TeX):

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

`\hypercalsbp`

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

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

Naming convention: All internal commands that are only needed by `\pdfstringdef` are prefixed with `\HyPsd@`.

6.1 Description of PDF strings

The PDF specification defines several places to hold text strings (bookmark names, document information, text annotations, etc.). The PDF strings have following properties:

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <code>ddd</code>
- Strings are stored either in `PDFDocEncoding`, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

`\MakeUppercase` and `\MakeLowercase` do not work by expansion in legacy code but if the `expl3` code is available we can handle them.

```
ppercaseUnsupportedInPdfStrings
lowercaseUnsupportedInPdfStrings
472 \ExplSyntaxOn
473 \@ifundefined{text_uppercase:n}{}
474 {
475   \def\MakeUppercaseUnsupportedInPdfStrings#1{\use:e {\text_uppercase:n {#1}}}
```

```

476 \def\MakeLowercaseUnsupportedInPdfStrings#1{\use:e {\text_lowercase:n {#1}}}
477 }
478 \ExplSyntaxOff

```

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

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

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

```

479 \def\pdfstringdef#1#2{%

```

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

```

480 \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.

```

481 \escapechar`\%

```

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

```

482 \edef\0{\string\0}%
483 \edef\1{\string\1}%
484 \edef\2{\string\2}%
485 \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.

```

486 \ifHy@unicode
487 \edef\8{\string\8}%
488 \edef\9{\string\9}%
489 \fontencoding{PU}%
490 \HyPsd@UTFviii
491 \def\ifpdfstringunicode##1##2{##1}%
492 \else
493 \fontencoding{PD1}%
494 \def\ifpdfstringunicode##1##2{##2}%
495 \fi
496 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
497 \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).

```

498 \@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).

```

499 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

500 \let\add@accent\HyPsd@add@accent

```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here. UF 29.09.2017: added a mapping for `\noboundary`, see issue #37 <https://github.com/latex3/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

501 \let\{\textbraceleft
502 \let\}\textbraceright
503 \let\\\textbackslash
504 \let\#\textnumbersign
505 \let\$\textdollar
506 \let\%\textpercent
507 \let\&\textampersand
508 % \let\~\textasciitilde
509 \let\_ \textunderscore
510 \let\P\textparagraph
511 \let\ldots\textellipsis
512 \let\dots\textellipsis
513 \ltx@ifundefined{textEncodingNoboundary}%
514 {}{\let\noboundary\textEncodingNoboundary}%

```

Newline `\expandafter \cmd@to@cs \string \newline` or `\expandafter \cmd@to@cs \string \` do not work in bookmarks, in text annotations they should expand to `\expandafter \cmd@to@cs \string \r`. In pdf strings `\expandafter \cmd@to@cs \string \` 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.

```
515 \def\{\pdfstringdefWarn\}%
516 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the \TeX logo does not work while writing to a file, the standard \TeX logos are redefined. We use the direct PU code to avoid problems if `\textepsilon` is not defined.

```
517 \def\TeX{\TeX}%
518 \def\LaTeX{\La\TeX}%
519 \def\LaTeXe{%
520   \LaTeX2%
521   \ifHy@unicode\83\265\else e\fi
522 }%
523 \def\eTeX{%
524   \ifHy@unicode\83\265\else e\fi
525   -\TeX%
526 }%
527 \def\SliTeX{\Sli\TeX}%
528 \def\MF{Metafont}%
529 \def\MP{Metapost}%
```

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

```
530 \let\fontencoding\@gobble
531 \let\fontfamily\@gobble
532 \let\fontseries\@gobble
533 \let\fontshape\@gobble
534 \let\fontsize\@gobbletwo
535 \let\selectfont\@empty
536 \let\usefont\@gobblefour
537 \let\emph\@firstofone
538 \let\textnormal\@firstofone
539 \let\textrm\@firstofone
540 \let\textsf\@firstofone
541 \let\texttt\@firstofone
542 \let\textbf\@firstofone
543 \let\textmd\@firstofone
544 \let\textit\@firstofone
545 \let\textsc\@firstofone
546 \let\textsl\@firstofone
```

```

547 \let\textup\@firstofone
548 \let\normalfont\@empty
549 \let\rmfamily\@empty
550 \let\sffamily\@empty
551 \let\ttfamily\@empty
552 \let\bfseries\@empty
553 \let\mdseries\@empty
554 \let\itshape\@empty
555 \let\scshape\@empty
556 \let\slshape\@empty
557 \let\upshape\@empty
558 \let\em\@empty
559 \let\rm\@empty
560 \let\Huge\@empty
561 \let\LARGE\@empty
562 \let\Large\@empty
563 \let\footnotesize\@empty
564 \let\huge\@empty
565 \let\large\@empty
566 \let\normalsize\@empty
567 \let\scriptsize\@empty
568 \let\small\@empty
569 \let\tiny\@empty
570 \let\mathversion\@gobble
571 \let\phantom\@gobble
572 \let\vphantom\@gobble
573 \let\hphantom\@gobble

```

Package pifont.

```

574 \let\ding\HyPsd@ding
575 \let\Cube\HyPsd@DieFace
576 %* \HyPsd@DieFace -> \epsdice (epsdice)
577 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

578 \def\begin##1{\csname##1\endcsname}%
579 \def\end##1{\csname end##1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

581 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
582 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

583 \ifHy@psdextra
584 \ifHy@unicode
585 \csname psdmapshortnames\endcsname
586 \csname psdaliasnames\endcsname

```

```

587 \fi
588 \fi

```

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

```

589 \let\foreignlanguage\@secondoftwo
590 \let\textlatin\@firstofone
591 \let\IfUndefined\language@group\@firstofone
592 \let\bbl@info\@gobble
593 \csname HyPsd@babel@\language@group\endcsname
594 }%

595 \let\@safe@activetrue\relax
596 \let\@safe@activesfalse\relax

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

```

Package german.

```

598 \let\glqq\textglqq
599 \let\grqq\textgrqq
600 \let\glq\textglq
601 \let\grq\textgrq
602 \let\flqq\textflqq
603 \let\frqq\textfrqq
604 \let\flq\textflq
605 \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}

606 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

607 \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.

```

608 \let\hspace\HyPsd@hspace

```

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

```

609 \let\label\@gobble
610 \let\index\@gobble
611 \let\glossary\@gobble
612 \let\href\HyPsd@href
613 \let\@mkboth\@gobbletwo

```


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

```
614 \let\ref\HyPsd@ref
615 \let\pageref\HyPsd@pageref
616 \let\nameref\HyPsd@nameref
617 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
618 \let\leavevmode\@empty
619 \let\mbox\@empty
```

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

```
620 \def\halign{\pdfstringdefWarn\halign\@gobble}%
621 \let\ignorespaces\HyPsd@ignorespaces
622 \let\Hy@SectionAnchorHref\@gobble
623 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
624 \HyPsd@CJKhook
```

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

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

```
625 \Hy@pdfstringtrue
626 \pdfstringdefPreHook
```

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

```
627 \HyPsd@LetUnexpandableSpace\space
628 \HyPsd@LetUnexpandableSpace\ %
629 \HyPsd@LetUnexpandableSpace~%
630 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
631 \ltx@ifundefined{@xspace}{%
632 \let\xspace\HyPsd@ITALCORR
633 }{%
634 \let\xspace\HyPsd@XSPACE
635 }%
636 \let\/\HyPsd@ITALCORR
637 \let\bgroup\/%
638 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
639 \let\discretionary\@gobbletwo
```

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

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

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

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

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

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

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

```
643 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
644 \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).

```
645 \begingroup
646 \let\GenericError\@gobblefour
647 \let\GenericWarning\@gobbletwo
648 \let\GenericInfo\@gobbletwo
```

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

```
649 \ifx\nofrenchguillemets\@undefined
650 \else
651 \nofrenchguillemets
652 \fi
```

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

```
653 \let\Hy@temp\xdef
654 \let\def\HyPsd@DefCommand
655 \let\gdef\HyPsd@DefCommand
656 \let\edef\HyPsd@DefCommand
657 \let\xdef\HyPsd@DefCommand
658 \let\futurelet\HyPsd@LetCommand
659 \let\let\HyPsd@LetCommand
660 \Hy@temp#1{#2}%
661 \endgroup
```

6.2.3 Postprocessing

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

```
662 \ifx#1\@empty
663 \else
```

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

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

1 and 2 are removed in the following and replaced by an marker for the xspace support.

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

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

```
664 \HyPsd@ProtectSpaces#1%
665 \let\HyPsd@String\@empty
666 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
667 \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.

```
668 \let\HyPsd@SPACEOPTI\relax
669 {%
670 \let\HyPsd@String\@empty
671 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
672 \global\let#1\HyPsd@String
673 }%
674 \expandafter\HyPsd@RemoveMask\expandafter
675 |\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.

```
676 \expandafter
677 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
```

```

678 \let\HyPsd@String\@empty
679 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
680 \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.

```

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

```

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

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

```

682 \iffHy@unicode
683 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
684 \HyPsd@SPACEOPTI#1%
685 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
686 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
687 {\HyPsd@SPACEOPTI\80\273}#1%
688 \else
689 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
690 \expandafter\HyPsd@Subst\expandafter{%
691 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
692 \string\273}\HyPsd@SPACEOPTI\273}#1%
693 \fi

```

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

```

694 \iffHy@unicode
695 \HyPsd@StringSubst{\)}{\80\051}#1%
696 \HyPsd@Subst){\80\051}#1%
697 \let\HyPsd@empty\relax
698 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
699 {\HyPsd@empty\80\051}#1%
700 \else
701 \HyPsd@StringSubst{\)}{\051}#1%
702 \HyPsd@Subst){\051}#1%
703 \let\HyPsd@empty\relax
704 \HyPsd@StringSubst{\051}\HyPsd@empty\string\)}#1%
705 \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`.

```

706 \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
707 \ltx@ifundefined{@xspace}{%
708 }{%
709 \let\HyPsd@xspace\relax
710 \expandafter\HyPsd@Subst\expandafter
711   {\HyPsd@XSPACE}\HyPsd@xspace#1%
712 \let\HyPsd@xspace\HyPsd@doxspace
713 }%
714 \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.

```

715 \HyPsd@Subst{---}\textemdash#1%
716 \HyPsd@Subst{--}\textendash#1%
717 % \HyPsd@Subst{fi}\textfi#1%
718 % \HyPsd@Subst{fl}\textfl#1%
719 \HyPsd@Subst{!`}\textexclamdown#1%
720 \HyPsd@Subst{?`}\textquestiondown#1%

```

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

```

721 \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.

```

722 \ifHy@unicode
723 \HyPsd@StringSubst{\textparenleft#1%
724 \HyPsd@Subst{\textparenleft#1%
725 \else
726 \HyPsd@StringSubst{\{050\}#1%
727 \HyPsd@Subst{\{050\}#1%

```

```

728     \HyPsd@StringSubst{\050}{\string\{ }#1%
729     \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.

```

730     \ifHy@unicode
731     \edef\HyPsd@SPACEOPTI{\80\040}%
732     \else
733     \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
734     \fi
735     \xdef#1{#1\@empty}%
736     \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.

```

737 \endgroup
738 \begingroup
739 \ifHy@unicode
740     \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

741     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
742     \ltx@ifundefined{StringEncodingConvertTest}{%
743     }{%
744     \EdefUnescapeString\HyPsd@temp#1%
745     \iftutex
746     \let\HyPsd@UnescapedString\HyPsd@temp
747     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
748     {utf16be}{ascii-print}{%
749     \EdefEscapeString\HyPsd@temp\HyPsd@temp
750     \global\let#1\HyPsd@temp
751     \HyPsd@EscapeTeX#1%
752     \Hy@unicodedefalse
753     }{%
754     \HyPsd@EscapeTeX#1%
755     }%
756     \else
757     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
758     {utf16be}{pdfdoc}{%
759     \EdefEscapeString\HyPsd@temp\HyPsd@temp
760     \global\let#1\HyPsd@temp
761     \HyPsd@EscapeTeX#1%
762     \Hy@unicodedefalse
763     }{%}%
764     \fi
765     }%
766     \fi
767     \fi

```

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

```
768 \pdfstringdefPostHook#1%
769 \endgroup
770 }
```

`\Hy@pdfstringdef`

```
771 \def\Hy@pdfstringdef#1#2{%
772 \pdfstringdef\Hy@gtemp{#2}%
773 \let#1\Hy@gtemp
774 }
```

6.3 Encodings

6.3.1 XeTeX

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

6.3.2 Workaround for package linguex

```
775 \@ifpackageloaded{linguex}{%
776 \let\HyLinguex@OrgB\b
777 \let\HyLinguex@OrgC\c
778 \let\HyLinguex@OrgD\d
779 \def\HyLinguex@Restore{%
780 \let\b\HyLinguex@OrgB
781 \let\c\HyLinguex@OrgC
782 \let\d\HyLinguex@OrgD
783 }%
784 \Hy@AtEndOfPackage{%
785 \pdfstringdefDisableCommands{%
786 \ltx@ifundefined{oldb}{\let\b\oldb}%
787 \ltx@ifundefined{oldc}{\let\c\oldc}%
788 \ltx@ifundefined{oldd}{\let\d\oldd}%
789 }%
790 }%
791 }{%
792 \let\HyLinguex@Restore\relax
793 }%
```

6.3.3 Catcodes saving and restoring for .def files

`\Hy@SaveCatcodeSettings`

```
794 \def\Hy@SaveCatcodeSettings#1{%
795 \expandafter\edef\csname Hy@cat@#1\endcsname{%
796 \endlinechar=\the\endlinechar\relax
797 \catcode32 \the\catcode32\relax % (space)
798 \catcode34 \the\catcode34\relax % "
799 \catcode35 \the\catcode35\relax % #
800 \catcode37 \the\catcode37\relax % (percent)
801 \catcode40 \the\catcode40\relax % (
802 \catcode41 \the\catcode41\relax % )
803 \catcode42 \the\catcode42\relax % *
```



```

804 \catcode46 \the\catcode46\relax % .
805 \catcode58 \the\catcode58\relax % :
806 \catcode60 \the\catcode60\relax % <
807 \catcode61 \the\catcode61\relax % =
808 \catcode62 \the\catcode62\relax % >
809 \catcode64 \the\catcode64\relax % @
810 \catcode91 \the\catcode91\relax % [
811 \catcode92 \the\catcode92\relax % (backslash)
812 \catcode93 \the\catcode93\relax % ]
813 \catcode123 \the\catcode123\relax % {
814 \catcode124 \the\catcode124\relax % |
815 \catcode125 \the\catcode125\relax % }
816 }%
817 \endlinechar=-1 %
818 \catcode32 10 % (space)
819 \catcode34 12 % "
820 \catcode35 6 % #
821 \catcode37 14 % (percent)
822 \catcode40 12 % (
823 \catcode41 12 % )
824 \catcode42 12 % *
825 \catcode46 12 % .
826 \catcode58 12 % :
827 \catcode60 12 % <
828 \catcode61 12 % =
829 \catcode62 12 % >
830 \catcode91 12 % [
831 \catcode92 0 % (backslash)
832 \catcode93 12 % ]
833 \catcode123 1 % {
834 \catcode124 12 % |
835 \catcode125 2 % }
836 \makeatletter
837 }

```

\Hy@RestoreCatcodeSettings

```

838 \def\Hy@RestoreCatcodeSettings#1{%
839 \csname Hy@cat@#1\endcsname
840 \expandafter\let\csname Hy@cat@#1\endcsname\relax
841 }

```

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.

```

842 \@ifundefined{T@PD1}{%
843 \Hy@SaveCatcodeSettings{pd1}%
844 \input{pd1enc.def}%

```

```

845 \Hy@RestoreCatcodeSettings{pd1}%
846 \HyLinguex@Restore
847 }{}
848 \DeclareFontFamily{PD1}{pdf}{}
849 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
850 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

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

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

```

851 \def\HyPsd@LoadUnicode{%
852   \@ifundefined{T@PU}{}%
853   \Hy@SaveCatcodeSettings{pu}%
854   \input{puenc.def}%
855   \Hy@RestoreCatcodeSettings{pu}%
856   \HyLinguex@Restore
857 }{}%
858 \DeclareFontFamily{PU}{pdf}{}%
859 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
860 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
861 \HyPsd@LoadExtra
862 \let\HyPsd@LoadUnicode\relax
863 }

```

`\HyPsd@LoadExtra`

```

864 \def\HyPsd@LoadExtra{%
865   \ifHy@psdextra
866     \ltx@iffileloaded{puenc.def}{}%
867     \ltx@iffileloaded{puenc-greekbasic.def}{}{}%
868     \Hy@SaveCatcodeSettings{pu}%
869     \input{puenc-greekbasic.def}%
870     \Hy@RestoreCatcodeSettings{pu}%
871     \Hy@SaveCatcodeSettings{psdextra}%
872     \input{psdextra.def}%
873     \Hy@RestoreCatcodeSettings{psdextra}%
874     \let\HyPsd@LoadExtra\relax
875   }{}%
876   \fi
877 }

```

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 ar-

guments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

878 \def\texorpdfstring{%
879   \ifHy@pdfstring
880     \expandafter\@secondoftwo
881   \else
882     \expandafter\@firstoftwo
883   \fi
884 }
```

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`.

```

885 \@ifundefined{pdfstringdefPreHook}{%
886   \let\pdfstringdefPreHook\@empty
887 }{}
888 \@ifundefined{pdfstringdefPostHook}{%
889   \let\pdfstringdefPostHook\@gobble
890 }{}
```

`\pdfstringdefDisableCommands` In `\expandafter \cmd@to@cs \string \pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\expandafter \cmd@to@cs \string \pdfstringdef`, is expanded. So replacements for problematic macros can be given. The code in `\expandafter \cmd@to@cs \string \pdfstringdefPreHook` should not be replaced perhaps by an `\expandafter \cmd@to@cs \string \renewcommand`, because a previous meaning gets lost.

Macro `\expandafter \cmd@to@cs \string \pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\expandafter \cmd@to@cs \string \pdfstringdefPreHook`, e.g.:

```

\pdfstringdefDisableCommands{%
  \let~\textasciitilde
  \def\url{\pdfstringdefWarn\url}%
  \let\textcolor\@gobble
}%
```

In the argument of `\expandafter \cmd@to@cs \string \pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful L^AT_EX commands like `\expandafter \cmd@to@cs \string \@gobble` or `\expandafter \cmd@to@cs \string \@firstofone`.

```

891 \def\pdfstringdefDisableCommands{%
892   \begingroup
893     \makeatletter
894     \HyPsd@DisableCommands
895 }
```

`\HyPsd@DisableCommands`

```

896 \long\def\HyPsd@DisableCommands#1{%
897   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
898   \endgroup
899 }
```

`\pdfstringdefWarn` The purpose of `\expandafter \cmd@to@cs \string \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. `\expandafter \cmd@to@cs \string \noexpand` protects the probably undefined one during the first expansion step. Then `\expandafter \cmd@to@cs \string \HyPsd @CheckCatcodes` can detect the not allowed token, `\expandafter \cmd@to@cs \string \HyPsd @Catcode-Warning` prints a warning message, after `\expandafter \cmd@to@cs \string \HyPsd @RemovePrefix` has removed the prefix.

`\expandafter \cmd@to@cs \string \pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\expandafter \cmd@to@cs \string \HyPsd @ifnextchar` or `\expandafter \cmd@to@cs \string \HyPsd @protected@testopt`.

```
900 \def\pdfstringdefWarn#1{%
901   \expandafter\noexpand\csname<>- \string#1\endcsname
902 }
```

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.

```
903 \begingroup
904   \catcode0=12 %
905   \def\x{\endgroup
906     \def\HyPsd@ignorespaces{%
907       \romannumeral\expandafter`\expandafter^^@%
908       \romannumeral`^^@%
909     }%
910   }%
911 \x
```

6.5.2 Babel languages

change 2020-10-10: moved language patches to its own file as a first step toward removing them completely.

```
912 \newif\ifHy@next
913 \</package>
```

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

```
\pdfstringdefDisableCommands{%
\languageshorthands\system}%
}
```

As consequence the shorthands were shown in the bookmarks, and required a hyperref patch. In version 3.48 babel removed this unneeded code and so the patch could be removed.

Nothing to do for english. change 2020/07/16: removed patch for french. No longer needed. change 2020/07/21: removed patches for german, ngerman. Will be done by the language package. <https://github.com/jspitz/babel-german/issues/4> change 2020/10/10: removed patches for danish, dutch, finnish, portugues, swedish, usorbian, slovene see <https://github.com/latex3/babel/issues/84> change 2020/10/10: removed patch for macedonian, ukrainian; maintainers notified. change 2020/10/11: removed patch for russian, has been merged into babel-russian see <https://github.com/kia999/babel-russian/pull/3> change 2021/02/04: removed patches for greek numerals, code is now in babel-greek. spanish: Nested quoting environments are not supported (<<, >>). change 2021/07/19: removed patches for spanish, code is now in babel-spanish.

914 <*package>

6.5.3 CJK patch

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

\HyPsd@CJKhook

```
916 \def\HyPsd@CJKhook{%
917   \ltx@ifpackageloaded{CJK}{%
918     \let\CJK@kern\relax
919     \let\CJKkern\relax
920     \let\CJK@CJK\relax
921     \ifHy@CJKbookmarks
922       \HyPsd@CJKhook@bookmarks
923     \fi
924     \HyPsd@CJKhook@unicode
925   }{}%
926 }
```

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 ($\geq 0x40$).

```
927 \begingroup
928 \catcode"7F=\active
929 \toks@{%
930   \let\CJK@ignorespaces\empty
931   \def\CJK@char#1{\@gobbletwo}%
932   \let\CJK@charx\@gobblefour
933   \let\CJK@punctchar\@gobblefour
934   \def\CJK@punctcharx#1{\@gobblefour}%
935   \catcode"7F=\active
936   \def^^7f#1^^7f#2^^7f{%
937     \string #1\HyPsd@DecimalToOctal{#2}%
```

```

938 }%
939 % ... ?
940 \ifHy@unicode
941   \def\Hy@cjkpu{\80}%
942   \else
943     \let\Hy@cjkpu\@empty
944   \fi
945   \HyPsd@CJKActiveChars
946 }%
947 \count@=127 %
948 \@whilenum\count@<255 \do{%
949   \advance\count@ by 1 %
950   \lccode\~=\count@
951   \lowercase{%
952     \toks@\expandafter{\the\toks@ ~}%
953   }%
954 }%
955 \toks@\expandafter{\the\toks@ !}%
956 \xdef\HyPsd@CJKhook@bookmarks{%
957   \the\toks@
958 }%
959 \endgroup

```

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

```

960 \def\HyPsd@CJKActiveChars#1{%
961   \ifx#1!%
962     \let\HyPsd@CJKActiveChars\relax
963   \else
964     \edef#1{\noexpand\Hy@cjkpu\string#1}%
965   \fi
966   \HyPsd@CJKActiveChars
967 }

```

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

```

968 \def\HyPsd@DecimalToOctal#1{%
969   \ifcase #1 %
970     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
971     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
972     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
973     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
974     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
975     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
976     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
977     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
978     \or @\or A\or B\or C\or D\or E\or F\or G%
979     \or H\or I\or J\or K\or L\or M\or N\or O%
980     \or P\or Q\or R\or S\or T\or U\or V\or W%
981     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
982     \or \140\or a\or b\or c\or d\or e\or f\or g%
983     \or h\or i\or j\or k\or l\or m\or n\or o%
984     \or p\or q\or r\or s\or t\or u\or v\or w%
985     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%

```

```

986 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
987 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
988 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
989 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
990 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
991 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
992 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
993 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
994 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
995 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
996 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
997 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
998 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
999 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1000 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1001 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1002 \fi
1003 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1004 \def\HyPsd@CJKhook@unicode{%
1005 \let\Unicode\HyPsd@CJK@Unicode
1006 \let\CJKnumber\HyPsd@CJKnumber
1007 \let\CJKdigits\HyPsd@CJKdigits
1008 }

```

\HyPsd@CJK@Unicode

```

1009 \def\HyPsd@CJK@Unicode#1#2{%
1010 \ifnum#1<256 %
1011 \HyPsd@DecimalToOctalFirst{#1}%
1012 \HyPsd@DecimalToOctalSecond{#2}%
1013 \else
1014 \933%
1015 \expandafter\expandafter\expandafter\HyPsd@HighA
1016 \intcalcDiv{#1}{4}!%
1017 \933%
1018 \ifcase\intcalcMod{#1}{4} %
1019 4\or 5\or 6\or 7%
1020 \fi
1021 \HyPsd@DecimalToOctalSecond{#2}%
1022 \fi
1023 }

1024 \def\HyPsd@HighA#1!{%
1025 \expandafter\expandafter\expandafter\HyPsd@HighB
1026 \IntCalcDiv#1!64!!%
1027 \expandafter\expandafter\expandafter\HyPsd@HighD
1028 \IntCalcMod#1!64!!%
1029 }

1030 \def\HyPsd@HighB#1!{%
1031 \expandafter\expandafter\expandafter\HyPsd@HighC
1032 \IntCalcDec#1!!%

```

```

1033 }
1034 \def\HyPsd@HighC#1!{%
1035   \IntCalcDiv#1!4!%
1036   \@backslashchar
1037   \IntCalcMod#1!4!%
1038 }
1039 \def\HyPsd@HighD#1!{%
1040   \ifcase\IntCalcDiv#1!8! %
1041     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1042   \fi
1043   \ifcase\IntCalcMod#1!8! %
1044     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1045   \fi
1046 }
1047 \def\HyPsd@DecimalToOctalFirst#1{%
1048   \9%
1049   \ifcase#1 %
1050     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1051     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1052     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1053     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1054     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1055     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1056     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1057     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1058     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1059     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1060     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1061     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1062     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1063     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1064     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1065     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1066     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1067     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1068     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1069     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1070     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1071     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1072     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1073     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1074     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1075     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1076     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1077     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1078     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1079     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1080     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1081     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1082   \fi
1083 }
1084 \def\HyPsd@DecimalToOctalSecond#1{%
1085   \ifcase #1 %
1086     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%

```



```

1087 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1088 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1089 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1090 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1091 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1092 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1093 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1094 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1095 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1096 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1097 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1098 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1099 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1100 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1101 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1102 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1103 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1104 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1105 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1106 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1107 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1108 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1109 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1110 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1111 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1112 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1113 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1114 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1115 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1116 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1117 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1118 \fi
1119 }

1120 \def\HyPsd@CJKnumber#1{%
1121 \ifnum#1<\z@
1122 \CJK@minus
1123 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1124 \else
1125 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1126 \fi
1127 }

1128 \def\HyPsd@@CJKnumber#1{%
1129 \ifcase#1 %
1130 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1131 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1132 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1133 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1134 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1135 \CJK@ten\CJK@nine
1136 \else
1137 \ifnum#1<10000 %
1138 \HyPsd@CJKnumberFour#1!\@empty{20}%
1139 \@empty
1140 \else

```

```

1141 \ifnum#1<100000000 %
1142 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1143 \IntCalcDiv#1!10000!%
1144 !\{#20}%
1145 \CJK@tenthousand
1146 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1147 \IntCalcMod#1!10000!%
1148 !\CJK@zero{10}%
1149 \@empty
1150 \else
1151 \expandafter\HyPsd@CJKnumberLarge
1152 \number\IntCalcDiv#1!100000000!\expandafter!%
1153 \number\IntCalcMod#1!100000000!!%
1154 \fi
1155 \fi
1156 \fi
1157 }
1158 \def\HyPsd@CJKnumberLarge#1!#2!{%
1159 \HyPsd@CJKnumberFour#1!{\#20}%
1160 \CJK@hundredmillion
1161 \ifnum#2=\z@
1162 \else
1163 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1164 \IntCalcDiv#2!10000!%
1165 !\CJK@zero{10}%
1166 \CJK@tenthousand
1167 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1168 \IntCalcMod#2!10000!%
1169 !\CJK@zero{10}%
1170 \@empty
1171 \fi
1172 }
1173 \def\HyPsd@CJKnumberFour#1!#2#3{%
1174 \ifnum#1=\z@
1175 \expandafter\@gobble
1176 \else
1177 \ifnum#1<1000 %
1178 #2%
1179 \HyPsd@CJKnumberThree#1!{\#3}%
1180 \else
1181 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1182 \CJK@thousand
1183 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1184 \IntCalcMod#1!1000!%
1185 !\CJK@zero{10}%
1186 \fi
1187 \fi
1188 }
1189 \def\HyPsd@CJKnumberThree#1!#2#3{%
1190 \ifnum#1=\z@
1191 \else
1192 \ifnum#1<100 %
1193 #2%
1194 \HyPsd@CJKnumberTwo#1!{\#3}%

```

```

1195 \else
1196 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1197 \CJK@hundred
1198 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1199 \IntCalcMod#1!100!%
1200 !\CJK@zero{10}%
1201 \fi
1202 \fi
1203 }
1204 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1205 \ifnum#1=\z@
1206 \else
1207 \ifnum#1<#3 %
1208 #2%
1209 \HyPsd@@CJKnumber{#1}%
1210 \else
1211 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1212 \CJK@ten
1213 \ifnum\IntCalcMod#1!10!=\z@
1214 \else
1215 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1216 \fi
1217 \fi
1218 \fi
1219 }
1220 \def\HyPsd@CJKdigits#1{%
1221 \ifx*#1\relax
1222 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1223 \else
1224 \HyPsd@@CJKdigits\CJK@null{#1}%
1225 \fi
1226 }
1227 \def\HyPsd@@CJKdigits#1#2{%
1228 \ifx\#2\%
1229 \else
1230 \HyPsd@@@CJKdigits#1#2\@nil
1231 \fi
1232 }%
1233 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1234 \HyPsd@CJKdigit#1{#2}%
1235 \ifx\#3\%
1236 \expandafter\@gobble
1237 \else
1238 \expandafter\@firstofone
1239 \fi
1240 {%
1241 \HyPsd@@@CJKdigits#1#3\@nil
1242 }%
1243 }
1244 \def\HyPsd@CJKdigit#1#2{%
1245 \ifcase#2 %
1246 #1\or
1247 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1248 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine

```

```

1249 \fi
1250 }

```

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 L^AT_EX 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 (L^AT_EX 2_ε release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typeset-protect` (`=\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}

1251 \def\HyPsd@inmathwarn#1#2{%
1252   \ifx#2\expandafter
1253     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1254       \HyPsd@GLYPHERR
1255       \expandafter\@gobble\string#1%
1256       >%

```

```

1257 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1258 \else
1259 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1260 \fi
1261 \else
1262 \expandafter#2%
1263 \fi
1264 }
1265 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1266 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1267 \def\HyPsd@add@accent#1#2{%
1268 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1269 #2%
1270 }%

```

6.5.7 Unexpandable spaces

\HyPsd@LetUnexpandableSpace In `\expandafter \cmd@to@cs \string \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 `\expandafter \cmd@to@cs \string \HyPsd @CheckCatcodes`.

```

1271 \def\HyPsd@LetUnexpandableSpace#1{%
1272 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1273 }

```

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

```

1274 \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.

```

1275 \edef\HyPsd@XSPACE{\string#\string X}
1276 \edef\HyPsd@ITALCORR{\string#\string I}
1277 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1278 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}

```

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

```
1279 \def\HyPsd@@hspace#1*#2\END{%
1280   \ifx\#2\%
1281     \HyPsd@hspacetest{#1}%
1282   \else
1283     \expandafter\HyPsd@hspacetest
1284   \fi
1285 }
```

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

```
1286 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1287 \ltx@ifundefined{tocsection}{%
1288   \let\HyPsd@AMSclassfix\relax
1289 }{%
1290   \def\HyPsd@AMSclassfix{%
1291     \let\tocpart\HyPsd@tocsection
1292     \let\tocchapter\HyPsd@tocsection
1293     \let\tocappendix\HyPsd@tocsection
1294     \let\tocsection\HyPsd@tocsection
1295     \let\tocsubsection\HyPsd@tocsection
1296     \let\tocsubsubsection\HyPsd@tocsection
1297     \let\tocparagraph\HyPsd@tocsection
1298   }%
1299   \def\HyPsd@tocsection#1#2#3{%
1300     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1301     #3%
1302   }%
1303 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1304 \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.

```
1305 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1306 \def\HyPsd@@ref#1*#2\END{%
1307   \ifx\#2\%
1308     \HyPsd@@@ref{#1}%
1309   \else
1310     \expandafter\HyPsd@@@ref
1311   \fi
1312 }
```

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

```
1313 \def\HyPsd@@@ref#1{%
1314   \expandafter\ifx\csname r@#1\endcsname\relax
```

```

1315   ??%
1316   \else
1317     \expandafter\expandafter\expandafter
1318     \@car\csname r@#1\endcsname\@nil
1319   \fi
1320 }

```

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

```

1321 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*END}

```

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

```

1322 \def\HyPsd@@pageref#1*#2END{%
1323   \ifx\#2\%
1324     \HyPsd@@@pageref{#1}%
1325   \else
1326     \expandafter\HyPsd@@@pageref
1327   \fi
1328 }

```

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

```

1329 \def\HyPsd@@@pageref#1{%
1330   \expandafter\ifx\csname r@#1\endcsname\relax
1331     ??%
1332   \else
1333     \expandafter\expandafter\expandafter\expandafter
1334     \expandafter\expandafter\expandafter\@car
1335     \expandafter\expandafter\expandafter\@gobble
1336     \csname r@#1\endcsname{}\@nil
1337   \fi
1338 }

```

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

```

1339 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*END}

```

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

```

1340 \def\HyPsd@@nameref#1*#2END{%
1341   \ifx\#2\%
1342     \HyPsd@@@nameref{#1}%
1343   \else
1344     \expandafter\HyPsd@@@nameref
1345   \fi
1346 }

```

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

```

1347 \def\HyPsd@@@nameref#1{%
1348   \expandafter\ifx\csname r@#1\endcsname\relax
1349     ??%
1350   \else
1351     \expandafter\expandafter\expandafter\expandafter
1352     \expandafter\expandafter\expandafter\@car
1353     \expandafter\expandafter\expandafter\@gobbletwo

```

```

1354 \csname r@#1\endcsname{}\}\@nil
1355 \fi
1356 }

```

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

```

1357 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1358 \def\HyPsd@@autoref#1*#2\END{%
1359 \ifx\#2\%
1360 \HyPsd@@@autoref{#1}%
1361 \else
1362 \expandafter\HyPsd@@@autoref
1363 \fi
1364 }

```

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

```

1365 \def\HyPsd@@@autoref#1{%
1366 \expandafter\ifx\csname r@#1\endcsname\relax
1367 ??%
1368 \else
1369 \expandafter\expandafter\expandafter\HyPsd@autorefname
1370 \csname r@#1\endcsname{}\}\}\@nil
1371 \expandafter\expandafter\expandafter
1372 \@car\csname r@#1\endcsname\@nil
1373 \fi
1374 }

```

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

```

1375 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1376 \ifx\#4\%
1377 \else
1378 \HyPsd@@autorefname#4.\@nil
1379 \fi
1380 }

```

`\HyPsd@@autorefname`

```

1381 \def\HyPsd@@autorefname#1.#2\@nil{%
1382 \ltx@ifundefined{#1autorefname}{%
1383 \ltx@ifundefined{#1name}{%
1384 }{%
1385 \csname#1name\endcsname\space
1386 }%
1387 }{%
1388 \csname#1autorefname\endcsname\space
1389 }%
1390 }

```

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1391 \begingroup
1392   \def\x#1#2{%
1393     \endgroup
1394     \let#1\def
1395     \def\HyPsd@DefCommand##1##2###{%
1396       #1%
1397       \expandafter\noexpand
1398       \csname\expandafter\@gobble\string##1\@empty\endcsname
1399       \@gobble
1400     }%
1401     \let#2\let
1402     \def\HyPsd@@LetCommand##1{%
1403       \expandafter\ifx\csname##1\expandafter\endcsname
1404         \csname iftrue\endcsname
1405       \pdfstringdefWarn\let
1406       \expandafter\@gobble
1407     \else
1408       \expandafter\ifx\csname##1\expandafter\endcsname
1409         \csname iffalse\endcsname
1410       \pdfstringdefWarn\let
1411       \expandafter\expandafter\expandafter\@gobble
1412     \else
1413       #2%
1414       \expandafter\noexpand
1415       \csname##1\expandafter\expandafter\expandafter\endcsname
1416     \fi

```

```

1417     \fi
1418   }%
1419 }%
1420 \expandafter\x\csname <def>-command\expandafter\endcsname
1421     \csname <let>-command\endcsname
1422 \def\HyPsd@LetCommand#1{%
1423   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1424   \expandafter\expandafter\expandafter{%
1425     \expandafter\@gobble\string#1\@empty
1426   }%
1427 }

```

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).

```

1428 \def\HyPsd@ifnextchar#1{%
1429   \pdfstringdefWarn#1%
1430   \expandafter\@gobbletwo\@gobble
1431 }

```

6.5.14 \@protected@testoptifnextchar

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

```

1432 \def\HyPsd@protected@testopt#1{%
1433   \pdfstringdefWarn#1%
1434   \@gobbletwo
1435 }

```

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:

```

1436 \def\HyPsd@Warning#1{%
1437   \begingroup

```

```

1438 \let\space\ltx@space
1439 \Hy@Warning{#1}%
1440 \endgroup
1441 }

```

6.6.2 Protecting spaces

```

1442 \RequirePackage{etexcmds}[2007/09/09]
1443 \ifetex@unexpanded
1444 \expandafter\@secondoftwo
1445 \else
1446 \expandafter\@firstoftwo
1447 \fi
1448 {%

```

`\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`.

```

1449 \def\HyPsd@ProtectSpaces#1{%
1450 \iftrue
1451 \expandafter\HyPsd@@ProtectSpacesFi
1452 \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1453 \fi
1454 }%

```

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

```

1455 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1456 \fi
1457 \ifx\scrollmode#2\scrollmode
1458 \HyPsd@RemoveMask#1\HyPsd@End#3%
1459 \else
1460 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1461 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1462 \fi
1463 }%

```

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.

```

1464 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1465 \toks@ \expandafter{#1}%
1466 \xdef#2{\the\toks@}%
1467 }%
1468 }{%
1469 \let\HyPsd@fi\fi
1470 \def\HyPsd@ProtectSpaces#1{%
1471 \xdef#1{%
1472 \iftrue

```

```

1473     \expandafter\HyPsd@@ProtectSpacesFi
1474     \expandafter|\expandafter\@empty#1| %
1475     \HyPsd@fi
1476 }%
1477 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1478 }%
1479 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1480   \fi
1481   \etex@unexpanded{#1}%
1482   \ifx\scrollmode#2\scrollmode
1483   \else
1484     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1485     \HyPsd@fi
1486   }%
1487 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1488   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1489 }%
1490 }

```

6.6.3 Remove grouping braces

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

```

1491 \def\HyPsd@RemoveBraces#1{%
1492   \ifx\scrollmode#1\scrollmode
1493   \else
1494     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1495   \fi
1496 }

```

`\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`.

```

1497 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1498   \fi
1499   \def\Hy@temp@A{#1#2}%
1500   \def\Hy@temp@B{#3}%
1501   \ifx\Hy@temp@A\Hy@temp@B
1502     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1503       \HyPsd@String#1%
1504     }%
1505   \ifx\scrollmode#2\scrollmode
1506   \else
1507     \Hy@ReturnAfterFiFiEnd{%
1508       \HyPsd@RemoveBraces{#2}%
1509     }%

```

```

1510 \fi
1511 \else
1512 \def\HyPsd@temp@A{#1}%
1513 \HyPsd@AppendItalcorr\HyPsd@String
1514 \ifx\HyPsd@temp@A\@empty
1515 \HyPsd@ReturnAfterElseFiFiEnd{%
1516 \HyPsd@RemoveBraces{#2}%
1517 }%
1518 \else
1519 \HyPsd@ProtectSpaces\HyPsd@temp@A
1520 \HyPsd@AppendItalcorr\HyPsd@temp@A
1521 \HyPsd@ReturnAfterFiFiEnd{%
1522 \expandafter\HyPsd@RemoveBraces\expandafter
1523 {\HyPsd@temp@A#2}%
1524 }%
1525 \fi
1526 \fi
1527 \HyPsd@ReturnEnd
1528 }

```

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

```

1529 \def\HyPsd@AppendItalcorr#1{%
1530 \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1531 }
1532 \def\HyPsd@@AppendItalcorr#1#2{%
1533 \expandafter\def\expandafter#2\expandafter{#2#1}%
1534 }

```

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>.

```

1535 \ltx@ifundefined{directlua}{%
1536 }{%
1537 \expandafter\ifx\csname\endcsname\relax\fi
1538 }

```

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`.

```

1539 \begingroup
1540 \catcode`\Q=\active
1541 \let Q\ltx@empty
1542 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1543   \global\let\HyPsd@Rest\relax
1544   \ifcat\relax\noexpand#1\relax
1545     \ifx#1\protect
1546     \else
1547       \ifx#1\penalty
1548         \setbox\z@=\hbox{%
1549           \afterassignment\HyPsd@AfterCountRemove
1550           \count@=#2\HyPsd@end
1551         }%
1552       \else
1553         \ifx#1\kern
1554           \setbox\z@=\hbox{%
1555             \afterassignment\HyPsd@AfterDimenRemove
1556             \dimen@=#2\HyPsd@end
1557           }%
1558         \else
1559           \ifx#1\hskip
1560             \setbox\z@=\hbox{%
1561               \afterassignment\HyPsd@AfterSkipRemove
1562               \skip@=#2\HyPsd@end
1563             }%
1564           \else
1565             \HyPsd@CatcodeWarning{#1}%
1566           \fi
1567         \fi
1568       \fi
1569     \fi
1570   \else
1571     \ifcat\noexpand#1\noexpandQ% active character
1572     \expandafter\expandafter\expandafter\def
1573     \expandafter\expandafter\expandafter\HyPsd@String
1574     \expandafter\expandafter\expandafter{%
1575       \expandafter\HyPsd@String\string#1%
1576     }%
1577   \else
1578     \ifcat#1A% letter
1579     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1580       \HyPsd@String#1%
1581     }%
1582   \else
1583     \ifcat#1 % SPACE
1584     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1585       \HyPsd@String\HyPsd@SPACEOPTI
1586     }%
1587   \else
1588     \ifcat$#1%
1589     \HyPsd@CatcodeWarning{math shift}%
1590   \else
1591     \ifcat&#1%
1592     \HyPsd@CatcodeWarning{alignment tab}%

```

```

1593         \else
1594         \ifcat^#1%
1595         \HyPsd@CatcodeWarning{superscript}%
1596         \else
1597         \ifcat_#1%
1598         \HyPsd@CatcodeWarning{subscript}%
1599         \else
1600         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1601         \HyPsd@String#1%
1602         }%
1603         \fi
1604         \fi
1605         \fi
1606         \fi
1607         \fi
1608         \fi
1609         \fi
1610         \fi
1611         \ifx\HyPsd@Rest\relax
1612         \ifx\scrollmode#2\scrollmode
1613         \else
1614         \Hy@ReturnAfterFiFiEnd{%
1615         \HyPsd@CheckCatcodes#2\HyPsd@End
1616         }%
1617         \fi
1618         \else
1619         \ifx\HyPsd@Rest\@empty
1620         \else
1621         \Hy@ReturnAfterFiFiEnd{%
1622         \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1623         }%
1624         \fi
1625         \fi
1626         \Hy@ReturnEnd
1627     }%
1628 \endgroup

```

Remove counts, dimens, skips.

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

```

1629 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1630   \gdef\HyPsd@Rest{#1}%
1631 }

```

`\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.

```

1632 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1633   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1634   \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1635   \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1636   \else

```

```

1637 \ifdim\dimen@=\z@
1638 \else
1639 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1640 \fi
1641 \gdef\HyPsd@Rest{#1}%
1642 \fi
1643 }

```

`\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).

```

1644 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1645 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>\fi>lex %
1646 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1647 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1648 \else
1649 \ifdim\skip@=\z@
1650 \else
1651 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1652 \fi
1653 \gdef\HyPsd@Rest{#1}%
1654 \fi
1655 }

```

Catcode warnings.

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

```

1656 \def\HyPsd@CatcodeWarning#1{%
1657 \HyPsd@Warning{%
1658 Token not allowed in a PDF string (%)
1659 \ifHy@unicode
1660 Unicode%
1661 \else
1662 PDFDocEncoding%
1663 \fi
1664 }:%
1665 \MessageBreak removing ``\HyPsd@RemoveCmdPrefix#1'%'
1666 }%
1667 }
1668 \begingroup
1669 \catcode`\|=0 %
1670 \catcode`\|=12 %
1671 |gdef|HyPsd@RemoveCmdPrefix#1{%
1672 |expandafter|HyPsd@@RemoveCmdPrefix
1673 |string#1|@empty\<>-|@empty|@empty
1674 }%
1675 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1676 |endgroup

```

`\HyPsd@RemoveSpaceWarning`

```

1677 \def\HyPsd@RemoveSpaceWarning#1{%
1678 \HyPsd@Warning{%
1679 Token not allowed in a PDF string (%)
1680 \ifHy@unicode
1681 Unicode%

```



```

1682 \else
1683     PDFDocEncoding%
1684 \fi
1685 ):%
1686 \MessageBreak #1\MessageBreak
1687 removed%
1688 }%
1689 }

```

\HyPsd@ReplaceSpaceWarning

```

1690 \def\HyPsd@ReplaceSpaceWarning#1{%
1691 \HyPsd@Warning{%
1692     Token not allowed in a PDF string (%
1693 \ifHy@unicode
1694     Unicode%
1695 \else
1696     PDFDocEncoding%
1697 \fi
1698 ):%
1699 \MessageBreak #1\MessageBreak
1700 replaced by space%
1701 }%
1702 }

```

6.6.5 Check for wrong glyphs

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

```

1703 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1704 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1705 \HyPsd@String#1%
1706 }%
1707 \ifx\#2\%
1708 \else
1709 \ltx@ReturnAfterFi{%
1710 \HyPsd@GlyphProcessWarning#2\@empty
1711 }%
1712 \fi
1713 }
1714 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1715 \HyPsd@@GlyphProcessWarning#1++>%
1716 \HyPsd@GlyphProcess#2\@empty
1717 }
1718 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1719 \ifx\#2\%
1720 \HyPsd@Warning{%
1721     Glyph not defined in %
1722 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1723 removing ` \@backslashchar#1'%
1724 }%
1725 \else
1726 \HyPsd@Warning{%
1727     Composite letter ` \@backslashchar#1+#2'\MessageBreak
1728 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%

```

```

1729 \MessageBreak
1730 removing `\"@backslashchar#1'%
1731 }%
1732 \fi
1733 }

```

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`.

```

1734 \def\HyPsd@spaceopti#1{ % first space
1735 \ifx\HyPsd@spaceopti#1%
1736 \040%
1737 \else
1738 #1%
1739 \fi
1740 }%

```

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.

```

1741 \def\HyPsd@Subst#1#2#3{%
1742 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1743 \fi
1744 ##1%
1745 \ifx\scrollmode##2\scrollmode
1746 \else
1747 #2%
1748 \HyPsd@@@ReplaceFi##2\END
1749 \fi
1750 }%
1751 \xdef#3{%
1752 \iftrue
1753 \expandafter\HyPsd@@@ReplaceFi#3#1\END
1754 \fi
1755 }%
1756 }

```

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

```

1757 \def\HyPsd@StringSubst#1{%
1758 \expandafter\HyPsd@Subst\expandafter{\string#1}%
1759 }

```

`\HyPsd@EscapeTeX`

```

1760 \begingroup

```

```

1761 \lccode`!=`\%%
1762 \lccode`|=`\%%
1763 \lccode`\(=\{ %
1764 \lccode`\)=`\}%
1765 \lccode`0=\ltx@zero
1766 \lccode`1=\ltx@zero
1767 \lccode`3=\ltx@zero
1768 \lccode`4=\ltx@zero
1769 \lccode`5=\ltx@zero
1770 \lccode`7=\ltx@zero
1771 \lowercase{\endgroup
1772 \def\HyPsd@EscapeTeX#1{%
1773   \HyPsd@Subst!{|045}#1%
1774   \HyPsd@Subst({|173}#1%
1775   \HyPsd@Subst){|175}#1%
1776 }%
1777 }

```

6.6.7 Support for package `xspace`

`\HyPsd@doboxspace` `\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.

```

1778 \def\HyPsd@doboxspace#1{%
1779   \ifx#1\relax\else
1780     \ifx#1.\else
1781       \ifx#1:\else
1782         \ifx#1,\else
1783           \ifx#1;\else
1784             \ifx#1!\else
1785               \ifx#1?\else
1786                 \ifx#1/\else
1787                   \ifx#1-\else
1788                     \ifx#1'\else
1789                       \HyPsd@SPACEOPTI
1790                     \fi
1791                   \fi
1792                 \fi
1793               \fi
1794             \fi
1795           \fi
1796         \fi
1797       \fi
1798     \fi
1799   \fi
1800   #1%
1801 }%

```

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.

```
1802 \begingroup
1803 \catcode`\|=0 %
1804 \catcode`\|=12 %
```

\HyPsd@ConvertToUnicode

```
1805 |gdef|HyPsd@ConvertToUnicode#1{%
1806   |xdef#1{%
1807     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1808   }%
1809   |ifx#1|@empty
1810   |else
1811     |xdef#1{%
1812       \376\377%
1813       #1%
1814     }%
1815   |fi
1816 }%
```

\HyPsd@DoConvert

```
1817 |gdef|HyPsd@DoConvert#1{%
1818   |ifx#1|@empty
1819   |else
1820     |ltx@ReturnAfterFi{%
1821       |ifx#1\%%
1822       \%%
1823       |expandafter|HyPsd@DoEscape
1824     |else
1825       |HyPsd@Char{#1}%
1826       |expandafter|HyPsd@DoConvert
1827     |fi
1828   }%
1829   |fi
1830 }%
```

\HyPsd@DoEscape

```
1831 |gdef|HyPsd@DoEscape#1{%
1832   |ifx#19%
1833   |expandafter|HyPsd@GetTwoBytes
1834   |else
1835     |ltx@ReturnAfterFi{%
1836       |ifx#18%
1837       00%
1838       |expandafter|HyPsd@GetTwoBytes
1839     |else
1840       #1%
1841       |expandafter|HyPsd@GetOneByte
1842     |fi
1843   }%
1844   |fi
1845 }%
```

\HyPsd@GetTwoBytes

```

1846 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1847   #1\#2#3#4%
1848   |HyPsd@DoConvert
1849 }%

```

\HyPsd@GetOneByte

```

1850 |gdef|HyPsd@GetOneByte#1#2{%
1851   #1#2%
1852   |HyPsd@DoConvert
1853 }%
1854 |endgroup

```

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

```

1855 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1856   \xdef#4{#4#1#2}%
1857   \HyPsd@@ConvertToUnicode#3\END#4%
1858 }

```

\HyPsd@Char

```

1859 \begingroup
1860 \catcode0=9 %
1861 \catcode`\^=7 %
1862 \catcode`\^^=12 %
1863 \def\x{^^^0000}%
1864 \expandafter\endgroup
1865 \ifx\x\@empty
1866   \def\HyPsd@Char#1{%
1867     \ifnum`#1<128 %
1868       \@backslashchar 000#1%
1869     \else
1870       \ifnum`#1<65536 %
1871         \expandafter\HyPsd@CharTwoByte\number`#1!%
1872       \else
1873         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1874         \intcalcSub{`#1}{65536}!%
1875       \fi
1876     \fi
1877   }%
1878   \def\HyPsd@CharTwoByte#1!{%
1879     \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1880     \IntCalcDiv#1!256!!%
1881     \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1882     \IntCalcMod#1!256!!%
1883   }%
1884   \def\HyPsd@CharOctByte#1!{%
1885     \@backslashchar
1886     \IntCalcDiv#1!64!%
1887     \intcalcDiv{\IntCalcMod#1!64!}{8}%
1888     \IntCalcMod#1!8!%
1889   }%
1890   \def\HyPsd@CharSurrogate#1!{%
1891     \@backslashchar 33%
1892     \IntCalcDiv#1!262144!%

```

```

1893 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1894 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1895 \@backslashchar 33%
1896 \expandafter\expandafter\expandafter\IntCalcAdd
1897 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1898 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1899 \IntCalcMod#1!256!!%
1900 }%
1901 \else
1902 \def\HyPsd@Char#1{%
1903 \@backslashchar 000#1%
1904 }%
1905 \fi

```

change 2022-02-21 For the case that utf8 chars are protected we need to expand them. This works only is \UTFviii@loop is not defined in a group, which will be the case in the new latex code, so we test for it.

```

1906 \ifcsname UTFviii@loop\endcsname
1907 \def\HyPsd@expand@utfvii{%
1908 \count@"C2
1909 \@tempcnta"F5
1910 \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1911 \UTFviii@loop
1912 }
1913 \else
1914 \def\HyPsd@expand@utfvii{}
1915 \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`

```

1916 \begingroup
1917 \lccode\~=\^^f4\relax
1918 \lowercase{\endgroup
1919 \def\HyPsd@UTFviii{%
1920 \HyPsd@expand@utfvii
1921 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1922 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1923 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1924 \ifx~\HyPsd@UTFviii@ccxliv@undef
1925 \let~\HyPsd@UTFviii@ccxliv@def
1926 \fi
1927 \let\unichar\HyPsd@unichar
1928 }%

```

```

1929 }%
1930 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1931 \edef\HyPsd@UTFviii@ccxliv@def{%
1932   \noexpand\UTFviii@four@octets\string ^^f4%
1933 }%

```

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

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

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

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

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

$$(5)$$

```

1934 \def\HyPsd@UTFviii@two#1#2{%
1935   \expandafter\HyPsd@UTFviii@@two
1936   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1937   \number`#1\expandafter|
1938   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
1939   \number`#2 \@nil
1940 }%
1941 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1942   \expandafter\8%
1943   \number\numexpr #1-48\expandafter\relax
1944   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1945   \number\numexpr #3-8*%
1946   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1947   \number\numexpr #4-8*#3\relax
1948 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1949 \def\HyPsd@UTFviii@three#1#2#3{%
1950   \expandafter\HyPsd@UTFviii@@three
1951   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1952   \number`#1\expandafter|
1953   \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
1954   \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
1955   \number`#2\expandafter|
1956   \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
1957   \number`#3 \@nil

```

```

1958 }%
1959 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1960 \expandafter\9%
1961 \number\numexpr #1-56\expandafter\relax
1962 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1963 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1964 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1965 \number\numexpr #6-16\expandafter\relax
1966 \number\numexpr #7-8*#6\relax
1967 }%

```

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

```

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

```

```

1968 \def\HyPsd@UTFviii@four#1#2{%
1969 \expandafter\HyPsd@@UTFviii@four\number
1970 \numexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
1971 \expandafter|\number
1972 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|}%
1973 }%
1974 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1975 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1976 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1977 \ifodd#2 %
1978 \number\numexpr(#2-1)/2\relax
1979 \else
1980 \number\numexpr#2/2\relax
1981 \fi
1982 \number\numexpr\ifodd#2 4+\fi
1983 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
1984 \933%
1985 \expandafter\HyPsd@@@UTFviii@four\number
1986 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp|}%
1987 }%
1988 \def\HyPsd@@@UTFviii@four#1|#2{%
1989 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1990 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1991 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
1992 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1993 }%

```

Input encoding utf8x of package ucs uses macro `\expandafter \cmd@to@cs \string \unichar`. Values greater than "FFFF are not supported.

```

1994 \def\HyPsd@unichar#1{%
1995 \ifHy@unicode
1996 \ifnum#1>"10FFFF %
1997 \HyPsd@UnicodeReplacementCharacter % illegal
1998 \else
1999 \ifnum#1>"FFFF %

```

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


```

2000     \expandafter\HyPsd@unichar\expandafter{%
2001     \number\numexpr 55296+%
2002     \dimexpr.0009765625\dimexpr\number#1sp-\p@
2003     \relax\relax\relax
2004     }%

```

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

```

2005     \expandafter\HyPsd@unichar\expandafter{%
2006     \number\numexpr#1-9216%
2007     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2008     \relax\relax\relax
2009     }%
2010     \else
2011     \ifnum#1>"7FF %
2012     \9%
2013     \expandafter\HyPsd@unichar@first@byte\expandafter{%
2014     \number
2015     \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2016     }%
2017     \else
2018     \8%
2019     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2020     \fi
2021     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2022     \number
2023     \numexpr#1-256*\number
2024     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2025     }%
2026     \fi
2027     \fi
2028     \else
2029     .% unsupported (Unicode -> PDF Doc Encoding)
2030     \fi
2031     }%
2032     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2033     \def\HyPsd@unichar@first@byte#1{%
2034     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2035     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2036     \number
2037     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2038     \relax\relax\relax
2039     }%
2040     }%
2041     \def\HyPsd@unichar@second@byte#1{%
2042     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2043     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2044     \number
2045     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2046     \relax\relax\relax
2047     }%
2048     }%
2049     \def\HyPsd@unichar@octtwo#1{%
2050     \number\dimexpr.125\dimexpr#1sp\relax\relax
2051     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2052     \relax\relax\relax

```

2053 }%

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

```

2054 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2055   \ifx\@gobble#1%
2056   \else
2057     [Please insert \textbackslash PrerenderUnicode%
2058     \textbraceleft#1\textbraceright\space
2059     into preamble]%
2060   \fi
2061 }%
```

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.

```

2062 \def\HyPsd@DieFace#1{%
2063   \ifHy@unicode
2064   \ifnum#1<1 %
2065     \HyPsd@UnicodeReplacementCharacter
2066   \else
2067     \ifnum#1>6 %
2068       \9046\205%
2069       \expandafter\expandafter\expandafter
2070       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2071     \else
2072       \9046\20\intcalcDec{#1}%
2073     \fi
2074   \fi
2075 \else
2076   .% Die faces are not part of PDFDocEncoding
2077 \fi
2078 }
```

\HyPsd@DieFaceLarge

```

2079 \def\HyPsd@DieFaceLarge#1!{%
2080   \ifnum#1>6 %
2081     \expandafter\ltx@firstoftwo
2082   \else
2083     \expandafter\ltx@secondoftwo
2084   \fi
2085   {%
2086     \9046\205%
2087     \expandafter\expandafter\expandafter
2088     \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2089   }{%
```

```

2090 \9046\20\IntCalcDec#1!%
2091 }%
2092 }

```

6.6.11 Support for moon phases of package china2e

```

2093 \def\HyPsd@MoonPha#1{%
2094 \ifcase\intcalcNum{#1} %
2095 \HyPsd@UnicodeReplacementCharacter
2096 \or % 1
2097 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2098 \9330\074\9337\032%
2099 \or % 2
2100 \HyPsd@UnicodeReplacementCharacter
2101 \or % 3
2102 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2103 \9330\074\9337\035%
2104 \or % 4
2105 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2106 \9330\074\9337\034%
2107 \else
2108 \HyPsd@UnicodeReplacementCharacter
2109 \fi
2110 }
2111 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2112 \def\HyPsd@ding#1{%
2113 \ifHy@unicode
2114 \ifnum#1<32 %
2115 \HyPsd@UnicodeReplacementCharacter
2116 \else
2117 \ifnum#1>254 %
2118 \HyPsd@UnicodeReplacementCharacter
2119 \else
2120 \ifnum#1<127 %
2121 \expandafter\expandafter\expandafter
2122 \HyPsd@@@ding\intcalcNum{#1}!%
2123 \else
2124 \ifnum#1>160 %
2125 \expandafter\expandafter\expandafter
2126 \HyPsd@@@ding\intcalcNum{#1}!%
2127 \else
2128 \HyPsd@UnicodeReplacementCharacter
2129 \fi
2130 \fi
2131 \fi
2132 \fi
2133 \else
2134 .% Dingbats are not part of PDFDocEncoding
2135 \fi
2136 }

```

\HyPsd@@ding

```
2137 \def\HyPsd@@ding#1!{%
2138 \ltx@ifundefined{HyPsd@ding@#1}{%
2139 \ifnum#1<127 %
2140 \9047%
2141 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2142 \else
2143 \ifnum#1<168 %
2144 \9047\14\IntCalcSub#1!160!%
2145 \else
2146 \ifnum#1>181 %
2147 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2148 \else
2149 % 172..181 -> U+2460..U+2469
2150 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2151 \fi
2152 \fi
2153 \fi
2154 }{%
2155 \csname HyPsd@ding@#1\endcsname
2156 }%
2157 }

2158 \@namedef{HyPsd@ding@32}{\space}
2159 % U+260E BLACK TELEPHONE
2160 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2161 % U+261B BLACK RIGHT POINTING INDEX
2162 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2163 % U+261E WHITE RIGHT POINTING INDEX
2164 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2165 % U+2605 BLACK STAR
2166 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2167 % U+25CF BLACK CIRCLE
2168 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2169 % U+25A0 BLACK SQUARE
2170 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2171 % U+25B2 BLACK UP-POINTING TRIANGLE
2172 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2173 % U+25BC BLACK DOWN-POINTING TRIANGLE
2174 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2175 % U+25C6 BLACK DIAMOND
2176 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2177 % U+25D7 RIGHT HALF BLACK CIRCLE
2178 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2179 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2180 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2181 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2182 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2183 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2184 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2185 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2186 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}
```

7 Support of other packages

7.1 Package subfigure

Added fix for version 2.1. Here `\expandafter \cmd@to@cs \string \sub @label` is defined.

```
2187 \@ifpackageloaded{subfigure}{%
2188   \ltx@ifundefined{sub@label}{%
2189     \Hy@hypertextnamesfalse
2190   }{%
2191     \renewcommand*{\sub@label}[1]{%
2192       \@bsphack
2193       \subfig@oldlabel{#1}%
2194       \if@filesw
2195         \begingroup
2196         \edef\@currentlabstr{%
2197           \expandafter\strip@prefix\meaning\@currentlabelname
2198         }%
2199         \protected@write\@auxout{}{%
2200           \string\newlabel{sub@#1}{%
2201             {\@nameuse{@@thesub\@capttype}}%
2202             {\thepage}%
2203             {%
2204               \expandafter\strip@period\@currentlabstr
2205               \relax.\relax\@@@%
2206             }%
2207             {\@currentHref}%
2208             {}%
2209           }%
2210         }%
2211         \endgroup
2212       \fi
2213       \@esphack
2214     }%
2215   }%
2216 }
```

7.2 Package xr and xr-hyper

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

```
2217 \ltx@ifundefined{XR@addURL}{%
2218 }
```

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.

```
2219 \def\XR@addURL#1{\XR@@dURL#1{}{}{}\\}%
2220 \def\XR@@dURL#1#2#3#4#5\\{%
2221   {#1}{#2}%
2222   \if!#4!%
2223   \else
2224     {#3}{#4}{\XR@URL}%
2225   \fi
```

```

2226 }%
2227 }

2228 \def\Hy@true{true}
2229 \def\Hy@false{false}

    Providing dummy definitions.

2230 \let\literalps@out\@gobble
2231 \newcommand\pdfbookmark[3][]{ }
2232 \def\Acrobatmenu#1#2{\leavevmode#2}
2233 \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

```

2234 \let\HyperRaiseLinkHook\@empty
2235 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2236 \newcount\Hy@SavedSpaceFactor
2237 \def\Hy@SaveSpaceFactor{%
2238   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2239 }
2240 \def\Hy@RestoreSpaceFactor{%
2241   \relax
2242   \ifhmode
2243     \ifnum\Hy@SavedSpaceFactor>\z@
2244       \spacefactor=\Hy@SavedSpaceFactor
2245     \fi
2246   \fi
2247 }
2248 \def\Hy@SaveSavedSpaceFactor{%
2249   \edef\Hy@RestoreSavedSpaceFactor{%
2250     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2251   }%
2252 }
2253 \def\Hy@raisedlink#1{%
2254   \ifvmode
2255     #1%
2256   \else
2257     \Hy@SaveSpaceFactor
2258     \penalty\@M

```

```

2259 \smash{%
2260 \begingroup
2261 \let\HyperRaiseLinkLength\@tempdima
2262 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2263 \HyperRaiseLinkHook
2264 \expandafter\endgroup
2265 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2266 \Hy@RestoreSpaceFactor
2267 #1%
2268 \Hy@SaveSpaceFactor
2269 }%
2270 }%
2271 \Hy@RestoreSpaceFactor
2272 \fi
2273 }

```

\Hy@SaveLastskip Inserting a `\expandafter \cmd@to@cs \string \special` command to set a destination destroys the `\expandafter \cmd@to@cs \string \lastskip` value.

```

2274 \def\Hy@SaveLastskip{%
2275 \let\Hy@RestoreLastskip\relax
2276 \ifvmode
2277 \ifdim\lastskip=\z@
2278 \ifnum\lastnodetype=1 %
2279 \let\Hy@RestoreLastskip\relax
2280 \else
2281 \let\Hy@RestoreLastskip\nobreak
2282 \fi
2283 \else
2284 \begingroup
2285 \skip@=-\lastskip
2286 \edef\x{%
2287 \endgroup
2288 \def\noexpand\Hy@RestoreLastskip{%
2289 \noexpand\ifvmode
2290 \noexpand\nobreak
2291 \vskip\the\skip@
2292 \vskip\the\lastskip\relax
2293 \noexpand\fi
2294 }%
2295 }%
2296 \x
2297 \fi
2298 \else
2299 \ifhmode
2300 \ifdim\lastskip=\z@
2301 \let\Hy@RestoreLastskip\nobreak
2302 \else
2303 \begingroup
2304 \skip@=-\lastskip
2305 \edef\x{%
2306 \endgroup
2307 \def\noexpand\Hy@RestoreLastskip{%
2308 \noexpand\ifhmode
2309 \noexpand\nobreak

```

```

2310          \hskip\the\skip@
2311          \hskip\the\lastskip\relax
2312          \noexpand\fi
2313      }%
2314  }%
2315  \x
2316  \fi
2317  \fi
2318  \fi
2319 }%

```

9 Options

```

2320 \SetupKeyvalOptions{%
2321   family=Hyp,%
2322   prefix=HyOpt%
2323 }

```

9.1 Help macros

Package like hyperxmp want to retrieve the value of keys like `pdfauthor`. To avoid that we have two parallel interfaces we provide the interface from the `pdfmanagement/ltdocinit` if it doesn't exist.

```

\AddToDocumentProperties
\GetDocumentProperties
2324 \ExplSyntaxOn
2325 \@ifundefined{AddToDocumentProperties}
2326 {
2327   \prop_new:N \g__hyp_documentproperties_prop
2328   \NewDocumentCommand\AddToDocumentProperties{O{\@currname}mm}
2329   {
2330     \exp_args:NNx
2331     \prop_gput:Nnn \g__hyp_documentproperties_prop
2332     {
2333       \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2334     }
2335     { #3}
2336   }
2337   \NewExpandableDocumentCommand\GetDocumentProperties{m}
2338   {
2339     \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2340   }
2341 }{}
2342 \ExplSyntaxOff

\IfHyperBooleanExists
2343 \def\IfHyperBooleanExists#1{%
2344   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2345     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2346   }%
2347 }

2348 \@namedef{KV@Hyp@stoppearly@default}{}

```


\IfHyperBoolean

```
2349 \def\IfHyperBoolean#1{%
2350   \IfHyperBooleanExists{#1}{%
2351     \csname ifHy@#1\endcsname
2352     \expandafter\ltx@firstoftwo
2353   \else
2354     \expandafter\ltx@secondoftwo
2355   \fi
2356 } \ltx@secondoftwo
2357 }
```

\Hy@boolkey

```
2358 \def\Hy@boolkey#1#2{%
2359   \edef\Hy@tempa{#2}%
2360   \lowercase\expandafter{%
2361     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2362   }%
2363   \ifx\Hy@tempa\@empty
2364     \let\Hy@tempa\Hy@true
2365   \fi
2366   \ifx\Hy@tempa\Hy@true
2367   \else
2368     \ifx\Hy@tempa\Hy@false
2369     \else
2370       \let\Hy@tempa\relax
2371     \fi
2372   \fi
2373   \ifx\Hy@tempa\relax
2374     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2375   \else
2376     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2377     \csname Hy@#1\Hy@tempa\endcsname
2378   \fi
2379 }
```

\Hy@WarnOptionValue

```
2380 \def\Hy@WarnOptionValue#1#2#3{%
2381   \Hy@Warning{%
2382     Unexpected value `#1'\MessageBreak
2383     of option `#2' instead of\MessageBreak
2384     #3%
2385   }%
2386 }
```

\Hy@DisableOption

```
2387 \def\Hy@DisableOption#1{%
2388   \ltx@ifundefined{KV@Hyp@#1@default}{%
2389     \define@key{Hyp}{#1}%
2390   }{%
2391     \define@key{Hyp}{#1}[]%
2392   }%
2393   {\Hy@WarnOptionDisabled{#1}}%
2394 }
2395
```

\Hy@WarnOptionDisabled

```
2396 \def\Hy@WarnOptionDisabled#1{%
2397   \Hy@Warning{%
2398     Option `#1' has already been used,\MessageBreak
2399     setting the option has no effect%
2400   }%
2401 }
```

\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.

```
2402 \def\Hy@CheckOptionValue#1#2#3{%
2403   \begingroup
2404   \edef\x{#1}%
2405   \@onelevel@sanitize\x
2406   \let\y=y%
2407   \def\do##1##2{%
2408     \def\z{##1}%
2409     \@onelevel@sanitize\z
2410     \ifx\x\z
2411       \let\y=n%
2412       \let\do\@gobbletwo
2413     \fi
2414   }%
2415   #3%
2416   \ifx\y y%
2417     \def\do##1##2{%
2418       * `##1'%
2419       \ifx\\##2\\\else\space(##2)\fi
2420     \MessageBreak
2421   }%
2422   \Hy@Warning{%
2423     Values of option `#2':\MessageBreak
2424     #3%
2425     * An empty value disables the option.\MessageBreak
2426     Unknown value `#1'%
2427   }%
2428   \fi
2429 \endgroup
2430 }
```

\Hy@DefNameKey #1: option name

#2: \do list with known values, first argument of \do is value, second argument is a comment.

```
2431 \def\Hy@DefNameKey#1{%
2432   \expandafter\Hy@@@DefNameKey\csname @#1\endcsname{#1}%
2433 }
```

\Hy@@@DefNameKey #1: macro for value storage

#2: option name

#3: \do list with known values.

```
2434 \def\Hy@@@DefNameKey#1#2#3{%
2435   \define@key{Hyp}{#2}{%
```

```

2436 \edef#1{##1}%
2437 \ifx#1\@empty
2438 \else
2439 \Hy@CheckOptionValue{##1}{#2}{#3}%
2440 \fi
2441 }%
2442 \let#1\@empty
2443 }

```

\Hy@UseNameKey

```

2444 \def\Hy@UseNameKey#1#2{%
2445 \ifx#2\@empty
2446 \else
2447 /#1/#2%
2448 \fi
2449 }

```

9.2 Defining the options

```

2450 \define@key{Hyp}{implicit}[true]{%
2451 \Hy@boolkey{implicit}{#1}%
2452 }
2453 \define@key{Hyp}{draft}[true]{%
2454 \Hy@boolkey{draft}{#1}%
2455 }
2456 \define@key{Hyp}{final}[true]{%
2457 \Hy@boolkey{final}{#1}%
2458 }
2459 \let\KV@Hyp@nolinks\KV@Hyp@draft
2460 \def\Hy@ObsoletePaperOption#1{%
2461 \Hy@WarningNoLine{%
2462 Option `#1' is no longer used%
2463 }%
2464 \define@key{Hyp}{#1}[true]{}%
2465 }
2466 \def\Hy@temp#1{%
2467 \define@key{Hyp}{#1}[true]{%
2468 \Hy@ObsoletePaperOption{#1}%
2469 }%
2470 }
2471 \Hy@temp{a4paper}
2472 \Hy@temp{a5paper}
2473 \Hy@temp{b5paper}
2474 \Hy@temp{letterpaper}
2475 \Hy@temp{legalpaper}
2476 \Hy@temp{executivepaper}
2477 \define@key{Hyp}{setpagesize}[true]{%
2478 \Hy@boolkey{setpagesize}{#1}%
2479 }
2480 \define@key{Hyp}{debug}[true]{%
2481 \Hy@boolkey{debug}{#1}%
2482 }
2483 \define@key{Hyp}{linktocpage}[true]{%

```

```

2484 \Hy@boolkey{linktocpage}{#1}%
2485 \ifHy@linktocpage
2486   \let\Hy@linktoc\Hy@linktoc@page
2487 \else
2488   \let\Hy@linktoc\Hy@linktoc@section
2489 \fi
2490 }
2491 \chardef\Hy@linktoc@none=0 %
2492 \chardef\Hy@linktoc@section=1 %
2493 \chardef\Hy@linktoc@page=2 %
2494 \chardef\Hy@linktoc@all=3 %
2495 \ifHy@linktocpage
2496   \let\Hy@linktoc\Hy@linktoc@page
2497 \else
2498   \let\Hy@linktoc\Hy@linktoc@section
2499 \fi
2500 \define@key{Hyp}{linktoc}{%
2501   \@ifundefined{Hy@linktoc@#1}{%
2502     \Hy@Warning{%
2503       Unexpected value `#1' of\MessageBreak
2504       option `linktoc' instead of `none',\MessageBreak
2505       `section', `page' or `all'%
2506     }%
2507   }{%
2508     \expandafter\let\expandafter\Hy@linktoc
2509     \csname Hy@linktoc@#1\endcsname
2510   }%
2511 }
2512 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2513 \let\XR@ext\relax
2514 \define@key{Hyp}{verbose}[true]{%
2515   \Hy@boolkey{verbose}{#1}%
2516 }

```

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.

```

2517 \define@key{Hyp}{raiselinks}[true]{%
2518   \Hy@boolkey{raiselinks}{#1}%
2519 }

```

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

```

2520 \def\Hy@setbreaklinks#1{%
2521   \csname breaklinks#1\endcsname
2522 }
2523 \def\Hy@breaklinks@unsupported{%
2524   \ifx\Hy@setbreaklinks\@gobble
2525     \ifHy@breaklinks
2526       \Hy@WarningNoLine{%
2527         You have enabled option `breaklinks'.\MessageBreak
2528         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2529         Expect trouble with the link areas of broken links%
2530       }%
2531     \fi

```

```

2532 \fi
2533 }

2534 \define@key{Hyp}{breaklinks}[true]{%
2535   \Hy@boolkey{breaklinks}{#1}%
2536   \let\Hy@setbreaklinks\@gobble
2537 }

2538 \define@key{Hyp}{localanchorname}[true]{%
2539   \Hy@WarningNoLine{%
2540     Option 'localanchorname' is deprecated%
2541   }%
2542   \Hy@boolkey{localanchorname}{#1}%
2543 }

```

Determines whether an automatic anchor is put on each page

```

2544 \define@key{Hyp}{pageanchor}[true]{%
2545   \Hy@boolkey{pageanchor}{#1}%
2546 }

```

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.

```

2547 \define@key{Hyp}{plainpages}[true]{%
2548   \Hy@boolkey{plainpages}{#1}%
2549 }

```

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

```

2550 \define@key{Hyp}{naturalnames}[true]{%
2551   \Hy@boolkey{naturalnames}{#1}%
2552 }

```

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

```

2553 \define@key{Hyp}{hypertextnames}[true]{%
2554   \Hy@boolkey{hypertextnames}{#1}%
2555 }

```

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

```

2556 \define@key{Hyp}{nesting}[true]{%
2557   \Hy@boolkey{nesting}{#1}%
2558 }

```

```

2559 \define@key{Hyp}{destlabel}[true]{%
2560   \Hy@boolkey{destlabel}{#1}%
2561 }

```

```

2562 \define@key{Hyp}{unicode}[true]{%
2563   \Hy@boolkey{unicode}{#1}%
2564   \ifHy@unicode
2565     \def\HyPsd@pdfencoding{unicode}%
2566     \HyPsd@LoadUnicode
2567   \else
2568     \def\HyPsd@pdfencoding{pdfdoc}%
2569   \fi
2570 }
2571 \Hy@AtBeginDocument{%
2572   \ifx\HyPsd@LoadUnicode\relax

```

```

2573 \else
2574 \def\HyPsd@LoadUnicode{%
2575 \Hy@Error{%
2576 Unicode support for bookmarks is not available.\MessageBreak
2577 Activate unicode support by using one of the options\MessageBreak
2578 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2579 in the preamble%
2580 } \@ehc
2581 \global\let\HyPsd@LoadUnicode\relax
2582 \global\Hy@unicodetrue
2583 \global\let\Hy@unicodetrue\Hy@unicodetrue
2584 }%
2585 \fi
2586 }

2587 \define@key{Hyp}{pdfencoding}{%
2588 \edef\HyPsd@temp{#1}%
2589 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2590 \let\HyPsd@pdfencoding\HyPsd@temp
2591 \Hy@unicodetrue
2592 \else
2593 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2594 \z@
2595 \else
2596 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2597 \z@
2598 \else
2599 \@ne
2600 \fi
2601 \fi
2602 \let\HyPsd@pdfencoding\HyPsd@temp
2603 \hypersetup{unicode}%
2604 \ifHy@unicode
2605 \def\HyPsd@pdfencoding{#1}%
2606 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2607 \HyPsd@LoadStringEnc
2608 \fi
2609 \else
2610 \Hy@Warning{Cannot switch to unicode bookmarks}%
2611 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2612 \fi
2613 \else
2614 \@onelevel@sanitize\HyPsd@temp
2615 \Hy@Warning{%
2616 Values of option `pdfencoding':\MessageBreak
2617 `pdfdoc', `unicode', `auto'.\MessageBreak
2618 Ignoring unknown value ``\HyPsd@temp'%
2619 }%
2620 \fi
2621 \fi
2622 }
2623 \def\HyPsd@pdfencoding@auto{auto}
2624 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2625 \def\HyPsd@pdfencoding@unicode{unicode}

```

change 2020-08-14, use unicode by default:

```

2626 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2627 \HyPsd@LoadUnicode
2628 \def\HyPsd@LoadStringEnc{%
2629   \RequirePackage{stringenc}[2009/12/15]%
2630   \let\HyPsd@LoadStringEnc\relax
2631 }
2632 \Hy@AtBeginDocument{%
2633   \ifpackageloaded{stringenc}{%
2634     \let\HyPsd@LoadStringEnc\relax
2635   }{%
2636     \def\HyPsd@LoadStringEnc{%
2637       \Hy@WarningNoLine{%
2638         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
2639         in the preamble or load the package there%
2640       }%
2641     }%
2642   }%
2643 }
2644 \define@key{Hyp}{psdextra}[true]{%
2645   \Hy@boolkey{psdextra}{#1}%
2646   \HyPsd@LoadExtra
2647 }
2648 \def\hypersetup{\kvsetkeys{Hyp}}
2649 \newif\ifHy@setpdfversion
2650 \define@key{Hyp}{pdfversion}{%
2651   \ifundefined{Hy@pdfversion@#1}{%
2652     \PackageWarning{hyperref}{%
2653       Unsupported PDF version `#1'.\MessageBreak
2654       Valid values: 1.2-1.7, 2.0%
2655     }%
2656   }{%
2657     \Hy@setpdfversiontrue
2658     \@nameuse{Hy@pdfversion@#1}%
2659   }%
2660 }

```

\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or \pdfvariable majorversion} so introduce new names here.

```

2661 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{2}}%
2662 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{3}}%
2663 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{4}}%
2664 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{5}}%
2665 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{6}}%
2666 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{7}}%
2667 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
    norversion{0}}%
2668 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```

Legacy name, earlier releases assumed 1.x

```
2669 \let\Hy@pdfversion\Hy@pdf@minorversion
2670 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
    norversion\relax}
2671 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
    norversion\relax}
if pdfminorversion is defined, make sure pdfmajorversion is too.
2672 \@ifundefined{pdfminorversion}{-}{%
2673 \@ifundefined{pdfmajorversion}{-}{%
2674 \newcount\pdfmajorversion
2675 \pdfmajorversion=1
2676 }-}%
2677 }
2678 \ifx\pdfmajorversion\@undefined\else
2679 \def\Hy@pdfmajorversion{\pdfmajorversion}
2680 \fi
```

10 Options for different drivers

```
2681 \newif\ifHy@DviMode
2682 \let\Hy@DviErrMsg\ltx@empty
2683 \ifpdf
2684 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2685 \else
2686 \ifxetex
2687 \def\Hy@DviErrMsg{XeTeX is running}%
2688 \else
2689 \ifvtex
2690 \ifnum\OpMode=\z@
2691 \Hy@DviModetrue
2692 \else
2693 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2694 \fi
2695 \else
2696 \Hy@DviModetrue
2697 \fi
2698 \fi
2699 \fi
2700 \def\HyOpt@CheckDvi#1{%
2701 \ifHy@DviMode
2702 \expandafter\ltx@firstofone
2703 \else
2704 \Hy@Error{%
2705 Wrong DVI mode driver option `#1',\MessageBreak
2706 because \Hy@DviErrMsg
2707 }\@ehc
2708 \expandafter\ltx@gobble
2709 \fi
2710 }
2711 \DeclareVoidOption{tex4ht}{%
2712 \Hy@texhttrue
2713 \kvsetkeys{Hyp}{colorlinks=true}%
2714 \def\BeforeTeXIVht{\RequirePackage{color}}%
2715 \def\Hy@driver{htex4ht}%
```



```

2716 \def\MaybeStopEarly{%
2717   \Hy@Message{Stopped early}%
2718   \Hy@AtBeginDocument{%
2719     \PDF@FinishDoc
2720     \gdef\PDF@FinishDoc{}%
2721   }%
2722   \endinput
2723 }%
2724 }
2725 \DeclareVoidOption{pdftex}{%
2726   \ifpdf
2727     \def\Hy@driver{hpdftex}%
2728     \PassOptionsToPackage{pdftex}{color}%
2729   \else
2730     \Hy@Error{%
2731       Wrong driver option `pdftex',\MessageBreak
2732       because pdfTeX in PDF mode is not detected%
2733     }\@ehc
2734   \fi
2735 }
2736 \DeclareVoidOption{luatex}{%
2737   \ifpdf
2738     \ifx\pdfextension\@undefined
2739       \def\Hy@driver{hpdftex}%
2740       \PassOptionsToPackage{pdftex}{color}%
2741     \else
2742       \def\Hy@driver{hluatex}%
2743       \PassOptionsToPackage{luatex}{color}%
2744     \fi
2745   \else
2746     \Hy@Error{%
2747       Wrong driver option `luatex',\MessageBreak
2748       because luaTeX in PDF mode is not detected%
2749     }\@ehc
2750   \fi
2751 }
2752 \DeclareVoidOption{nativepdf}{%
2753   \HyOpt@CheckDvi{nativepdf}{%
2754     \def\Hy@driver{hdvips}%
2755     \PassOptionsToPackage{dvips}{color}%
2756   }%
2757 }
2758 \DeclareVoidOption{dvipdfm}{%
2759   \HyOpt@CheckDvi{dvipdfm}{%
2760     \def\Hy@driver{hdvipdfm}%
2761   }%
2762 }
2763 \DeclareVoidOption{dvipdfmx}{%
2764   \HyOpt@CheckDvi{dvipdfmx}{%
2765     \def\Hy@driver{hdvipdfm}%
2766     \PassOptionsToPackage{dvipdfmx}{color}%
2767   }%
2768 }
2769 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%

```

```

2770 \expandafter\ifx\csname if#1\expandafter\endcsname
2771     \csname iftrue\endcsname
2772     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2773 \else
2774     \chardef\SpecialDvipdfmxOutlineOpen\z@
2775 \fi
2776 }
2777 \DeclareVoidOption{xetex}{%
2778     \ifxetex
2779         \def\Hy@driver{hxetex}%
2780     \else
2781         \Hy@Error{%
2782             Wrong driver option `xetex',\MessageBreak
2783             because XeTeX is not detected%
2784         }\@ehc
2785     \fi
2786 }
2787 \DeclareVoidOption{pdfmark}{%
2788     \HyOpt@CheckDvi{pdfmark}{%
2789         \def\Hy@driver{hdvips}%
2790     }%
2791 }
2792 \DeclareVoidOption{dvips}{%
2793     \HyOpt@CheckDvi{dvips}{%
2794         \def\Hy@driver{hdvips}%
2795         \PassOptionsToPackage{dvips}{color}%
2796     }%
2797 }
2798 \DeclareVoidOption{hypertex}{%
2799     \HyOpt@CheckDvi{hypertex}{%
2800         \def\Hy@driver{hypertex}%
2801     }%
2802 }
2803 \let\Hy@MaybeStopNow\relax
2804 \DeclareVoidOption{vtex}{%
2805     \ifvtex
2806         \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2807         \def\Hy@driver{hvtex}%
2808     \else
2809         \ifnum\OpMode=10\relax
2810             \def\Hy@driver{hvtexhtm}%
2811             \def\Hy@MaybeStopEarly{%
2812                 \Hy@Message{Stopped early}%
2813                 \Hy@AtBeginDocument{%
2814                     \PDF@FinishDoc
2815                     \gdef\PDF@FinishDoc{}%
2816                 }%
2817             \endinput
2818         }%
2819     \else
2820         \Hy@Error{%
2821             Wrong driver option `vtex',\MessageBreak
2822             because of wrong OpMode (\the\OpMode)%
2823         }\@ehc

```

```

2824 \fi
2825 \fi
2826 \else
2827 \Hy@Error{%
2828   Wrong driver option `vtex',\MessageBreak
2829   because VTeX is not running%
2830 }\@ehc
2831 \fi
2832 }
2833 \DeclareVoidOption{vtexpdfmark}{%
2834 \ifvtex
2835 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2836 \def\Hy@driver{hvtexmrk}%
2837 \else
2838 \Hy@Error{%
2839   Wrong driver option `vtexpdfmark',\MessageBreak
2840   because of wrong OpMode (\the\OpMode)%
2841 }\@ehc
2842 \fi
2843 \else
2844 \Hy@Error{%
2845   Wrong driver option `vtexpdfmark',\MessageBreak
2846   because VTeX is not running%
2847 }\@ehc
2848 \fi
2849 }
2850 \DeclareVoidOption{dviwindo}{%
2851 \HyOpt@CheckDvi{dviwindo}{%
2852 \def\Hy@driver{hdviwind}%
2853 \kvsetkeys{Hyp}{colorlinks}%
2854 \PassOptionsToPackage{dviwindo}{color}%
2855 }%
2856 }
2857 \DeclareVoidOption{dvipsone}{%
2858 \HyOpt@CheckDvi{dvipsone}{%
2859 \def\Hy@driver{hdvipson}%
2860 \PassOptionsToPackage{dvipsone}{color}%
2861 }%
2862 }
2863 \DeclareVoidOption{textures}{%
2864 \HyOpt@CheckDvi{textures}{%
2865 \def\Hy@driver{htexture}%
2866 }%
2867 }
2868 \DeclareVoidOption{latex2html}{%
2869 \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2870   A current html.sty will do all necessary (re)definitions%
2871 }%
2872 }

```

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

```

2873 \DeclareVoidOption{ps2pdf}{%
2874 \HyOpt@CheckDvi{ps2pdf}{%
2875 \def\Hy@driver{hdvips}%
2876 \PassOptionsToPackage{dvips}{color}%

```

```

2877 }%
2878 }

2879 \let\HyOpt@DriverFallback\ltx@empty
2880 \define@key{Hyp}{driverfallback}{%
2881   \ifHy@DviMode
2882     \def\HyOpt@DriverFallback{#1}%
2883     \Hy@Match\HyOpt@DriverFallback}{%
2884       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2885       latex2html|tex4ht)$%
2886     }{}%
2887     \Hy@Warning{%
2888       Invalid driver `#1' for option\MessageBreak
2889       `driverfallback'%
2890     }%
2891     \let\HyOpt@DriverFallback\ltx@empty
2892   }%
2893 \fi
2894 }

2895 \let\HyOpt@CustomDriver\ltx@empty
2896 \define@key{Hyp}{customdriver}{%
2897   \IfFileExists{#1.def}{%
2898     \def\HyOpt@CustomDriver{#1}%
2899   }{}%
2900   \Hy@Warning{%
2901     Missing driver file `#1.def',\MessageBreak
2902     ignoring custom driver%
2903   }%
2904 }%
2905 }

```

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.

```

2906 \define@key{Hyp}{hyperfigures}[true]{%
2907   \Hy@boolkey{hyperfigures}{#1}%
2908 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2909 \define@key{Hyp}{hyperfootnotes}[true]{%
2910   \Hy@boolkey{hyperfootnotes}{#1}%
2911 }

```

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

```

2912 \def\back@none{none}
2913 \def\back@section{section}
2914 \def\back@page{page}
2915 \def\back@slide{slide}
2916 \define@key{Hyp}{backref}[section]{%
2917   \lowercase{\def\Hy@tempa{#1}}%
2918   \ifx\Hy@tempa\@empty
2919     \let\Hy@tempa\back@section
2920   \fi
2921   \ifx\Hy@tempa\Hy@false

```

```

2922 \let\Hy@tempa\back@none
2923 \fi
2924 \ifx\Hy@tempa\back@slide
2925 \let\Hy@tempa\back@section
2926 \fi
2927 \ifx\Hy@tempa\back@page
2928 \PassOptionsToPackage{hyperpageref}{backref}%
2929 \Hy@backreftrue
2930 \else
2931 \ifx\Hy@tempa\back@section
2932 \PassOptionsToPackage{hyperref}{backref}%
2933 \Hy@backreftrue
2934 \else
2935 \ifx\Hy@tempa\back@none
2936 \Hy@backreffalse
2937 \else
2938 \Hy@WarnOptionValue{#1}{backref}{%
2939 `section', `slide', `page', `none',\MessageBreak
2940 or `false'}%
2941 \fi
2942 \fi
2943 \fi
2944 }
2945 \define@key{Hyp}{pagebackref}[true]{%
2946 \edef\Hy@tempa{#1}%
2947 \lowercase\expandafter{%
2948 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2949 }%
2950 \ifx\Hy@tempa\@empty
2951 \let\Hy@tempa\Hy@true
2952 \fi
2953 \ifx\Hy@tempa\Hy@true
2954 \PassOptionsToPackage{hyperpageref}{backref}%
2955 \Hy@backreftrue
2956 \else
2957 \ifx\Hy@tempa\Hy@false
2958 \Hy@backreffalse
2959 \else
2960 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2961 \fi
2962 \fi
2963 }

```

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

```

2964 \define@key{Hyp}{hyperindex}[true]{%
2965 \Hy@boolkey{hyperindex}{#1}%
2966 }

```

Configuration of encap char.

```

2967 \define@key{Hyp}{encap}[|]{%
2968 \def\HyInd@EncapChar{#1}%
2969 }

```

12 Language options

The `\expandafter \cmd@to@cs \string \autoref` feature depends on the language.

```
2970 \def\HyLang@afrikaans{%
2971   \def\equationautorefname{Vergelyking}%
2972   \def\footnoteautorefname{Voetnota}%
2973   \def\itemautorefname{Item}%
2974   \def\figureautorefname{Figuur}%
2975   \def\tableautorefname{Tabel}%
2976   \def\partautorefname{Deel}%
2977   \def\appendixautorefname{Bylae}%
2978   \def\chapterautorefname{Hoofstuk}%
2979   \def\sectionautorefname{Afdeling}%
2980   \def\subsectionautorefname{Subafdeling}%
2981   \def\subsubsectionautorefname{Subsubafdeling}%
2982   \def\paragraphautorefname{Paragraaf}%
2983   \def\subparagraphautorefname{Subparagraaf}%
2984   \def\FancyVerbLineautorefname{Lyn}%
2985   \def\theoremautorefname{Teorema}%
2986   \def\pageautorefname{Bladsy}%
2987 }
2988 \def\HyLang@english{%
2989   \def\equationautorefname{Equation}%
2990   \def\footnoteautorefname{footnote}%
2991   \def\itemautorefname{item}%
2992   \def\figureautorefname{Figure}%
2993   \def\tableautorefname{Table}%
2994   \def\partautorefname{Part}%
2995   \def\appendixautorefname{Appendix}%
2996   \def\chapterautorefname{chapter}%
2997   \def\sectionautorefname{section}%
2998   \def\subsectionautorefname{subsection}%
2999   \def\subsubsectionautorefname{subsubsection}%
3000   \def\paragraphautorefname{paragraph}%
3001   \def\subparagraphautorefname{subparagraph}%
3002   \def\FancyVerbLineautorefname{line}%
3003   \def\theoremautorefname{Theorem}%
3004   \def\pageautorefname{page}%
3005 }
3006 \def\HyLang@french{%
3007   \def\equationautorefname{'equation}%
3008   \def\footnoteautorefname{note}%
3009   \def\itemautorefname{item}%
3010   \def\figureautorefname{figure}%
3011   \def\tableautorefname{tableau}%
3012   \def\partautorefname{partie}%
3013   \def\appendixautorefname{annexe}%
3014   \def\chapterautorefname{chapitre}%
3015   \def\sectionautorefname{section}%
3016   \def\subsectionautorefname{sous-section}%
3017   \def\subsubsectionautorefname{sous-sous-section}%
3018   \def\paragraphautorefname{paragraphe}%
3019   \def\subparagraphautorefname{sous-paragraphe}%

```

```

3020 \def\FancyVerbLineautorefname{ligne}%
3021 \def\theoremautorefname{th\'eor\`eme}%
3022 \def\pageautorefname{page}%
3023 }
3024 \def\HyLang@german{%
3025 \def\equationautorefname{Gleichung}%
3026 \def\footnoteautorefname{Fu\ss note}%
3027 \def\itemautorefname{Punkt}%
3028 \def\figureautorefname{Abbildung}%
3029 \def\tableautorefname{Tabelle}%
3030 \def\partautorefname{Teil}%
3031 \def\appendixautorefname{Anhang}%
3032 \def\chapterautorefname{Kapitel}%
3033 \def\sectionautorefname{Abschnitt}%
3034 \def\subsectionautorefname{Unterabschnitt}%
3035 \def\subsubsectionautorefname{Unterunterabschnitt}%
3036 \def\paragraphautorefname{Absatz}%
3037 \def\subparagraphautorefname{Unterabsatz}%
3038 \def\FancyVerbLineautorefname{Zeile}%
3039 \def\theoremautorefname{Theorem}%
3040 \def\pageautorefname{Seite}%
3041 }
3042 \def\HyLang@italian{%
3043 \def\equationautorefname{Equazione}%
3044 \def\footnoteautorefname{nota}%
3045 \def\itemautorefname{punto}%
3046 \def\figureautorefname{Figura}%
3047 \def\tableautorefname{Tabella}%
3048 \def\partautorefname{Parte}%
3049 \def\appendixautorefname{Appendice}%
3050 \def\chapterautorefname{Capitolo}%
3051 \def\sectionautorefname{sezione}%
3052 \def\subsectionautorefname{sottosezione}%
3053 \def\subsubsectionautorefname{sottosottosezione}%
3054 \def\paragraphautorefname{paragrafo}%
3055 \def\subparagraphautorefname{sottoparagrafo}%
3056 \def\FancyVerbLineautorefname{linea}%
3057 \def\theoremautorefname{Teorema}%
3058 \def\pageautorefname{Pag.\@}%
3059 }
3060 \def\HyLang@magyar{%
3061 \def\equationautorefname{Egyenlet}%
3062 \def\footnoteautorefname{l\'abjegyzet}%
3063 \def\itemautorefname{Elem}%
3064 \def\figureautorefname{'Abra}%
3065 \def\tableautorefname{T\'abl\'azat}%
3066 \def\partautorefname{R\'esz}%
3067 \def\appendixautorefname{F\'uggel\'ek}%
3068 \def\chapterautorefname{fejezet}%
3069 \def\sectionautorefname{szakasz}%
3070 \def\subsectionautorefname{alszakasz}%
3071 \def\subsubsectionautorefname{alalszakasz}%
3072 \def\paragraphautorefname{bekezd\'es}%
3073 \def\subparagraphautorefname{albekezd\'es}%

```

```

3074 \def\FancyVerbLineautorefname{sor}%
3075 \def\theoremautorefname{T\`etel}%
3076 \def\pageautorefname{oldal}%
3077 }
3078 \def\HyLang@portuges{%
3079 \def\equationautorefname{Equa\c c\~ao}%
3080 \def\footnoteautorefname{Nota de rodap\`e}%
3081 \def\itemautorefname{Item}%
3082 \def\figureautorefname{Figura}%
3083 \def\tableautorefname{Tabela}%
3084 \def\partautorefname{Parte}%
3085 \def\appendixautorefname{Ap\`endice}%
3086 \def\chapterautorefname{Cap\`itulo}%
3087 \def\sectionautorefname{Se\c c\~ao}%
3088 \def\subsectionautorefname{Subse\c c\~ao}%
3089 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3090 \def\paragraphautorefname{par\`agrafo}%
3091 \def\subparagraphautorefname{subpar\`agrafo}%
3092 \def\FancyVerbLineautorefname{linha}%
3093 \def\theoremautorefname{Teorema}%
3094 \def\pageautorefname{P\`agina}%
3095 }

```

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`.

```

3096 \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`?

```

3097 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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

```

3098 % \def\equationautorefname{%
3099 %   \cyr\cyrv\cyrery\cyr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3100 % }%

```

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

```

3101 \def\footnoteautorefname{%
3102   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr. \cyrp\cyr\cyri\cyr.
3103 }%

```

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}`”

```

3104 % \def\footnoteautorefname{%
3105 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr\cyro\cyrch\cyrn\cyro\cyre\ %

```



```

3106 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3107 % }%

```

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

```

3108 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3109 % \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.

```

3110 \def\itemautorefname{\cyr\cyrp.}%
3111 % \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.

```

3112 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3113 \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.

```

3114 \def\partautorefname{\cyr\cyrch.}%
3115 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3116 \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.

```

3117 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3118 % \def\appendixautorefname{%
3119 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3120 % }%

```

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.

```

3121 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3122 \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.

```

3123 \def\paragraphautorefname{\cyr\cyrp.}%
3124 \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.

```

3125 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3126 % \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.

```
3127 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3128 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
3129 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3130 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

```
3131 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3132 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
3133 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3134 \def\pageautorefname{\cyr\cyrs.}%
```

```
3135 }
```

```
3136 \def\HyLang@spanish{%
```

```
3137 \def\equationautorefname{Ecuaci\'on}%
```

```
3138 \def\footnoteautorefname{Nota a pie de p\'agina}%
```

```
3139 \def\itemautorefname{Elemento}%
```

```
3140 \def\figureautorefname{Figura}%
```

```
3141 \def\tableautorefname{Tabla}%
```

```
3142 \def\partautorefname{Parte}%
```

```
3143 \def\appendixautorefname{Ap\'endice}%
```

```
3144 \def\chapterautorefname{Cap\'itulo}%
```

```
3145 \def\sectionautorefname{Secci\'on}%
```

```
3146 \def\subsectionautorefname{Subsecci\'on}%
```

```
3147 \def\subsubsectionautorefname{Subsubsecci\'on}%
```

```
3148 \def\paragraphautorefname{P\'arrafo}%
```

```
3149 \def\subparagraphautorefname{Subp\'arrafo}%
```

```
3150 \def\FancyVerbLineautorefname{L\'inea}%
```

```
3151 \def\theoremautorefname{Teorema}%
```

```
3152 \def\pageautorefname{P\'agina}%
```

```
3153 }
```

```
3154 \def\HyLang@catalan{%
```

```
3155 \def\equationautorefname{Equaci\'o}%
```

```
3156 \def\footnoteautorefname{Nota al peu de p\'agina}%
```

```
3157 \def\itemautorefname{Element}%
```

```
3158 \def\figureautorefname{Figura}%
```

```
3159 \def\tableautorefname{Taula}%
```

```
3160 \def\partautorefname{Part}%
```

```
3161 \def\appendixautorefname{Ap\'endix}%
```

```
3162 \def\chapterautorefname{Cap\'itol}%
```

```
3163 \def\sectionautorefname{Secci\'o}%
```

```
3164 \def\subsectionautorefname{Subsecci\'o}%
```



```

3204 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
      ctonos\texteta}%
3205 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\text-
      rho\texteta\textmu\textalpha}%
3206 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\text-
      alpha}%
3207 }

3208 \def\HyLang@dutch{%
3209   \def\equationautorefname{Vergelijking}%
3210   \def\footnoteautorefname{voetnoot}%
3211   \def\itemautorefname{punt}%
3212   \def\figureautorefname{Figuur}%
3213   \def\tableautorefname{Tabel}%
3214   \def\partautorefname{Deel}%
3215   \def\appendixautorefname{Bijlage}%
3216   \def\chapterautorefname{hoofdstuk}%
3217   \def\sectionautorefname{paragraaf}%
3218   \def\subsectionautorefname{deelparagraaf}%
3219   \def\subsubsectionautorefname{deel-deelparagraaf}%
3220   \def\paragraphautorefname{alinea}%
3221   \def\subparagraphautorefname{deelalinea}%
3222   \def\FancyVerbLineautorefname{regel}%
3223   \def\theoremautorefname{Stelling}%
3224   \def\pageautorefname{pagina}%
3225 }

3226 \def\HyLang@norsk{%
3227   \def\equationautorefname{Ligning}%
3228   \def\footnoteautorefname{fotnote}%
3229   \def\itemautorefname{element}%
3230   \def\figureautorefname{Figur}%
3231   \def\tableautorefname{Tabell}%
3232   \def\partautorefname{Del}%
3233   \def\appendixautorefname{Tillegg}%
3234   \def\chapterautorefname{kapittel}%
3235   \def\sectionautorefname{seksjon}%
3236   \def\subsectionautorefname{underseksjon}%
3237   \def\subsubsectionautorefname{under-underseksjon}%
3238   \def\paragraphautorefname{avsnitt}%
3239   \def\subparagraphautorefname{underavsnitt}%
3240   \def\FancyVerbLineautorefname{Linje}%
3241   \def\theoremautorefname{Teorem}%
3242   \def\pageautorefname{side}%
3243 }

3244 \def\HyLang@danish{%
3245   \def\equationautorefname{Ligning}%
3246   \def\footnoteautorefname{fodnote}%
3247   \def\itemautorefname{element}%
3248   \def\figureautorefname{Figur}%
3249   \def\tableautorefname{Tabel}%
3250   \def\partautorefname{Del}%
3251   \def\appendixautorefname{Bilag}%
3252   \def\chapterautorefname{kapitel}%
3253   \def\sectionautorefname{sektion}%
3254   \def\subsectionautorefname{under-sektion}%

```

```

3255 \def\subsubsectionautorefname{under-under-sektion}%
3256 \def\paragraphautorefname{afsnit}%
3257 \def\subparagraphautorefname{underafsnit}%
3258 \def\FancyVerbLineautorefname{linje}%
3259 \def\theoremautorefname{Teorem}%
3260 \def\pageautorefname{side}%
3261 }

```

Instead of package babel's definition of `\expandafter \cmd@to@cs \string \addto` the implementation of package `varioref` is used. Additionally argument `#1` is checked for `\expandafter \cmd@to@cs \string \relax` .

```

3262 \def\HyLang@addto#1#2{%
3263   #2%
3264   \@temptokena{#2}%
3265   \ifx#1\relax
3266     \let#1\@empty
3267   \fi
3268   \ifx#1\@undefined
3269     \edef#1{\the\@temptokena}%
3270   \else
3271     \toks@\expandafter{#1}%
3272     \edef#1{\the\toks@\the\@temptokena}%
3273   \fi
3274   \@temptokena{}\toks@\@temptokena
3275 }

3276 \def\HyLang@DeclareLang#1#2#3{%
3277   \ifpackagewith{babel}{#1}{%
3278     \expandafter\HyLang@addto
3279     \csname extras#1\expandafter\endcsname
3280     \csname HyLang@#2\endcsname
3281     \begingroup
3282     \edef\x{\endgroup
3283       #3%
3284     }%
3285     \x
3286     \@namedef{HyLang@#1@done}{}%
3287   }{%
3288     \begingroup
3289     \edef\x#1#2{%
3290       \noexpand\ifx##2\relax
3291         \errmessage{No definitions for language #2' found!}%
3292       \noexpand\fi
3293     \endgroup
3294     \noexpand\define@key{Hyp}{#1}[]{%
3295       \noexpand\@ifundefined{HyLang@#1@done}{%
3296         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3297         #3%
3298         \noexpand\@namedef{HyLang@#1@done}{}%
3299       }{%
3300       }%
3301     }%
3302     \expandafter\x\csname extras#1\expandafter\endcsname
3303     \csname HyLang@#2\endcsname
3304 }

```

```

3305 \HyLang@DeclareLang{english}{english}{}
3306 \HyLang@DeclareLang{UKenglish}{english}{}
3307 \HyLang@DeclareLang{british}{english}{}
3308 \HyLang@DeclareLang{USenglish}{english}{}
3309 \HyLang@DeclareLang{american}{english}{}
3310 \HyLang@DeclareLang{german}{german}{}
3311 \HyLang@DeclareLang{austrian}{german}{}
3312 \HyLang@DeclareLang{ngerman}{german}{}
3313 \HyLang@DeclareLang{naustrian}{german}{}
3314 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3315 \HyLang@DeclareLang{brazil}{portuges}{}
3316 \HyLang@DeclareLang{brazilian}{portuges}{}
3317 \HyLang@DeclareLang{portuguese}{portuges}{}
3318 \HyLang@DeclareLang{spanish}{spanish}{}
3319 \HyLang@DeclareLang{catalan}{catalan}{}
3320 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3321 \HyLang@DeclareLang{french}{french}{}
3322 \HyLang@DeclareLang{frenchb}{french}{}
3323 \HyLang@DeclareLang{francais}{french}{}
3324 \HyLang@DeclareLang{acadian}{french}{}
3325 \HyLang@DeclareLang{canadien}{french}{}
3326 \HyLang@DeclareLang{italian}{italian}{}
3327 \HyLang@DeclareLang{magyar}{magyar}{}
3328 \HyLang@DeclareLang{hungarian}{magyar}{}
3329 \HyLang@DeclareLang{greek}{greek}{}
3330 \HyLang@DeclareLang{dutch}{dutch}{}
3331 \HyLang@DeclareLang{norsk}{norsk}{}
3332 \HyLang@DeclareLang{norwegian}{norsk}{}
3333 \HyLang@DeclareLang{danish}{danish}{}

```

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

```

3334 \DeclareVoidOption{vietnamese}{%
3335   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3336   \Hy@AtEndOfPackage{%
3337     \@ifundefined{T@PU}{}{}%
3338     \input{puvnenc.def}%
3339   }%
3340 }%
3341 }
3342 \DeclareVoidOption{vietnam}{%
3343   \HyLang@addto\extravietnam\HyLang@vietnamese
3344   \Hy@AtEndOfPackage{%
3345     \@ifundefined{T@PU}{}{}%
3346     \input{puvnenc.def}%
3347   }%
3348 }%
3349 }

```

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

```

3350 \DeclareVoidOption{arabic}{%
3351   \Hy@AtEndOfPackage{%
3352     \@ifundefined{T@PU}{}{}%
3353     \input{puarenc.def}%
3354   }%
3355 }%

```

```
3356 }
```

13 Options to change appearance of links

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

```
3357 \define@key{Hyp}{colorlinks}[true]{%
3358   \Hy@boolkey{colorlinks}{#1}%
3359 }
3360 \DeclareVoidOption{hidelinks}{%
3361   \Hy@colorlinksfalse
3362   \Hy@ocgcolorlinksfalse
3363   \Hy@frenchlinksfalse
3364   \def\Hy@colorlink##1{\begingroup}%
3365   \def\Hy@endcolorlink{\endgroup}%
3366   \def\@pdfborder{0 0 0}%
3367   \let\@pdfborderstyle\ltx@empty
3368 }
3369 \define@key{Hyp}{ocgcolorlinks}[true]{%
3370   \Hy@boolkey{ocgcolorlinks}{#1}%
3371 }
3372 \Hy@AtBeginDocument{%
3373   \begingroup
3374   \@ifundefined{OBJ@OCG@view}{%
3375     \ifHy@ocgcolorlinks
3376       \Hy@Warning{%
3377         Driver does not support `ocgcolorlinks',\MessageBreak
3378         using `colorlinks' instead%
3379       }%
3380     \fi
3381   }{}%
3382   \endgroup
3383 }
3384 \define@key{Hyp}{frenchlinks}[true]{%
3385   \Hy@boolkey{frenchlinks}{#1}%
3386 }
```

14 Bookmarking

```
3387 \begingroup\expandafter\expandafter\expandafter\endgroup
3388 \expandafter\ifx\csname chapter\endcsname\relax
3389   \def\toclevel@part{0}%
3390 \else
3391   \def\toclevel@part{-1}%
3392 \fi
3393 \def\toclevel@chapter{0}
3394 \def\toclevel@section{1}
3395 \def\toclevel@subsection{2}
3396 \def\toclevel@subsubsection{3}
3397 \def\toclevel@paragraph{4}
3398 \def\toclevel@subparagraph{5}
3399 \def\toclevel@figure{0}
3400 \def\toclevel@table{0}
```

```

3401 \define@key{Hyp}{bookmarks}[true]{%
3402   \Hy@boolkey{bookmarks}{#1}%
3403 }

3404 \define@key{Hyp}{bookmarksopen}[true]{%
3405   \Hy@boolkey{bookmarksopen}{#1}%
3406 }

```

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.

```

3407 \let\Hy@bookmarksdepth\c@tocdepth
3408 \define@key{Hyp}{bookmarksdepth}[]{%
3409   \begingroup
3410     \edef\x{#1}%
3411     \ifx\x\empty
3412       \global\let\Hy@bookmarksdepth\c@tocdepth
3413     \else
3414       \@ifundefined{toclevel@\x}{%
3415         \@onelevel@sanitize\x
3416         \edef\y{\expandafter\@car\x\@nil}%
3417         \ifcase 0\expandafter\ifx\y-1\fi
3418           \expandafter\ifnum\expandafter`y>47 %
3419             \expandafter\ifnum\expandafter`y<58 1\fi\fi\relax
3420           \Hy@Warning{Unknown document division name (\x)}%
3421         \else
3422           \setbox\z@=\hbox{%
3423             \count@=\x
3424             \xdef\Hy@bookmarksdepth{\the\count@}%
3425           }%
3426         \fi
3427       }{%
3428         \setbox\z@=\hbox{%
3429           \count@=\csname toclevel@\x\endcsname
3430           \xdef\Hy@bookmarksdepth{\the\count@}%
3431         }%
3432       }%
3433     \fi
3434   \endgroup
3435 }

```

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

```

3436 \define@key{Hyp}{bookmarksopenlevel}{%
3437   \def\@bookmarksopenlevel{#1}%
3438 }

3439 \def\@bookmarksopenlevel{\maxdimen}
3440 % `bookmarkstype' to specify which `toc' file to mimic
3441 \define@key{Hyp}{bookmarkstype}{%

```



```

3442 \def\Hy@bookmarkstype{#1}%
3443 }
3444 \def\Hy@bookmarkstype{toc}

```

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

```

3445 \define@key{Hyp}{bookmarksnumbered}[true]{%
3446 \Hy@boolkey{bookmarksnumbered}{#1}%
3447 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3448 \define@key{Hyp}{CJKbookmarks}[true]{%
3449 \Hy@boolkey{CJKbookmarks}{#1}%
3450 }

3451 \def\Hy@temp#1{%
3452 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3453 }
3454 \def\Hy@@temp#1#2#3{%
3455 \define@key{Hyp}{#2color}{%
3456 \HyColor@HyperrefColor{##1}#1%
3457 }%
3458 \def#1{#3}%
3459 }
3460 \Hy@temp{link}{red}
3461 \Hy@temp{anchor}{black}
3462 \Hy@temp{cite}{green}
3463 \Hy@temp{file}{cyan}
3464 \Hy@temp{url}{magenta}
3465 \Hy@temp{menu}{red}
3466 \Hy@temp{run}{\@filecolor}
3467 \define@key{Hyp}{pagecolor}{%
3468 \Hy@WarningPageColor
3469 }
3470 \def\Hy@WarningPageColor{%
3471 \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3472 \global\let\Hy@WarningPageColor\relax
3473 }
3474 \define@key{Hyp}{allcolors}{%
3475 \HyColor@HyperrefColor{#1}\@linkcolor
3476 \HyColor@HyperrefColor{#1}\@anchorcolor
3477 \HyColor@HyperrefColor{#1}\@citecolor
3478 \HyColor@HyperrefColor{#1}\@filecolor
3479 \HyColor@HyperrefColor{#1}\@urlcolor
3480 \HyColor@HyperrefColor{#1}\@menucolor
3481 \HyColor@HyperrefColor{#1}\@runcolor
3482 }

3483 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3484 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3485 \let\@baseurl\@empty
3486 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3487 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3488 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

`\@pdfpagetransition` The value of option `pdfpagetransition` is stored in `\@expandafter \cmd@to@cs \string \@pdfpagetransition`. Its initial value is set to `\@expandafter \cmd@to@cs \string \relax` in order to be able to differentiate between a not used option and an option with an empty value.

```
3489 \let\@pdfpagetransition\relax
3490 \define@key{Hyp}{pdfpagetransition}{%
3491   \def\@pdfpagetransition{#1}%
3492 }
```

`\@pdfpageduration` The value of option `pdfpageduration` is stored in `\@expandafter \cmd@to@cs \string \@pdfpageduration`. Its initial value is set to `\@expandafter \cmd@to@cs \string \relax` in order to be able to differentiate between a not used option and an option with an empty value.

```
3493 \let\@pdfpageduration\relax
3494 \define@key{Hyp}{pdfpageduration}{%
3495   \def\@pdfpageduration{#1}%
3496   \Hy@Match\@pdfpageduration}{%
3497     ^([|0-9]+\.\?[0-9]*|[0-9]*\.\?[0-9]+)$%
3498   }{ {%
3499     \Hy@Warning{%
3500       Invalid value ` \@pdfpageduration'\MessageBreak
3501       of option `pdfpageduration'\MessageBreak
3502       is replaced by an empty value%
3503     }%
3504     \let\@pdfpageduration\ltx@empty
3505   }%
3506 }
```

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).

```
3507 \def\Hy@ColorList{cite,file,link,menu,run,url}
3508 \@for\Hy@temp:=\Hy@ColorList\do{%
3509   \edef\Hy@temp{%
3510     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3511       \noexpand\HyColor@HyperrefBorderColor
3512       {##1}%
3513       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3514       {hyperref}%
3515       {\Hy@temp bordercolor}%
3516     }%
3517   }%
3518   \Hy@temp
3519 }
3520 \define@key{Hyp}{pagebordercolor}{%
```

```

3521 \Hy@WarningPageBorderColor
3522 }
3523 \def\Hy@WarningPageBorderColor{%
3524 \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3525 \global\let\Hy@WarningPageBorderColor\relax
3526 }
3527 \define@key{Hyp}{allbordercolors}{%
3528 \def\Hy@temp##1##2{%
3529 \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3530 }%
3531 \Hy@temp\@citebordercolor{cite}%
3532 \Hy@temp\@filebordercolor{file}%
3533 \Hy@temp\@linkbordercolor{link}%
3534 \Hy@temp\@menubordercolor{menu}%
3535 \Hy@temp\@runbordercolor{run}%
3536 \Hy@temp\@urlbordercolor{url}%
3537 }

3538 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3539 \Hy@DefNameKey{pdfhighlight}{%
3540 \do{/I}{Invert}%
3541 \do{/N}{None}%
3542 \do{/O}{Outline}%
3543 \do{/P}{Push}%
3544 }
3545 \def\Hy@setpdfhighlight{%
3546 \ifx\@pdfhighlight\@empty
3547 \else
3548 /H\@pdfhighlight
3549 \fi
3550 }
3551 \define@key{Hyp}{pdfborder}{%
3552 \let\Hy@temp\@pdfborder
3553 \def\@pdfborder{#1}%
3554 \Hy@Match\@pdfborder{}{%
3555 ~\HyPat@NonNegativeReal/ %
3556 \HyPat@NonNegativeReal/ %
3557 \HyPat@NonNegativeReal/%
3558 ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*\])?$$%
3559 }{}{%
3560 \Hy@Warning{%
3561 Invalid value `\'@pdfborder'\MessageBreak
3562 for option `pdfborder'.\MessageBreak
3563 Option setting is ignored%
3564 }%
3565 \let\@pdfborder\Hy@temp
3566 }%
3567 }
3568 \define@key{Hyp}{pdfborderstyle}{%
3569 \let\Hy@temp\@pdfborderstyle
3570 \def\@pdfborderstyle{#1}%
3571 \Hy@Match\@pdfborderstyle{}{%
3572 ~%
3573 ( */Type */Border%
3574 | */W +\HyPat@NonNegativeReal/%

```

```

3575 | */S */[SDBIU]%
3576 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?]%
3577 )* *$%
3578 }{}{%
3579 \Hy@Warning{%
3580 Invalid value ` \@pdfborderstyle'\MessageBreak
3581 for option `pdfborderstyle'.\MessageBreak
3582 Option setting is ignored%
3583 }%
3584 \let\@pdfborderstyle\Hy@temp
3585 }%
3586 }
3587 \def\Hy@setpdfborder{%
3588 \ifx\@pdfborder\@empty
3589 \else
3590 /Border[\@pdfborder]%
3591 \fi
3592 \ifx\@pdfborderstyle\@empty
3593 \else
3594 /BS<<\@pdfborderstyle>>%
3595 \fi
3596 }
3597 \Hy@DefNameKey{pdfpagemode}{%
3598 \do{UseNone}{}%
3599 \do{UseOutlines}{}%
3600 \do{UseThumbs}{}%
3601 \do{FullScreen}{}%
3602 \do{UseOC}{PDF 1.5}%
3603 \do{UseAttachments}{PDF 1.6}%
3604 }
3605 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3606 \do{UseNone}{}%
3607 \do{UseOutlines}{}%
3608 \do{UseThumbs}{}%
3609 \do{FullScreen}{}%
3610 \do{UseOC}{PDF 1.5}%
3611 \do{UseAttachments}{PDF 1.6}%
3612 }
3613 \Hy@DefNameKey{pdfdirection}{%
3614 \do{L2R}{Left to right}%
3615 \do{R2L}{Right to left}%
3616 }
3617 \Hy@DefNameKey{pdfviewarea}{%
3618 \do{MediaBox}{}%
3619 \do{CropBox}{}%
3620 \do{BleedBox}{}%
3621 \do{TrimBox}{}%
3622 \do{ArtBox}{}%
3623 }
3624 \Hy@DefNameKey{pdfviewclip}{%
3625 \do{MediaBox}{}%
3626 \do{CropBox}{}%
3627 \do{BleedBox}{}%
3628 \do{TrimBox}{}%

```

```

3629 \do{ArtBox}{}%
3630 }
3631 \Hy@DefNameKey{pdfprintarea}{%
3632 \do{MediaBox}{}%
3633 \do{CropBox}{}%
3634 \do{BleedBox}{}%
3635 \do{TrimBox}{}%
3636 \do{ArtBox}{}%
3637 }
3638 \Hy@DefNameKey{pdfprintclip}{%
3639 \do{MediaBox}{}%
3640 \do{CropBox}{}%
3641 \do{BleedBox}{}%
3642 \do{TrimBox}{}%
3643 \do{ArtBox}{}%
3644 }
3645 \Hy@DefNameKey{pdfprintscaling}{%
3646 \do{AppDefault}{}%
3647 \do{None}{}%
3648 }
3649 \Hy@DefNameKey{pdfduplex}{%
3650 \do{Simplex}{}%
3651 \do{DuplexFlipShortEdge}{}%
3652 \do{DuplexFlipLongEdge}{}%
3653 }
3654 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3655 \do{true}{}%
3656 \do{false}{}%
3657 }
3658 \define@key{Hyp}{pdfprintpagerange}{%
3659 \def\@pdfprintpagerange{#1}%
3660 }
3661 \Hy@DefNameKey{pdfnumcopies}{%
3662 \do{2}{two copies}%
3663 \do{3}{three copies}%
3664 \do{4}{four copies}%
3665 \do{5}{five copies}%
3666 }
3667 \define@key{Hyp}{pdfusetitle}[true]{%
3668 \Hy@boolkey{pdfusetitle}{#1}%
3669 }
3670 \def\HyXeTeX@CheckUnicode{%
3671 \ifxetex
3672 \ifHy@unicode
3673 \else
3674 \Hy@WarningNoLine{%
3675 XeTeX driver only supports unicode.\MessageBreak
3676 Enabling option `unicode'%
3677 }%
3678 \kvsetkeys{Hyp}{unicode}%
3679 \fi
3680 \else
3681 \let\HyXeTeX@CheckUnicode\relax
3682 \fi

```

```

3683 }
3684 \def\HyPsd@PrerenderUnicode#1{%
3685   \begingroup
3686   \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3687   \else
3688     \sbox0{%
3689       \let\GenericInfo\@gobbletwo
3690       \let\GenericWarning\@gobbletwo
3691       \let\GenericError\@gobblefour
3692       \PrerenderUnicode{#1}%
3693     }%
3694   \fi
3695 \endgroup
3696 }
3697 \define@key{Hyp}{pdftitle}{%
3698   \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3699   \HyXeTeX@CheckUnicode
3700   \HyPsd@PrerenderUnicode{#1}%
3701   \pdfstringdef\@pdftitle{#1}%
3702 }
3703 \define@key{Hyp}{pdfauthor}{%
3704   \AddToDocumentProperties[hyperref]{pdfauthor}{#1}%
3705   \HyXeTeX@CheckUnicode
3706   \HyPsd@PrerenderUnicode{#1}%
3707   \pdfstringdef\@pdfauthor{#1}%
3708 }
3709 \define@key{Hyp}{pdfproducer}{%
3710   \AddToDocumentProperties[hyperref]{pdfproducer}{#1}%
3711   \HyXeTeX@CheckUnicode
3712   \HyPsd@PrerenderUnicode{#1}%
3713   \pdfstringdef\@pdfproducer{#1}%
3714 }
3715 \define@key{Hyp}{pdfcreator}{%
3716   \AddToDocumentProperties[hyperref]{pdfcreator}{#1}%
3717   \HyXeTeX@CheckUnicode
3718   \HyPsd@PrerenderUnicode{#1}%
3719   \pdfstringdef\@pdfcreator{#1}%
3720 }
3721 \define@key{Hyp}{addtopdfcreator}{%
3722   \HyXeTeX@CheckUnicode
3723   \HyPsd@PrerenderUnicode{#1}%
3724   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3725 }
3726 \define@key{Hyp}{pdfcreationdate}{%
3727   \begingroup
3728   \Hy@unicodetofalse
3729   \pdfstringdef\@pdfcreationdate{#1}%
3730 \endgroup
3731 }
3732 \define@key{Hyp}{pdfmoddate}{%
3733   \begingroup
3734   \Hy@unicodetofalse
3735   \pdfstringdef\@pdfmoddate{#1}%
3736 \endgroup

```

```

3737 }
3738 \define@key{Hyp}{pdfsubject}{%
3739 \AddToDocumentProperties[hyperref]{pdfsubject}{#1}%
3740 \HyXeTeX@CheckUnicode
3741 \HyPsd@PrerenderUnicode{#1}%
3742 \pdfstringdef\@pdfsubject{#1}%
3743 }
3744 \define@key{Hyp}{pdfkeywords}{%
3745 \AddToDocumentProperties[hyperref]{pdfkeywords}{#1}%
3746 \HyXeTeX@CheckUnicode
3747 \HyPsd@PrerenderUnicode{#1}%
3748 \pdfstringdef\@pdfkeywords{#1}%
3749 }
3750 \define@key{Hyp}{pdftrapped}{%
3751 \lowercase{\edef\Hy@temp{#1}}%
3752 \ifx\Hy@temp\HyInfo@trapped@true
3753 \def\@pdftrapped{True}%
3754 \else
3755 \ifx\Hy@temp\HyInfo@trapped@false
3756 \def\@pdftrapped{False}%
3757 \else
3758 \ifx\Hy@temp\HyInfo@trapped@unknown
3759 \def\@pdftrapped{Unknown}%
3760 \else
3761 \ifx\Hy@temp\@empty
3762 \else
3763 \Hy@Warning{%
3764     Unsupported value `#1'\MessageBreak
3765     for option `pdftrapped'%
3766 }%
3767 \fi
3768 \def\@pdftrapped{}%
3769 \fi
3770 \fi
3771 \fi
3772 }
3773 \def\HyInfo@trapped@true{true}
3774 \def\HyInfo@trapped@false{false}
3775 \def\HyInfo@trapped@unknown{unknown}
3776 \def\HyInfo@TrappedUnsupported{%
3777 \ifx\@pdftrapped\@empty
3778 \else
3779 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
3780 \gdef\HyInfo@TrappedUnsupported{}%
3781 \fi
3782 }
3783 \define@key{Hyp}{pdffinfo}{%
3784 \kvsetkeys{pdffinfo}{#1}%
3785 }
3786 \def\Hy@temp#1{%
3787 \lowercase{\Hy@temp@A{#1}}{#1}%
3788 }
3789 \def\Hy@temp@A#1#2{%
3790 \define@key{pdffinfo}{#2}{%

```

```

3791 \hypersetup{pdf#1={##1}}%
3792 }%
3793 }
3794 \Hy@temp{Title}
3795 \Hy@temp{Author}
3796 \Hy@temp{Keywords}
3797 \Hy@temp{Subject}
3798 \Hy@temp{Creator}
3799 \Hy@temp{Producer}
3800 \Hy@temp{CreationDate}
3801 \Hy@temp{ModDate}
3802 \Hy@temp{Trapped}
3803 \newif\ifHyInfo@AddonUnsupported
3804 \kv@set@family@handler{pdfinfo}{%
3805 \HyInfo@AddonHandler{#1}{#2}%
3806 }
3807 \let\HyInfo@do\relax
3808 \def\HyInfo@AddonHandler#1#2{%
3809 \ifx\kv@value\relax
3810 \Hy@Warning{%
3811 Option `pdfinfo': ignoring key `\'kv@key' without value%
3812 }%
3813 \else
3814 \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
3815 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3816 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3817 \ifHyInfo@AddonUnsupported
3818 \Hy@Warning{%
3819 This driver does not support additional\MessageBreak
3820 information entries, therefore\MessageBreak
3821 `\'kv@key' is ignored%
3822 }%
3823 \else
3824 \def\HyInfo@tmp##1{%
3825 \kv@define@key{pdfinfo}{##1}{%
3826 \HyXeTeX@CheckUnicode
3827 \HyPsd@PrerenderUnicode{####1}%
3828 \pdfstringdef\HyInfo@Value{####1}%
3829 \global\expandafter
3830 \let\csname HyInfo@Value@##1\endcsname
3831 \HyInfo@Value
3832 }%
3833 }%
3834 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3835 \global\expandafter
3836 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3837 \csname KV@pdfinfo@\HyInfo@Key\endcsname
3838 \xdef\HyInfo@AddonList{%
3839 \HyInfo@AddonList
3840 \HyInfo@do{\HyInfo@Key}%
3841 }%
3842 \kv@parse@normalized{%
3843 \HyInfo@Key={#2}%
3844 }{%

```



```

3845     \kv@processor@default{pdfinfo}%
3846   }%
3847   \fi
3848   \else
3849     \kv@parse@normalized{%
3850       \HyInfo@Key={#2}%
3851     }{%
3852       \kv@processor@default{pdfinfo}%
3853     }%
3854   \fi
3855 \fi
3856 }
3857 \def\HyInfo@GenerateAddons{%
3858   \ifHyInfo@AddonUnsupported
3859     \def\HyInfo@Addons{}%
3860   \else
3861     \begingroup
3862     \toks@{}%
3863     \def\HyInfo@do##1{%
3864       \EdefEscapeName\HyInfo@Key{##1}%
3865       \edef\x{%
3866         \toks@{%
3867           \the\toks@
3868           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3869         }%
3870       }%
3871       \x
3872     }%
3873     \HyInfo@AddonList
3874     \edef\x{\endgroup
3875       \def\noexpand\HyInfo@Addons{\the\toks@}%
3876     }%
3877     \x
3878   \fi
3879 }
3880 \global\let\HyInfo@AddonList\ltx@empty
3881 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3882 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
3883 \let\setpdflinkmargin@gobble
3884 \def\calculate@pdfview#1 #2\{%
3885   \def\@pdfview{#1}%
3886   \ifx\#2\%
3887     \def\@pdfviewparams{-32768}%
3888   \else
3889     \def\@pdfviewparams{#2}%
3890   \fi
3891 }
3892 \def\Hy@number#1{%
3893   \the\numexpr#1\relax
3894 }%
3895 \define@key{Hyp}{pdfstartpage}{%
3896   \ifx\#1\%
3897     \let\@pdfstartpage\ltx@empty
3898   \else

```

```

3899 \edef\@pdfstartpage{\Hy@number{#1}}%
3900 \fi
3901 }%
3902 \define@key{Hyp}{pdfstartview}{%
3903 \ifx\#1\%
3904 \let\@pdfstartview\ltx@empty
3905 \else
3906 \def\@pdfstartview{/#1}%
3907 \fi
3908 }
3909 \def\HyPat@NonNegativeReal/{%
3910 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3911 }
3912 \define@key{Hyp}{pdfremotestartview}{%
3913 \ifx\#1\%
3914 \def\@pdfremotestartview{/Fit}%
3915 \else
3916 \edef\@pdfremotestartview{#1}%
3917 \Hy@Match\@pdfremotestartview{}{%
3918 ^{XYZ(%
3919 ()| %
3920 (null|-?\HyPat@NonNegativeReal/) %
3921 (null|-?\HyPat@NonNegativeReal/) %
3922 (null|\HyPat@NonNegativeReal/)%
3923 )| % end of "XYZ"
3924 Fit(%
3925 ()| %
3926 B| %
3927 (H|V|BH|BV)(%
3928 ()| %
3929 (null|\HyPat@NonNegativeReal/)%
3930 )| %
3931 R %
3932 \HyPat@NonNegativeReal/ %
3933 \HyPat@NonNegativeReal/ %
3934 \HyPat@NonNegativeReal/ %
3935 \HyPat@NonNegativeReal/%
3936 ) % end of "Fit"
3937 )$%
3938 }{}{%
3939 \Hy@Warning{%
3940 Invalid value `'\@pdfremotestartview'\MessageBreak
3941 of `pdfremotestartview'\MessageBreak
3942 is replaced by `Fit'%
3943 }%
3944 \let\@pdfremotestartview\@empty
3945 }%
3946 \ifx\@pdfremotestartview\@empty
3947 \def\@pdfremotestartview{/Fit}%
3948 \else
3949 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3950 \fi
3951 \fi
3952 }

```

```

3953 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3954 \define@key{Hyp}{pdftoolbar}[true]{%
3955   \Hy@boolkey{pdftoolbar}{#1}%
3956 }
3957 \define@key{Hyp}{pdfmenubar}[true]{%
3958   \Hy@boolkey{pdfmenubar}{#1}%
3959 }
3960 \define@key{Hyp}{pdfwindowui}[true]{%
3961   \Hy@boolkey{pdfwindowui}{#1}%
3962 }
3963 \define@key{Hyp}{pdffitwindow}[true]{%
3964   \Hy@boolkey{pdffitwindow}{#1}%
3965 }
3966 \define@key{Hyp}{pdfcenterwindow}[true]{%
3967   \Hy@boolkey{pdfcenterwindow}{#1}%
3968 }
3969 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3970   \Hy@boolkey{pdfdisplaydoctitle}{#1}%
3971 }
3972 \define@key{Hyp}{pdfa}[true]{%
3973   \Hy@boolkey{pdfa}{#1}%
3974 }
3975 \define@key{Hyp}{pdfnewwindow}[true]{%
3976   \def\Hy@temp{#1}%
3977   \ifx\Hy@temp\@empty
3978     \Hy@pdfnewwindowsetfalse
3979   \else
3980     \Hy@pdfnewwindowsettrue
3981     \Hy@boolkey{pdfnewwindow}{#1}%
3982   \fi
3983 }
3984 \def\Hy@SetNewWindow{%
3985   \ifHy@pdfnewwindowset
3986     /NewWindow %
3987   \ifHy@pdfnewwindow true\else false\fi
3988 }
3989 }
3990 \Hy@DefNameKey{pdfpagelayout}{%
3991   \do{SinglePage}{}%
3992   \do{OneColumn}{}%
3993   \do{TwoColumnLeft}{}%
3994   \do{TwoColumnRight}{}%
3995   \do{TwoPageLeft}{PDF 1.5}%
3996   \do{TwoPageRight}{PDF 1.5}%
3997 }
3998 \define@key{Hyp}{pdflang}{%
3999   \edef\@pdflang{#1}%
4000   \def\Hy@temp{\relax}%
4001   \ifx\@pdflang\Hy@temp
4002     \let\@pdflang\relax
4003   \fi
4004   \ifx\@pdflang\relax
4005   \else
4006     \ifx\@pdflang\ltx@empty

```

4007 \else

Test according to ABNF of RFC 3066.

```
4008     \Hy@Match\@pdflang{icase}{%
4009       ~%
4010       [a-z]{1,8}%
4011       (-[a-z0-9]{1,8})*%
4012       $%
4013     }%
```

Test according to ABNF of RFC 5646.

```
4014     \Hy@Match\@pdflang{icase}{%
4015       ~%
4016       (%
4017        % langtag
4018        (% language
4019         [a-z]{2,3}%
4020         ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4021         |[a-z]{4}% reserved for future use
4022         |[a-z]{5,8}% registered language subtag
4023        )%
4024        (-[a-z]{4})?% script
4025        (-(a-z){2}|[0-9]{3})?% region
4026        (-(a-z){5,8}|[0-9][a-z0-9]{3}))*% variant
4027        (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4028        (-x(-[a-z0-9]{1,8})+)?% privateuse
4029        % privateuse
4030        |x(-[a-z0-9]{1,8})+%
4031        % grandfathered/irregular
4032        |en-GB-oed%
4033        |i-(ami|bnn|default|enochian|hak|klinton|lux|
4034         mingo|navajo|pwn|tao|tay|tsu)%
4035        |sgn-(BE-FR|BE-NL|CH-DE)%
4036        % grandfathered/regular
4037        |art-lojban%
4038        |cel-gaulish%
4039        |no-(bok|nyn)%
4040        |zh-(guoyu|hakka|min|min-nan|xiang)%
4041        )%
4042        $%
4043     }%
```

Test for unique extensions.

```
4044     \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4045       \Hy@Match\@pdflang{icase}{~x-}{%
4046        % remove privateuse
4047        \edef\Hy@temp{-\@pdflang}%
4048        \Hy@Match\Hy@temp{icase}{%
4049         ~%
4050         (%
4051         (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4052         )%
4053         -x-%
4054        }%
4055        \edef\Hy@temp{%
```

```

4056         \expandafter\strip@prefix\pdfastmatch1%
4057     }%
4058 }{}%
4059 \Hy@Match\Hy@temp{icase}{%
4060     (-[a-wyz0-9]-).*\ltx@backslashchar1%
4061 }{%
4062     \Hy@Warning{%
4063         Invalid language identifier `#1'\MessageBreak
4064         for option `pdfang', because it violates\MessageBreak
4065         well-formedness defined in RFC 4646\MessageBreak
4066         by duplicate singleton subtags%
4067     }%
4068     \let\@pdfang\relax
4069 }{}%
4070 }%
4071 }{}%

```

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

```

4072 \ifx\@pdfang\relax
4073 \else
4074     \Hy@Match\@pdfang{icase}{%
4075         ~%
4076         [a-zA-Z]{2}-%
4077         (%
4078             aa|AA|%
4079             [qQ][m-zM-Z]|%
4080             [xX][a-zA-Z]|%
4081             zz|ZZ%
4082         )%
4083         (-|$)%
4084     }{%
4085         \Hy@Warning{%
4086             Invalid language identifier `#1'\MessageBreak
4087             for option `pdfang' because of invalid country code%
4088             \MessageBreak
4089             in second subtag (RFC 3066)%
4090         }%
4091         \let\@pdfang\relax
4092     }{}%
4093 \fi
4094 }{}%
4095 \Hy@Warning{%
4096     Invalid language identifier `#1'\MessageBreak
4097     for option `pdfang', because it violates\MessageBreak
4098     well-formedness defined in RFC 5646%
4099 }%
4100 \let\@pdfang\relax
4101 }%
4102 }{}%
4103 \Hy@Warning{%
4104     Invalid language identifier `#1'\MessageBreak
4105     for option `pdfang' (RFC 3066)%
4106 }%
4107 \let\@pdfang\relax
4108 }%

```

```

4109   \fi
4110   \fi
4111 }
4112 \define@key{Hyp}{pdfpagelabels}[true]{%
4113   \Hy@boolkey{pdfpagelabels}{#1}%
4114 }
4115 \define@key{Hyp}{pdfescapeform}[true]{%
4116   \Hy@boolkey{pdfescapeform}{#1}%
4117 }

```

Default values:

```

4118 \def\@linkbordercolor{1 0 0}
4119 \def\@urlbordercolor{0 1 1}
4120 \def\@menubordercolor{1 0 0}
4121 \def\@filebordercolor{0 .5 .5}
4122 \def\@runbordercolor{0 .7 .7}
4123 \def\@citebordercolor{0 1 0}
4124 \def\@pdfhighlight{/I}
4125 \let\@pdftitle\ltx@empty
4126 \let\@pdfauthor\ltx@empty
4127 \let\@pdfproducer\relax
4128 \def\@pdfcreator{LaTeX with hyperref}
4129 \let\@pdfcreationdate\ltx@empty
4130 \let\@pdfmoddate\ltx@empty
4131 \let\@pdfsubject\ltx@empty
4132 \let\@pdfkeywords\ltx@empty
4133 \let\@pdftrapped\ltx@empty
4134 \let\@pdfpagescrop\ltx@empty
4135 \def\@pdfstartview{/Fit}
4136 \def\@pdfremotestartview{/Fit}
4137 \def\@pdfstartpage{1}
4138 \let\@pdfprintpagerange\ltx@empty
4139 \let\@pdflang\relax
4140 \let\PDF@SetupDoc\@empty
4141 \let\PDF@FinishDoc\@empty
4142 \let\phantomsection\@empty
4143 \let\special@paper\@empty
4144 \def\HyperDestNameFilter#1{#1}
4145 \Hy@AtBeginDocument{%
4146   \begingroup
4147     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4148     \dimen@=\x\relax
4149     \ifdim\dimen@>\z@
4150       \else
4151         \dimen@=11in\relax
4152         \Hy@WarningNoLine{%
4153           Height of page (\expandafter\string\x) %
4154           is invalid (\the\x),\MessageBreak
4155           using 11in%
4156         }%
4157       \fi
4158       \dimen@=0.99626401\dimen@
4159       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4160     \endgroup
4161 }

```

```
4162 \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.

```
4163 \let\hyper@normalise\ExecuteOptions
4164 \let\ExecuteOptions\hypersetup
4165 \Hy@RestoreCatcodes
4166 \InputIfFileExists{hyperref.cfg}{-}{-}
4167 \Hy@SetCatcodes
4168 \let\ExecuteOptions\hyper@normalise
4169 \ifx\Hy@MaybeStopNow\relax
4170 \else
4171   \Hy@stoppedearlytrue
4172   \expandafter\Hy@MaybeStopNow
4173 \fi
4174 \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.

```
4175 \SetupKeyvalOptions{family=Hyp}
4176 \DeclareLocalOptions{%
4177   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4178 }
```

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

```
4179 \@ifpackagewith{hyperref}{tex4ht}{%
4180 }{%
4181   \@ifpackageloaded{tex4ht}{%
4182     \PassOptionsToPackage{tex4ht}{hyperref}%
4183   }{%
4184     \ltx@ifundefined{HCode}{%
4185     }{%
4186       \begingroup
4187       \def\Hy@pkg{tex4ht}%
4188       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4189         \def\Hy@param{#2#3}%
4190         \ifx\Hy@param\ltx@empty
4191           \expandafter\ltx@gobble
4192         \else
4193           \def\Hy@param{#3}%
4194           \ifx\Hy@param\Hy@pkg
4195             \PassOptionsToPackage{#2}{tex4ht}%
4196             \expandafter\expandafter\expandafter\@gobble
4197           \else
4198             \expandafter\expandafter\expandafter\ltx@firstofone
4199           \fi
4200         \fi
4201         {\Hy@temp@A#4\Hy@NIL}%
4202       }%
4203       \expandafter
4204       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4205     \endgroup
4206     \PassOptionsToPackage{tex4ht}{hyperref}%
4207   }%
}
```

```

4208 }%
4209 }
4210 \let\ReadBookmarks\relax
4211 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4212 \def\Hy@xspace@end{}
4213 \ltx@ifundefined{xspaceaddexceptions}{%
4214   \Hy@AtBeginDocument{%
4215     \ltx@ifundefined{xspaceaddexceptions}{%
4216       }{%
4217         \def\Hy@xspace@end{%
4218           \ltx@gobble{end for xspace}%
4219         }%
4220         \xspaceaddexceptions{%
4221           \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4222         }%
4223       }%
4224     }%
4225   }{%
4226     \def\Hy@xspace@end{%
4227       \ltx@gobble{end for xspace}%
4228     }%
4229     \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4230 }

```

15.2 Option draft

```

4231 \Hy@AtBeginDocument{%
4232   \ifHy@draft
4233     \let\hyper@@anchor\@gobble
4234     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4235     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4236     \def\hyper@anchorend{\Hy@xspace@end}%
4237     \let\hyper@linkstart\@gobbletwo
4238     \def\hyper@linkend{\Hy@xspace@end}%
4239     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4240     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4241     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4242     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4243     \let\PDF@SetupDoc\@empty
4244     \let\PDF@FinishDoc\@empty
4245     \let\ReadBookmarks\relax
4246     \let\WriteBookmarks\relax
4247     \Hy@WarningNoLine{Draft mode on}%
4248   \fi
4249   \Hy@DisableOption{draft}%
4250   \Hy@DisableOption{nolinks}%
4251   \Hy@DisableOption{final}%
4252 }

```

15.3 PDF/A


```

4253 \Hy@DisableOption{pdfa}
4254 \ifHy@pdfa
4255   \ifnum \Hy@pdf@major@minor@version < 104
4256     \kvsetkeys{Hyp}{pdfversion=1.4}%
4257     \fi
4258     \Hy@DisableOption{pdfversion}%
4259     \def\Hy@Acrobatmenu#1#2{%
4260       \leavevmode
4261       \begingroup
4262         \edef\x{#1}%
4263         \@onelevel@sanitize\x
4264         \ifx\x\Hy@NextPage
4265           \let\y=Y%
4266         \else
4267           \ifx\x\Hy@PrevPage
4268             \let\y=Y%
4269           \else
4270             \ifx\x\Hy@FirstPage
4271               \let\y=Y%
4272             \else
4273               \ifx\x\Hy@LastPage
4274                 \let\y=Y%
4275               \else
4276                 \let\y=N%
4277             \fi
4278           \fi
4279         \fi
4280       \expandafter\endgroup
4281       \ifx\y Y%
4282       \else
4283         \Hy@Error{%
4284           PDF/A: Named action `#1' is not permitted%
4285         }\@ehc
4286         {#2}%
4287       \expandafter\@gobble
4288     \fi
4289   }%
4290 \def\Hy@temp#1{%
4291   \expandafter\def\csname Hy@#1\endcsname{#1}%
4292   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4293 }%
4294 \Hy@temp{NextPage}%
4295 \Hy@temp{PrevPage}%
4296 \Hy@temp{FirstPage}%
4297 \Hy@temp{LastPage}%
4298 \Hy@temp{LastPage}%
4299 \else
4300 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4301 \fi

```

15.4 Patch for babel's \texttilde

Babel does not define `\expandafter \cmd@to@cs \string \texttilde` in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix

this, `\expandafter \cmd@to@cs \string \texttilde` is defined in babel manner.
change 2020-10-10: no trace of `\texttilde` can be found in the three languages
spanish, galician and estonian so the patch has been removed as outdated.

```

4302 \def\Hy@wrapper@babel#1#2{%
4303   \begingroup
4304     \Hy@safe@activestrue
4305     \set@display@protect
4306     \edef\x{#2}%
4307     \@onelevel@sanitize\x
4308     \toks@{#1}%
4309     \edef\x{\endgroup\the\toks@{x}}%
4310   \x
4311 }
4312 \def\Hy@WrapperDef#1{%
4313   \begingroup
4314     \escapechar=\m@ne
4315     \xdef\Hy@gtemp{%
4316       \expandafter\noexpand\csname HyWrap@string#1\endcsname
4317     }%
4318   \endgroup
4319   \edef#1{%
4320     \noexpand\Hy@wrapper@babel
4321     \expandafter\noexpand\Hy@gtemp
4322   }%
4323   \expandafter\def\Hy@gtemp
4324 }
4325 \ifHy@hyperfigures
4326   \Hy@Info{Hyper figures ON}%
4327 \else
4328   \Hy@Info{Hyper figures OFF}%
4329 \fi
4330 \ifHy@nesting
4331   \Hy@Info{Link nesting ON}%
4332 \else
4333   \Hy@Info{Link nesting OFF}%
4334 \fi
4335 \ifHy@hyperindex
4336   \Hy@Info{Hyper index ON}%
4337 \else
4338   \Hy@Info{Hyper index OFF}%
4339 \fi
4340 \ifHy@plainpages
4341   \Hy@Info{Plain pages ON}%
4342 \else
4343   \Hy@Info{Plain pages OFF}%
4344 \fi
4345 \ifHy@backref
4346   \Hy@Info{Backreferencing ON}%
4347 \else
4348   \Hy@Info{Backreferencing OFF}%
4349 \fi
4350 \ifHy@implicit
4351   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%

```

```

4352 \else
4353 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4354 \def\MaybeStopEarly{%
4355 \Hy@Message{Stopped early}}%
4356 \Hy@AtBeginDocument{%
4357 \PDF@FinishDoc
4358 \gdef\PDF@FinishDoc{}}%
4359 }%
4360 \endinput
4361 }%
4362 \Hy@AtBeginDocument{%
4363 \let\autoref\ref
4364 \let\autopageref\pageref
4365 \ifx\@pdfpagemode\@empty
4366 \gdef\@pdfpagemode{UseNone}%
4367 \fi
4368 \global\Hy@backreffalse
4369 }%
4370 \Hy@AtEndOfPackage{%
4371 \global\let\ReadBookmarks\relax
4372 \global\let\WriteBookmarks\relax
4373 }%
4374 \fi
4375 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4376 \Hy@AtEndOfPackage{%
4377 \@ifpackageloaded{tex4ht}{%
4378 \def\Hy@driver{htex4ht}%
4379 \Hy@texhttrue
4380 }-}%

```

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.

```

4381 \ifx\Hy@driver\@empty
4382 \else
4383 \ifx\pdfextension\@undefined
4384 \def\Hy@temp{hpdftex}%
4385 \else
4386 \def\Hy@temp{hluatex}%
4387 \fi
4388 \ifpdf
4389 \ifx\Hy@driver\Hy@temp
4390 \else
4391 \Hy@WarningNoLine{%
4392 Wrong driver ``\Hy@driver.def';\MessageBreak
4393 pdfTeX is running in PDF mode.\MessageBreak
4394 Forcing driver ``\Hy@temp.def'%
4395 }%
4396 \let\Hy@driver\Hy@temp
4397 \fi
4398 \else
4399 \ifx\Hy@driver\Hy@temp
4400 \Hy@WarningNoLine{%

```

```

4401      Wrong driver ``\Hy@driver.def';\MessageBreak
4402      pdfTeX is not running in PDF mode.\MessageBreak
4403      Using default driver%
4404  }%
4405  \let\Hy@driver\@empty
4406 \fi
4407 \fi
4408 \fi
4409 \ifHy@texht
4410 \else
4411   \ifx\Hy@driver\@empty
4412   \else
4413     \def\Hy@temp{hxtex}%
4414     \ifxetex
4415       \ifx\Hy@driver\Hy@temp
4416       \else
4417         \Hy@WarningNoLine{%
4418           Wrong driver ``\Hy@driver.def';\MessageBreak
4419           XeTeX is running.\MessageBreak
4420           Forcing driver ``\Hy@temp.def' for XeTeX%
4421         }%
4422         \let\Hy@driver\Hy@temp
4423       \fi
4424     \fi
4425   \fi
4426 \fi
4427 \ifx\Hy@driver\@empty
4428 \else
4429   \def\Hy@temp{hvtexhtm}%
4430   \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4431   \ifx\Hy@driver\Hy@temp
4432   \else
4433     \Hy@WarningNoLine{%
4434       Wrong driver ``\Hy@driver.def';\MessageBreak
4435       VTeX is running in HTML mode.\MessageBreak
4436       Forcing driver ``\Hy@temp.def'%
4437     }%
4438     \let\Hy@driver\Hy@temp
4439   \fi
4440 \else
4441   \ifx\Hy@driver\Hy@temp
4442   \Hy@WarningNoLine{%
4443     Wrong driver ``\Hy@driver.def';\MessageBreak
4444     VTeX is not running in HTML mode.\MessageBreak
4445     Using default driver%
4446   }%
4447   \let\Hy@driver\@empty
4448 \fi
4449 \fi
4450 \fi

```

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

```

4451 \let\HyOpt@DriverType\ltx@empty
4452 \ifx\HyOpt@CustomDriver\ltx@empty
4453   \ifx\Hy@driver\@empty

```

```

4454 \def\HyOpt@DriverType{ (autodetected)}%
4455 \providecommand*{\Hy@defaultdriver}{hdvips}%
4456 \ifpdf
4457 \ifx\pdfextension\@undefined
4458 \def\Hy@driver{hpdftex}%
4459 \else
4460 \def\Hy@driver{hluatex}%
4461 \fi
4462 \else
4463 \ifxetex
4464 \def\Hy@driver{hxetex}%
4465 \else
4466 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4467 \def\Hy@driver{hvtexhtm}%
4468 \def\MaybeStopEarly{%
4469 \Hy@Message{Stopped early}%
4470 \Hy@AtBeginDocument{%
4471 \PDF@FinishDoc
4472 \gdef\PDF@FinishDoc{}}%
4473 }%
4474 \endinput
4475 }%
4476 \else
4477 \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4478 \def\Hy@driver{hvtex}%
4479 \else
4480 \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4481 \def\Hy@driver{hvtex}%
4482 \else
4483 \ifx\HyOpt@DriverFallback\ltx@empty
4484 \let\Hy@driver\Hy@defaultdriver
4485 \def\HyOpt@DriverType{ (default)}%
4486 \else
4487 \begingroup
4488 \toks@{\expandafter{\HyOpt@DriverFallback}}%
4489 \edef\x{\endgroup
4490 \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4491 }%
4492 \x
4493 \ifx\Hy@driver\ltx@empty
4494 \let\Hy@driver\Hy@defaultdriver
4495 \def\HyOpt@DriverType{ (default)}%
4496 \else
4497 \def\HyOpt@DriverType{ (fallback)}%
4498 \fi
4499 \fi
4500 \fi
4501 \fi
4502 \fi
4503 \fi
4504 \fi
4505 \ifx\Hy@driver\Hy@defaultdriver
4506 \def\Hy@temp{hdvwind}%
4507 \ifx\Hy@temp\Hy@driver

```

```

4508     \kvsetkeys{Hyp}{colorlinks}%
4509     \PassOptionsToPackage{dviwindo}{color}%
4510     \fi
4511   \fi
4512 \fi
4513 \else
4514   \def\HyOpt@DriverType{ (custom)}%
4515   \let\Hy@driver\HyOpt@CustomDriver
4516 \fi
4517 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4518 \chardef\Hy@VersionChecked=0 %
4519 \input{\Hy@driver.def}%
4520 \ifcase\Hy@VersionChecked
4521   \Hy@VersionCheck{\Hy@driver.def}%
4522 \fi
4523 \let\@unprocessedoptions\relax
4524 \Hy@RestoreCatcodes
4525 \Hy@DisableOption{tex4ht}%
4526 \Hy@DisableOption{pdftex}%
4527 \Hy@DisableOption{nativepdf}%
4528 \Hy@DisableOption{dvipdfm}%
4529 \Hy@DisableOption{dvipdfmx}%
4530 \Hy@DisableOption{dvipdfmx-outline-open}%
4531 \Hy@DisableOption{pdfmark}%
4532 \Hy@DisableOption{dvips}%
4533 \Hy@DisableOption{hypertex}%
4534 \Hy@DisableOption{vtex}%
4535 \Hy@DisableOption{vtexpdfmark}%
4536 \Hy@DisableOption{dviwindo}%
4537 \Hy@DisableOption{dvipsone}%
4538 \Hy@DisableOption{textures}%
4539 \Hy@DisableOption{latex2html}%
4540 \Hy@DisableOption{ps2pdf}%
4541 \Hy@DisableOption{xetex}%
4542 \Hy@DisableOption{driverfallback}%
4543 \Hy@DisableOption{customdriver}%
4544 \Hy@DisableOption{pdfversion}%
4545 }

```

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.

```

4546 \newif\ifHy@DvipdfmxOutlineOpen
4547 \ifxetex
4548   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4549   \else
4550     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4551     \Hy@DvipdfmxOutlineOpenttrue
4552   \fi
4553 \fi
4554 \begingroup\expandafter\expandafter\expandafter\endgroup
4555 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4556 \else
4557   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4558     \Hy@DvipdfmxOutlineOpenttrue

```

```

4559 \fi
4560 \fi

```

15.4.2 Bookmarks

```

4561 \def\WriteBookmarks{0}
4562 \def\@bookmarkopenstatus#1{%
4563   \ifHy@bookmarksopen

```

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

```

4564   \ifnum#1<\expandafter\@firstofone\expandafter
4565     {\number\@bookmarkopenlevel} % explicit space
4566   \else
4567     -%
4568   \fi
4569 \else
4570   -%
4571 \fi
4572 }
4573 \ifHy@bookmarks
4574   \Hy@Info{Bookmarks ON}%
4575   \ifx\@pdfpagemode\@empty
4576     \def\@pdfpagemode{UseOutlines}%
4577   \fi
4578 \else
4579   \let\@bookmarkopenstatus\ltx@gobble
4580   \Hy@Info{Bookmarks OFF}%
4581   \Hy@AtEndOfPackage{%
4582     \global\let\ReadBookmarks\relax
4583     \global\let\WriteBookmarks\relax
4584   }%
4585   \ifx\@pdfpagemode\@empty
4586     \def\@pdfpagemode{UseNone}%
4587   \fi
4588 \fi
4589 \Hy@DisableOption{bookmarks}

```

Add wrapper for setting standard catcodes (babel's shorthands).

```

4590 \def\Hy@CatcodeWrapper#1{%
4591   \let\Hy@endWrap\ltx@empty
4592   \def\TMP@EnsureCode##1##2{%
4593     \edef\Hy@endWrap{%
4594       \Hy@endWrap
4595       \catcode##1 \the\catcode##1\relax
4596     }%
4597     \catcode##1 ##2\relax
4598   }%
4599   \TMP@EnsureCode{10}{12}% ^^J
4600   \TMP@EnsureCode{33}{12}% !
4601   \TMP@EnsureCode{34}{12}% "
4602   \TMP@EnsureCode{36}{3}% $ (math)
4603   \TMP@EnsureCode{38}{4}% & (alignment)
4604   \TMP@EnsureCode{39}{12}% '
4605   \TMP@EnsureCode{40}{12}% (
4606   \TMP@EnsureCode{41}{12}% )

```

```

4607 \TMP@EnsureCode{42}{12}% *
4608 \TMP@EnsureCode{43}{12}% +
4609 \TMP@EnsureCode{44}{12}% ,
4610 \TMP@EnsureCode{45}{12}% -
4611 \TMP@EnsureCode{46}{12}% .
4612 \TMP@EnsureCode{47}{12}% /
4613 \TMP@EnsureCode{58}{12}% :
4614 \TMP@EnsureCode{59}{12}% ;
4615 \TMP@EnsureCode{60}{12}% <
4616 \TMP@EnsureCode{61}{12}% =
4617 \TMP@EnsureCode{62}{12}% >
4618 \TMP@EnsureCode{63}{12}% ?
4619 \TMP@EnsureCode{91}{12}% [
4620 \TMP@EnsureCode{93}{12}% ]
4621 \TMP@EnsureCode{94}{7}% ^ (superscript)
4622 \TMP@EnsureCode{95}{8}% _ (subscript)
4623 \TMP@EnsureCode{96}{12}% `
4624 \TMP@EnsureCode{124}{12}% |
4625 \TMP@EnsureCode{126}{13}% ~ (active)
4626 #1\relax
4627 \Hy@EndWrap
4628 }

```

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

```

4629 \Hy@AtBeginDocument{%
4630   \ifHy@ocgcolorlinks
4631     \kvsetkeys{Hyp}{colorlinks}%
4632     \ifHy@pdfa
4633       \Hy@Warning{%
4634         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4635         using `colorlinks' instead of `ocgcolorlinks'%
4636       }%
4637       \Hy@ocgcolorlinksfalse
4638     \fi
4639   \fi
4640   \ifHy@ocgcolorlinks
4641   \else
4642     \Hy@DisableOption{ocgcolorlinks}%
4643   \fi
4644   \ifHy@colorlinks
4645     \def\@pdfborder{0 0 0}%
4646     \let\@pdfborderstyle\@empty
4647     \Hy@CatcodeWrapper{%
4648       \RequirePackage{color}%
4649     }%
4650     \def\Hy@colorlink#1{%
4651       \begingroup
4652       \HyColor@UseColor#1%
4653     }%
4654     \def\Hy@endcolorlink{\endgroup}%
4655     \Hy@Info{Link coloring ON}%
4656   \else
4657     \ifHy@frenchlinks
4658       \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%

```



```

4659 \def\Hy@endcolorlink{\endgroup}%
4660 \Hy@Info{French linking ON}%
4661 \else
for grouping consistency:
4662 \def\Hy@colorlink#1{\begingroup}%
4663 \def\Hy@endcolorlink{\endgroup}%
4664 \Hy@Info{Link coloring OFF}%
4665 \fi
4666 \fi
4667 \Hy@DisableOption{colorlinks}%
4668 \Hy@DisableOption{frenchlinks}%
4669 \ifHy@texht
4670 \else

```

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

```

4671 \ifHy@implicit
4672 \let \T@Ref\HyRef@Ref
4673 \def\@refstar#1{%
4674 \NR@ref@showkeys{#1}%
4675 \HyRef@StarSetRef{#1}\@firstoffive
4676 }
4677 \def\@pagerefstar#1{%
4678 \NR@ref@showkeys{#1}%
4679 \HyRef@StarSetRef{#1}\@secondoffive
4680 }
4681 \def\@namerefstar#1{%
4682 \NR@ref@showkeys{#1}%
4683 \HyRef@StarSetRef{#1}\@thirdoffive
4684 }
4685 \def\@Refstar#1{%
4686 \NR@ref@showkeys{#1}%
4687 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4688 }%
4689 \else
4690 \fi
4691 \fi
4692 }
4693 \Hy@AtBeginDocument{%
4694 \ifx\ReadBookmarks\relax
4695 \else
4696 \Hy@CatcodeWrapper\ReadBookmarks
4697 \fi
4698 }
4699 \ifHy@backref
4700 \RequirePackage{backref}%
4701 \else
4702 \let\Hy@backout\@gobble
4703 \fi
4704 \Hy@DisableOption{backref}
4705 \Hy@DisableOption{pagebackref}
4706 \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.

```

4707 \begingroup
4708 \endlinechar=-1 %
4709 \catcode\^^A=14 %
4710 \catcode\^^M\active
4711 \catcode\%\active
4712 \catcode\#\active
4713 \catcode\_ \active
4714 \catcode\$\active
4715 \catcode\&\active
4716 \gdef\hyper@normalise{^^A
4717   \begingroup
4718   \catcode\^^M\active
4719   \def^^M{ }^^A
4720   \catcode\%\active
4721   \let%\@percentchar
4722   \let\%\@percentchar
4723   \catcode\#\active
4724   \def#{\hyper@hash}^^A
4725   \def#{\hyper@hash}^^A
4726   \@makeother\&^^A
4727   \edef&{\string&}^^A
4728   \edef\&{\string&}^^A
4729   \edef\textunderscore{\string_}^^A
4730   \let\_ \textunderscore
4731   \catcode\_ \active
4732   \let\_ \textunderscore
4733   \let~\hyper@tilde
4734   \let~\hyper@tilde
4735   \let\textasciitilde\hyper@tilde
4736   \let\\\@backslashchar
4737   \edef$\{\string$\}^^A
4738   \Hy@safe@activetrue
4739   \hyper@n@rmalise
4740 }^^A
4741 \catcode\#=6 ^^A
4742 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4743 \gdef\hyper@n@rmalise#1#2{^^A
4744   \def\Hy@tempa{#2}^^A
4745   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4746     \ltx@ReturnAfterElseFi{^^A
4747       \hyper@@normalise{#1}^^A
4748     }^^A
4749   \else
4750     \ltx@ReturnAfterFi{^^A

```

```

4751     \hyper@@normalise{#1}{#2}^^A
4752   }^^A
4753   \fi
4754 }^^A
4755 \gdef\hyper@@normalise#1#2{^^A
4756   \edef\Hy@tempa{^^A
4757     \endgroup
4758     \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4759   }^^A
4760   \Hy@tempa
4761 }^^A
4762 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4763   #1^^A
4764   \ifx\limits#2\limits
4765   \else
4766     \ltx@ReturnAfterFi{^^A
4767       \Hy@RemovePercentCr #2\@nil
4768     }^^A
4769   \fi
4770 }^^A
4771 \endgroup
4772 \providecommand*\hyper@chars{%
4773   \let\#\hyper@hash
4774   \let\%\@percentchar
4775   \Hy@safe@activestrue
4776 }
4777 \def\hyperlink#1#2{%
4778   \hyper@@@link{}{#1}{#2}%
4779 }
4780 \def\Hy@VerboseLinkStart#1#2{%
4781   \ifHy@verbose
4782     \begingroup
4783     \Hy@safe@activestrue
4784     \xdef\Hy@VerboseGlobalTemp{(#1) `#2}%
4785     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4786     \xdef\Hy@VerboseGlobalTemp{%
4787       \Hy@VerboseGlobalTemp, %
4788       line \the\inputlineno
4789     }%
4790   \endgroup
4791   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4792   \@onelevel@sanitize\Hy@VerboseLinkInfo
4793   \fi
4794 }
4795 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4796 \def\Hy@VerboseLinkStop{%
4797   \ifHy@verbose
4798     \begingroup
4799     \edef\x{\endgroup
4800       \write\m@ne{%
4801         Package `hyperref' Info: %
4802         End of reference \Hy@VerboseLinkInfo.%
4803       }%

```

```

4804 }%
4805 \x
4806 \fi
4807 }

4808 \def\Hy@VerboseAnchor#1{%
4809 \ifHy@verbose
4810 \begingroup
4811 \Hy@safe@activetrue
4812 \Hy@Info{Anchor `\'HyperDestNameFilter{#1}'}%
4813 \endgroup
4814 \fi
4815 }

4816 \def\Hy@AllowHyphens{%
4817 \relax
4818 \ifhmode
4819 \penalty\@M
4820 \hskip\z@skip
4821 \fi
4822 }

4823 \DeclareRobustCommand*{\href}[1][]{%
4824 \begingroup
4825 \setkeys{href}{#1}%
4826 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4827 }
4828 \def\Hy@href#1{%
4829 \hyper@normalise\href@
4830 }
4831 \begingroup
4832 \catcode`\$=6 %
4833 \catcode`\#=12 %
4834 \gdef\href@\$1{\expandafter\href@split$1##\\}%
4835 \gdef\href@split$1##$2##$3\\$4{%
4836 \hyper@@link{$1}{$2}{$3}{$4}%
4837 \endgroup
4838 }%
4839 \endgroup

```

Option ‘page’.

```

4840 \define@key{href}{page}{%
4841 \def\Hy@href@page{#1}%
4842 }
4843 \let\Hy@href@page\@empty
4844 \newcount\c@Hy@tempcnt
4845 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4846 \def\Hy@MakeRemoteAction{%
4847 \ifx\Hy@href@page\@empty
4848 \def\Hy@href@page{0}%
4849 \else
4850 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4851 \ifnum\c@Hy@tempcnt<\@ne
4852 \Hy@Warning{%
4853 Invalid page number (\theHy@tempcnt)\MessageBreak
4854 for remote PDF file.\MessageBreak

```

```

4855     Using page 1%
4856   }%
4857   \def\Hy@href@page{0}%
4858   \else
4859     \global\advance\c@Hy@tempcnt\m@ne
4860     \edef\Hy@href@page{\theHy@tempcnt}%
4861   \fi
4862 \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.

```

4863 \ifx\Hy@href@nextactionraw\@empty
4864 \else
4865   \Hy@pdfnewwindowsettrue
4866   \Hy@pdfnewwindowtrue
4867 \fi
4868 }

```

Option ‘pdfremotestartview’.

```

4869 \define@key{href}{pdfremotestartview}{%
4870   \setkeys{Hyp}{pdfremotestartview={#1}}%
4871 }

```

Option ‘pdfnewwindow’.

```

4872 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4873 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4874 \newif\ifHy@href@ismap
4875 \define@key{href}{ismap}[true]{%
4876   \ltx@ifundefined{Hy@href@ismap#1}{%
4877     \Hy@Error{%
4878       Invalid value (#1) for key `ismap'.\MessageBreak
4879       Permitted values are `true' or `false'.\MessageBreak
4880       Ignoring `ismap'%
4881     }\@ehc
4882   }{%
4883     \csname Hy@href@ismap#1\endcsname
4884   }%
4885 }

```

Option ‘nextactionraw’.

```

4886 \let\Hy@href@nextactionraw\@empty
4887 \define@key{href}{nextactionraw}{%
4888   \edef\Hy@href@nextactionraw{#1}%
4889   \ifx\Hy@href@nextactionraw\@empty
4890   \else
4891     \Hy@Match\Hy@href@nextactionraw{%
4892       ~(\HyPat@ObjRef/|<<.*[/|.+>>|
4893       \[( ?\HyPat@ObjRef/|<<.*[/|.+>>)+ ?)]$%
4894     }{%
4895       \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4896       \Hy@href@nextactionraw\MessageBreak
4897       The action is discarded%
4898     }%
4899   }%

```

```

4900 \ifx\Hy@href@nextactionraw\@empty
4901 \else
4902 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4903 \fi
4904 \fi
4905 }
4906 \def\HyPat@ObjRef/{.+}

```

Load package url.sty and save the meaning of the original `\expandafter`
`\cmd@to@cs \string \url` in `\expandafter \cmd@to@cs \string \nolinkurl` .

```

4907 \RequirePackage{url}
4908 \let\HyOrg@url\url
4909 \def\Hurl{\begingroup \Url}
4910 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4911 \def\nolinkurl@#1{\Hurl{#1}}
4912 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4913 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4914 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4915 \providecommand\hyper@image[2]{#2}

4916 \def\hypertarget#1#2{%
4917 \ifHy@nesting
4918 \hyper@@anchor{#1}{#2}%
4919 \else
4920 \hyper@@anchor{#1}{\relax}#2%
4921 \fi
4922 }

```

`\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.

```

4923 \DeclareRobustCommand*\hyperref{%
4924 \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4925 }
4926 \def\Hy@babelnormalise#1[#2]{%
4927 \begingroup
4928 \Hy@safe@activetrue
4929 \let\protect\@unexpandable@protect
4930 \edef\Hy@tempa{%
4931 \endgroup
4932 \noexpand#1[{#2}]}%
4933 }%
4934 \Hy@tempa
4935 }
4936 \def\@hyperref{\hyper@normalise\@hyperref}
4937 \def\@hyperref#1#2#3{%
4938 \edef\ref@one{\ifx\\#2\\else#2.\fi#3}%
4939 \expandafter\tryhyper@link\ref@one\{#1}%
4940 }
4941 \def\tryhyper@link#1\\#2{%

```

```

4942 \hyper@@link{#2}{#1}%
4943 }

4944 \def\hyperdef{\@ifnextchar[{\label@hyperdef}{\@hyperdef}}
4945 \def\@hyperdef#1#2#3{% , category, name, text
4946   \ifx\#1\%
4947     \def\Hy@AnchorName{#2}%
4948   \else
4949     \def\Hy@AnchorName{#1.#2}%
4950   \fi
4951   \ifHy@nesting
4952     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4953   \else
4954     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4955   \fi
4956 }

```

We also have a need to give a L^AT_EX *label* to a hyper reference, to ease the pain of referring to it later. `\hyperrefundefinedlink` may be redefined by a user to add colour or other formatting.

```

4957 \let\hyperrefundefinedlink\@firstofone
4958 \def\label@hyperref{#1}{%
4959   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4960 }%
4961 \def\label@@hyperref#1#2#3{%
4962   \ifx#1\relax
4963     \protect\G@refundefinedtrue
4964     \@latex@warning{%
4965       Hyper reference `#2' on page \thepage \space undefined%
4966     }%
4967     \begingroup
4968       \hyperrefundefinedlink{#3}%
4969     \endgroup
4970   \else
4971     \hyper@@link{\expandafter\@fifthoffive#1}%
4972     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4973   \fi
4974 }
4975 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4976                               % anchor text
4977   \@bsphack
4978   \ifx\#2\%
4979     \def\Hy@AnchorName{#3}%
4980   \else
4981     \def\Hy@AnchorName{#2.#3}%
4982   \fi
4983   \if@filesw
4984     \protected@write\@auxout{}{%
4985       \string\newlabel{#1}{\{ }\}{\{ }\}{\Hy@AnchorName}{\} }%
4986     }%
4987   \fi
4988   \@esphack
4989   \ifHy@nesting
4990     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4991   \else

```

```

4992 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4993 \fi
4994 }

```

`\hyperget` To create manually bookmarks one need the destination name. If there is a label, the name can be retrieved with commands from `refcount`. Such a destination name must take `\HyperDestNameFilter` into account

```
\HyperDestNameFilter{\getrefbykeydefault{label}{anchor}{Doc-Start}}
```

To make this easier, we define `\hyperget`

```

4995 \ExplSyntaxOn
4996 \cs_new:Npn \hyperget #1 #2
4997 {
4998   \use:c { __hyp_get_#1:n } { #2}
4999 }
5000
5001 \cs_new:Npn \__hyp_get_anchor:n #1
5002 {
5003   \HyperDestNameFilter
5004   {
5005     \cs_if_exist:cTF {r@#1}
5006     {
5007       \tl_item:cn {r@#1}{4}
5008     }
5009     {
5010       Doc-Start
5011     }
5012   }
5013 }
5014 \cs_new:Npn \__hyp_get_pageanchor:n #1
5015 {
5016   \HyperDestNameFilter
5017   {
5018     \cs_if_exist:cTF {r@#1}
5019     {
5020       page. \tl_item:cn {r@#1}{2}
5021     }
5022     {
5023       Doc-Start
5024     }
5025   }
5026 }
5027 \cs_new:Npn \__hyp_get_currentanchor:n #1
5028 {
5029   \HyperDestNameFilter { \@currentHref }
5030 }
5031 \ExplSyntaxOff

```

16.1 Link box support for XeTeX

```

5032 \newdimen\XeTeXLinkMargin
5033 \setlength{\XeTeXLinkMargin}{2pt}

```



```

5034 \ifxetex
5035 \font\XeTeXLink@font=pzdr at 1sp\relax
5036 \newcommand*{\XeTeXLink@space}{%
5037   \begingroup
5038     \XeTeXLink@font
5039     \@xxxii
5040   \endgroup
5041 }%
5042 \newcommand{\XeTeXLinkBox}[1]{%
5043   \begingroup
5044     \leavevmode
5045     \sbox\z@{#1}%
5046     \begingroup
5047       \dimen@=\dp\z@
5048       \advance\dimen@\XeTeXLinkMargin
5049       \setbox\tw@=\llap{%
5050         \hb@xt@\XeTeXLinkMargin{%
5051           \lower\dimen@\hbox{\XeTeXLink@space}%
5052         \hss
5053       }%
5054     }%
5055     \dp\tw@=\dp\z@
5056     \ht\tw@=\ht\z@
5057     \copy\tw@
5058   \endgroup
5059   \copy\z@
5060   \dimen@=\ht\z@
5061   \advance\dimen@\XeTeXLinkMargin
5062   \setbox\tw@=\rlap{%
5063     \hb@xt@\XeTeXLinkMargin{%
5064       \hss
5065       \raise\dimen@\hbox{\XeTeXLink@space}%
5066     }%
5067   }%
5068   \dp\tw@=\dp\z@
5069   \ht\tw@=\ht\z@
5070   \copy\tw@
5071 \endgroup
5072 }%
5073 \else
5074 \newcommand*{\XeTeXLinkBox}[1]{%
5075   \begingroup
5076     \leavevmode
5077     \sbox\z@{#1}%
5078     \copy\z@
5079   \endgroup
5080 }%
5081 \fi

```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we

need to open another file or a URL. A link start has a type, and a URL.

```

5082 \def\hyper@@link{\let\Hy@reserved@a\relax
5083 \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
5084 }
5085 % #1: type
5086 % #2: URL
5087 % #3: destination name
5088 % #4: text
5089 \def\hyper@link@[#1]#2#3#4{%
5090 \ltx@ifempty{#4}{% link text
5091 \Hy@Warning{Suppressing empty link}%
5092 }{%
5093 \begingroup
5094 \protected@edef\Hy@tempa{#2}%
5095 \edef\Hy@tempb{#3}%
5096 \ifx\Hy@tempa\ltx@empty
5097 \ifx\Hy@tempb\ltx@empty
5098 \Hy@Warning{Suppressing link with empty target}%
5099 \toks@{%
5100 \endgroup
5101 \ltx@secondoftwo
5102 }%
5103 \else
5104 \toks@{%
5105 \endgroup
5106 \hyper@link{#1}%
5107 }%
5108 \fi
5109 \else
5110 \toks@{%
5111 \endgroup
5112 \expandafter\hyper@readexternallink#2\{#1}%
5113 }%
5114 \fi
5115 \Hy@safe@activesfalse
5116 \toks@\expandafter{%
5117 \the\expandafter\toks@
5118 \expandafter{\Hy@tempb}{#4}%
5119 }%
5120 \the\toks@
5121 }%
5122 }

```

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.

```

5123 \def\hyper@readexternallink#1\{#2#3#4{%
5124 \begingroup
5125 \let\\\relax
5126 \expandafter\endgroup
5127 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5128 }

```

```
5129 \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.

```
5130 \@hyper@readexternallink#{#2}{#3}{#4}#1::\#{#1}%
5131 }
```

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

```
5132 \def\@pdftempwordfile{file}%
5133 \def\@pdftempwordrun{run}%
5134 \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:**

```
5135 \ifx\#6\%
5136 \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
5137 \else
5138 \ifx\#4\%
5139 \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
5140 \else
```

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

```
5141 \def\@pdftempa{#4}%
5142 \ifx\@pdftempa\@pdftempwordfile
5143 \@hyper@linkfile#7\#{#3}{#2}{#7}%
5144 \else
```

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

```
5145 \ifx\@pdftempa\@pdftempwordrun
5146 \ifHy@pdfa
5147 \Hy@Error{%
5148 PDF/A: Launch action is prohibited%
5149 }\@ehc
5150 \begingroup
5151 \leavevmode
5152 #2%
5153 \endgroup
5154 \else
5155 \@hyper@launch#7\#{#3}{#2}%
5156 \fi
5157 \else
```

otherwise its a URL

```

5158      \hyper@linkurl{#3}{#7\ifx\\#2\\else\hyper@hash#2\fi}%
5159      \fi
5160      \fi
5161      \fi
5162      \fi
5163 }

```

By default, turn run: into file:

```

5164 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5165   \hyper@linkurl{#2}{%
5166     \Hy@linkfileprefix
5167     #1%
5168     \ifx\\#3\\%
5169     \else
5170       \hyper@hash
5171       #3%
5172     \fi
5173   }%
5174 }

```

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

```

5175 \def\@hyper@linkfile file:#1\\#2#3#4{%
5176   %file url,link string, name, original uri
5177   \filename@parse{#1}%
5178   \ifx\filename@ext\relax
5179     \edef\filename@ext{\XR@ext}%
5180   \fi
5181   \def\use@file{\filename@area\filename@base.\filename@ext}%
5182   \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5183     \hyper@linkfile{#2}{\use@file}{#3}%
5184   }{%
5185     \ifx\@baseurl\@empty
5186       \hyper@linkurl{#2}{%
5187         #4\ifx\\#3\\else\hyper@hash#3\fi
5188       }%
5189     \else
5190       \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
5191     \fi
5192   }%
5193 }

5194 \def\Hy@IfStringEndsWith#1#2{%
5195   \begingroup
5196   \edef\x{#1}%
5197   \@onelevel@sanitize\x
5198   \edef\x{.\x}%
5199   \edef\y{#2}%
5200   \@onelevel@sanitize\y
5201   \edef\y{.\y}%
5202   \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5203     \endgroup
5204     \ifx\relax##2\relax
5205       \expandafter\ltx@secondoftwo

```

```

5206 \else
5207 \expandafter\ltx@firstoftwo
5208 \fi
5209 }%
5210 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5211 }

5212 \def\Hy@StringLocalhost{localhost}
5213 \@onelevel@sanitize\Hy@StringLocalhost
5214 \def\Hy@CleanupFile#1{%
5215 \edef#1{#1}%
5216 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5217 }
5218 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5219 \begingroup
5220 \toks@{\endgroup}%
5221 \def\x{#1}%
5222 \ifx\x\@empty
5223 \def\x{#2}%
5224 \ifx\x\@empty
5225 \toks@{\endgroup\def#5{/#3}}%
5226 \else
5227 \@onelevel@sanitize\x
5228 \ifx\x\Hy@StringLocalhost
5229 \toks@{\endgroup\def#5{/#3}}%
5230 \fi
5231 \fi
5232 \fi
5233 \the\toks@
5234 }

```

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.

```

5235 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5236 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5237 \ifx\#1\%
5238 #2\Hy@Warning{Ignoring empty anchor}%
5239 \else
5240 \def\anchor@spot{#2#3}%
5241 \let\put@me@back\@empty
5242 \ifx\relax#2\relax
5243 \else
5244 \ifHy@nesting
5245 \else
5246 \ifcat a\noexpand#2\relax
5247 \else
5248 \ifcat 0\noexpand#2 \relax
5249 \else
5250 % \typeout{Anchor start is not alphanumeric %
5251 % on input line\the\inputlineno%

```

```

5252 %      }%
5253       \let\anchor@spot\@empty
5254       \def\put@me@back{#2#3}%
5255       \fi
5256     \fi
5257   \fi
5258 \fi
5259 \ifHy@activeanchor
5260   \anchor@spot
5261 \else
5262   \hyper@anchor{#1}%
5263 \fi
5264 \expandafter\put@me@back
5265 \fi
5266 \let\anchor@spot\@empty
5267 }
5268 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5269 \ifHy@destlabel

\hyper@newdestlabel

5270 \def\hyper@newdestlabel#1#2{%
5271   \begingroup
5272   \Hy@safe@activetrue
5273   \edef\x{\endgroup
5274     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5275   }%
5276   \x
5277 }%

\hyper@destlabel@hook

5278 \providecommand*{\hyper@destlabel@hook}{}%

\Hy@DestRename

5279 \newcommand*{\Hy@DestRename}[2]{%
5280   \ltx@ifundefined{HyDL!#1}{%
5281     \begingroup
5282     \Hy@safe@activetrue
5283     \edef\dest@name{#1}%
5284     \edef\label@name{#2}%
5285     \hyper@destlabel@hook
5286     \Hy@IsNotEmpty{dest@name}{%
5287       \Hy@IsNotEmpty{label@name}{%
5288         \global\expandafter
5289         \let\csname HyDL!#1\endcsname\ltx@empty
5290         \if@files
5291           \protected@write\@auxout{}{%
5292             \string\hyper@newdestlabel
5293             {#1}%
5294             {\label@name}%
5295           }%

```

```

5296         \fi
5297     }%
5298 }%
5299 \endgroup
5300 }{}%
5301 }%

```

\HyperDestRename

```

5302 \newcommand*{\HyperDestRename}[2]{%
5303     \AtBeginDocument{%
5304         \Hy@DestRename{#1}{#2}%
5305     }%
5306 }%
5307 \AtBeginDocument{%
5308     \let\HyperDestRename\Hy@DestRename
5309 }%

```

\Hy@IsNotEmpty

```

5310 \def\Hy@IsNotEmpty#1{%
5311     \ltx@ifundefined{#1}\ltx@gobble{%
5312         \expandafter\ifx\csname#1\endcsname\ltx@empty
5313         \expandafter\ltx@gobble
5314     \else
5315         \expandafter\ltx@firstofone
5316     \fi
5317 }%
5318 }%

5319 \ltx@GlobalAppendToMacro\label@hook{%
5320     \HyperDestRename\@currentHref\label@name
5321 }%

```

\HyperDestLabelReplace

```

5322 \def\HyperDestLabelReplace#1{%
5323     \ltx@ifundefined{HyDL@#1}{%
5324         #1%
5325     }{%
5326         \csname HyDL@#1\endcsname
5327     }%
5328 }%

```

\HyperDestNameFilter

```

5329 \let\HyperDestNameFilter\HyperDestLabelReplace
5330 \else

```

\hyper@newdestlabel

```

5331 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5332 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

5333 \fi

5334 \Hy@DisableOption{destlabel}

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

5335 \AddLineBeginAux{%

5336 \string\providecommand\string\hyper@newdestlabel[2]{}%

5337 }

19 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

19.1 Field flags

The field flags are organized in a bit set.

5338 \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

5339 \def\HyField@NewFlag#1#2{%

5340 \lowercase{\HyField@NewOption{#2}}%

5341 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%

5342 }

\HyField@NewFlagOnly

5343 \def\HyField@NewFlagOnly#1#2{%

5344 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%

5345 }

\HyField@NewOption #1: option name

5346 \def\HyField@NewOption#1{%

5347 \expandafter\newif\csname ifFld@#1\endcsname

5348 \define@key{Field}{#1}[true]{%

5349 \lowercase{\Field@boolkey{##1}}{#1}%

5350 }%

5351 }

`\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
5352 \def\HyField@NewBitsetFlag#1#2#3#4{%
5353   \begingroup
5354   \count@=#4\relax
5355   \advance\count@\m@ne
5356   \def\x##1{%
5357     \endgroup
5358     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5359     \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5360       \expandafter\edef\csname HyField@#3@#1\endcsname{%
5361         (\number#4) #2%
5362       }%
5363     \else
5364       \expandafter\edef\csname HyField@#3@#1\endcsname{%
5365         \csname HyField@#3@#1\endcsname
5366         /#2%
5367       }%
5368     \fi
5369   }%
5370   \expandafter\x\expandafter{\the\count@}%
5371 }
```

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

```
5372 \def\HyField@UseFlag#1#2{%
5373   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5374 }
```

`\HyField@@UseFlag`

```
5375 \def\HyField@@UseFlag#1#2{%
5376   \bitsetSetValue{HyField@#2}{%
5377     \csname HyField@#2@#1\endcsname
5378   }{%
5379     \csname ifFld@#1\endcsname 1\else 0\fi
5380   }%
5381 }
```

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

```
5382 \def\HyField@SetFlag#1#2{%
5383   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5384 }
```

`\HyField@@SetFlag`

```
5385 \def\HyField@@SetFlag#1#2{%
5386   \bitsetSetValue{HyField@#2}{%
5387     \csname HyField@#2@#1\endcsname
5388   }{1}%
5389 }
```

`\HyField@PrintFlags`

```

5390 \def\HyField@PrintFlags#1#2{%
5391   \ifHy@verbose
5392     \begingroup
5393     \let\Hy@temp\@empty
5394     \let\MessageBreak\relax
5395     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5396     \bitsetGetSetBitList{HyField@#1}\do{%
5397       \edef\Hy@temp{%
5398         \Hy@temp
5399         \csname HyField@#1@\x\endcsname\MessageBreak
5400       }%
5401     }%
5402   \edef\x{\endgroup
5403     \noexpand\Hy@Info{%
5404       Field flags: %
5405       \expandafter\ifx\@car#1\@nil S\else/\fi
5406       #1 %
5407       \bitsetGetDec{HyField@#1} %
5408       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5409       \Hy@temp
5410       for #2%
5411     }%
5412   }\x
5413   \fi
5414 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5415 \HyField@NewFlag{Ff}{ReadOnly}{1}
5416 \HyField@NewFlag{Ff}{Required}{2}
5417 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5418 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5419 \HyField@NewFlag{Ff}{Radio}{16}
5420 \HyField@NewFlag{Ff}{Pushbutton}{17}
5421 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5422 \HyField@NewFlag{Ff}{Multiline}{13}
5423 \HyField@NewFlag{Ff}{Password}{14}
5424 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5425 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5426 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5427 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5428 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5429 \HyField@NewFlag{Ff}{Combo}{18}
5430 \HyField@NewFlag{Ff}{Edit}{19}
5431 \HyField@NewFlag{Ff}{Sort}{20}
5432 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5433 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5434 \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.

```
5435 \newif\ifFld@popdown
5436 \define@key{Field}{popdown}[true]{%
5437   \lowercase{\Field@boolkey{#1}}{popdown}%
5438 }
```

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.

```
5439 \HyField@NewFlag{F}{Invisible}{1}
5440 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5441 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5442 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5443 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5444 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5445 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5446 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5447 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5448 \ifHy@pdfa
5449   \def\HyField@PDFAFflagWarning#1#2{%
5450     \Hy@Warning{%
5451       PDF/A: Annotation flag `#1' must\MessageBreak
5452       be set to `#2'%
5453     }%
5454   }%
5455   \Fld@invisiblefalse
5456   \def\Fld@invisibletrue{%
5457     \HyField@PDFAFflagWarning{invisible}{false}%
5458   }%
5459   \Fld@hiddenfalse
5460   \def\Fld@hiddentrue{%
5461     \HyField@PDFAFflagWarning{hidden}{false}%
5462   }%
5463   \Fld@printtrue
5464   \def\Fld@printfalse{%
5465     \HyField@PDFAFflagWarning{print}{true}%
5466   }%
5467   \Fld@nozoomtrue
5468   \def\Fld@nozoomfalse{%
5469     \HyField@PDFAFflagWarning{nozoom}{true}%
5470   }%
5471   \Fld@norotatetrue
5472   \def\Fld@norotatefalse{%
5473     \HyField@PDFAFflagWarning{norotate}{true}%
5474   }%
5475   \Fld@noviewfalse
5476   \def\Fld@noviewtrue{%
5477     \HyField@PDFAFflagWarning{noview}{false}%
5478   }%
```

5479 \fi

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

```
5480 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5481 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5482 \HyField@NewFlag{Submit}{GetMethod}{4}
5483 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5484 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5485 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5486 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5487 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5488 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5489 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5490 \HyField@NewFlag{Submit}{ExclFKey}{12}
5491 \HyField@NewFlag{Submit}{EmbedForm}{14}

5492 \define@key{Field}{export}{%
5493   \lowercase{\def\Hy@temp{#1}}%
5494   \@ifundefined{Fld@export@\Hy@temp}{%
5495     \@onelevel@sanitize\Hy@temp
5496     \Hy@Error{%
5497       Unknown export format `'\Hy@temp'.\MessageBreak
5498       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5499     }\@ehc
5500   }{%
5501     \let\Fld@export\Hy@temp
5502   }%
5503 }
5504 \def\Fld@export{fdf}
5505 \@namedef{Fld@export@fdf}{0}%
5506 \@namedef{Fld@export@html}{1}%
5507 \@namedef{Fld@export@xfdf}{2}%
5508 \@namedef{Fld@export@pdf}{3}%
```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```
5509 \def\HyField@FlagsSubmit{%
5510   \bitsetReset{HyField@Submit}%
5511   \ifcase\@nameuse{Fld@export@\Fld@export} %
5512     % FDF
5513     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5514     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5515     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5516     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5517     \HyField@UseFlag{Submit}{CanonicalFormat}%
5518     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5519     \HyField@UseFlag{Submit}{ExclFKey}%
5520     \HyField@UseFlag{Submit}{EmbedForm}%
5521   \or % HTML
5522     \HyField@SetFlag{Submit}{ExportFormat}%
5523     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5524     \HyField@UseFlag{Submit}{GetMethod}%
5525     \HyField@UseFlag{Submit}{SubmitCoordinates}%
```

```

5526 \HyField@UseFlag{Submit}{CanonicalFormat}%
5527 \or % XFDF
5528 \HyField@SetFlag{Submit}{XFDF}%
5529 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5530 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5531 \HyField@UseFlag{Submit}{CanonicalFormat}%
5532 \or % PDF
5533 \HyField@SetFlag{Submit}{SubmitPDF}%
5534 \HyField@UseFlag{Submit}{GetMethod}%
5535 \fi
5536 \HyField@PrintFlags{Submit}{submit button field}%
5537 \bitsetIsEmpty{HyField@Submit}{%
5538 \let\Fld@submitflags\ltx@empty
5539 }{%
5540 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5541 }%
5542 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5543 \def\HyField@FlagsAnnot#1{%
5544 \bitsetReset{HyField@F}%
5545 \HyField@UseFlag{F}{Invisible}%
5546 \HyField@UseFlag{F}{Hidden}%
5547 \HyField@UseFlag{F}{Print}%
5548 \HyField@UseFlag{F}{NoZoom}%
5549 \HyField@UseFlag{F}{NoRotate}%
5550 \HyField@UseFlag{F}{NoView}%
5551 \HyField@UseFlag{F}{Locked}%
5552 \HyField@UseFlag{F}{ToggleNoView}%
5553 \HyField@UseFlag{F}{LockedContents}%
5554 \HyField@PrintFlags{F}{#1}%
5555 \bitsetIsEmpty{HyField@F}{%
5556 \let\Fld@annotflags\ltx@empty
5557 }{%
5558 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5559 }%
5560 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5561 \def\HyField@FlagsPushButton{%
5562 \HyField@FlagsAnnot{push button field}%
5563 \bitsetReset{HyField@Ff}%
5564 \HyField@UseFlag{Ff}{ReadOnly}%
5565 \HyField@UseFlag{Ff}{Required}%
5566 \HyField@UseFlag{Ff}{NoExport}%
5567 \HyField@SetFlag{Ff}{PushButton}%
5568 \HyField@PrintFlags{Ff}{push button field}%
5569 \bitsetIsEmpty{HyField@Ff}{%
5570 \let\Fld@flags\ltx@empty

```

```

5571 }{%
5572 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5573 }%
5574 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5575 \def\HyField@FlagsCheckBox{%
5576 \HyField@FlagsAnnot{check box field}%
5577 \bitsetReset{HyField@Ff}%
5578 \HyField@UseFlag{Ff}{ReadOnly}%
5579 \HyField@UseFlag{Ff}{Required}%
5580 \HyField@UseFlag{Ff}{NoExport}%
5581 \HyField@PrintFlags{Ff}{check box field}%
5582 \bitsetIsEmpty{HyField@Ff}{%
5583 \let\Fld@flags\ltx@empty
5584 }{%
5585 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5586 }%
5587 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5588 \def\HyField@FlagsRadioButton{%
5589 \HyField@FlagsAnnot{radio button field}%
5590 \bitsetReset{HyField@Ff}%
5591 \HyField@UseFlag{Ff}{ReadOnly}%
5592 \HyField@UseFlag{Ff}{Required}%
5593 \HyField@UseFlag{Ff}{NoExport}%
5594 \HyField@UseFlag{Ff}{NoToggleToOff}%
5595 \HyField@SetFlag{Ff}{Radio}%
5596 \HyField@UseFlag{Ff}{RadiosInUnison}%
5597 \HyField@PrintFlags{Ff}{radio button field}%
5598 \bitsetIsEmpty{HyField@Ff}{%
5599 \let\Fld@flags\ltx@empty
5600 }{%
5601 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5602 }%
5603 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5604 \def\HyField@FlagsText{%
5605 \HyField@FlagsAnnot{text field}%
5606 \bitsetReset{HyField@Ff}%
5607 \HyField@UseFlag{Ff}{ReadOnly}%
5608 \HyField@UseFlag{Ff}{Required}%
5609 \HyField@UseFlag{Ff}{NoExport}%
5610 \HyField@UseFlag{Ff}{Multiline}%
5611 \HyField@UseFlag{Ff}{Password}%

```

```

5612 \HyField@UseFlag{Ff}{FileSelect}%
5613 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5614 \HyField@UseFlag{Ff}{DoNotScroll}%
5615 \ifFld@comb
5616 \ifcase0\ifFld@multiline
5617 \else\ifFld@password
5618 \else\ifFld@fileselect
5619 \else 1\fi\fi\fi\relax
5620 \Hy@Error{%
5621 Field option `comb' cannot used together with\MessageBreak
5622 `multiline', `password', or `fileselect'%
5623 }\@ehc
5624 \else
5625 \HyField@UseFlag{Ff}{Comb}%
5626 \fi
5627 \fi
5628 \HyField@UseFlag{Ff}{RichText}%
5629 \HyField@PrintFlags{Ff}{text field}%
5630 \bitsetIsEmpty{HyField@Ff}{%
5631 \let\Fld@flags\ltx@empty
5632 }{%
5633 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5634 }%
5635 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5636 \def\HyField@FlagsChoice{%
5637 \HyField@FlagsAnnot{choice field}%
5638 \bitsetReset{HyField@Ff}%
5639 \HyField@UseFlag{Ff}{ReadOnly}%
5640 \HyField@UseFlag{Ff}{Required}%
5641 \HyField@UseFlag{Ff}{NoExport}%
5642 \HyField@UseFlag{Ff}{Combo}%
5643 \ifFld@combo
5644 \HyField@UseFlag{Ff}{Edit}%
5645 \fi
5646 \HyField@UseFlag{Ff}{Sort}%
5647 \HyField@UseFlag{Ff}{MultiSelect}%
5648 \ifFld@combo
5649 \ifFld@edit
5650 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5651 \fi
5652 \fi
5653 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5654 \HyField@PrintFlags{Ff}{choice field}%
5655 \bitsetIsEmpty{HyField@Ff}{%
5656 \let\Fld@flags\ltx@empty
5657 }{%
5658 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5659 }%
5660 }

```

19.2 Choice field

`\HyField@PDFChoices #1:` list of choices in key value syntax, key = exported name, value = displayed text.

Input: `\Fld@default, \Fld@value, \ifFld@multiselect`

Result: `\Fld@choices` with entries: `/Opt, /DV, /V, /I`.

```

5661 \def\HyField@PDFChoices#1{%
5662   \begingroup
5663   \global\let\Fld@choices\ltx@empty
5664   \let\HyTmp@optlist\ltx@empty
5665   \let\HyTmp@optitem\relax
5666   \count@=0 %
5667   \kv@parse{#1}{%
5668     \Hy@pdfstringdef\kv@key\kv@key
5669     \ifx\kv@value\relax
5670     \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5671       \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}{%
5672         \else
5673         \xdef\Fld@choices{\Fld@choices(\kv@key)}{%
5674         \fi
5675       \else
5676       \Hy@pdfstringdef\kv@value\kv@value
5677       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}{%
5678       \fi
5679       \edef\HyTmp@optlist{%
5680         \HyTmp@optlist
5681         \HyTmp@optitem{\the\count@}{\kv@key}0%
5682       }%
5683       \advance\count@ by 1 %
5684       \@gobbletwo
5685     }%
5686     \xdef\Fld@choices{/Opt{\Fld@choices}}%
5687     \ifFld@multiselect
5688       \HyField@@PDFChoices{DV}\Fld@default
5689       \HyField@@PDFChoices{V}\Fld@value
5690     \else
5691       \ifx\Fld@default\relax
5692       \else
5693       \pdfstringdef\Hy@gtemp\Fld@default
5694       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5695     \fi
5696     \ifx\Fld@value\relax
5697     \else
5698     \pdfstringdef\Hy@gtemp\Fld@value
5699     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5700   \fi
5701   \fi
5702   \endgroup
5703 }
```

`\HyField@@PDFChoices`

```

5704 \def\HyField@@PDFChoices#1#2{%
5705   \ifx#2\relax
5706   \else
```



```

5707 \count@=0 %
5708 \def\HyTmp@optitem##1##2##3{%
5709 \def\HyTmp@key{##2}%
5710 \ifx\HyTmp@key\Hy@gtemp
5711 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5712 \HyTmp@optlist
5713 \HyTmp@optitem{##1}{##2}1%
5714 }%
5715 \let\HyTmp@found=Y%
5716 \else
5717 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5718 \HyTmp@optlist
5719 \HyTmp@optitem{##1}{##2}##3%
5720 }%
5721 \fi
5722 }%
5723 \expandafter\comma@parse\expandafter{#2}{%
5724 \pdfstringdef\Hy@gtemp\comma@entry
5725 \let\HyTmp@found=N %
5726 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5727 \HyTmp@optlist
5728 \ifx\HyTmp@found Y%
5729 \advance\count@ by 1 %
5730 \else
5731 \@onelevel@sanitize\comma@entry
5732 \PackageWarning{hyperref}{%
5733 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5734 \MessageBreak
5735 it cannot be found in the choices%
5736 }%
5737 \fi
5738 \@gobble
5739 }%
5740 \def\HyTmp@optitem##1##2##3{%
5741 \ifnum##3=1 %
5742 (##2)%
5743 \fi
5744 }%
5745 \ifcase\count@
5746 \or
5747 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5748 \else
5749 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5750 \ifx#1V%
5751 \def\HyTmp@optitem##1##2##3{%
5752 \ifnum##3=1 %
5753 \@firstofone{ ##1}%
5754 \fi
5755 }%
5756 \edef\HyTmp@optlist{\HyTmp@optlist}%
5757 \xdef\Fld@choices{%
5758 \Fld@choices
5759 /I[\expandafter\@firstofone\HyTmp@optlist]}%
5760 }%

```

```

5761     \fi
5762     \fi
5763 \fi
5764 }

```

19.3 Forms

\HyField@SetKeys

```

5765 \def\HyField@SetKeys{%
5766   \kvsetkeys{Field}%
5767 }

5768 \newif\ifFld@checked
5769 \newif\ifFld@disabled
5770 \Fld@checkedfalse
5771 \Fld@disabledfalse
5772 \newcount\Fld@menulength
5773 \newdimen\Fld@Width
5774 \newdimen\Fld@charsize
5775 \Fld@charsize=10\p@
5776 \def\Fld@maxlen{0}
5777 \def\Fld@align{0}
5778 \def\Fld@color{0 0 0 rg}
5779 \def\Fld@bcolor{1 1 1}
5780 \def\Fld@bordercolor{1 0 0}
5781 \def\Fld@bordersep{1\p@}
5782 \def\Fld@borderwidth{1}
5783 \def\Fld@borderstyle{S}
5784 \def\Fld@cbsymbol{4}
5785 \def\Fld@radiosymbol{H}
5786 \def\Fld@rotation{0}
5787 \def\Fld@Form{\ifnextchar[{\@Form}{\@Form[]}}
5788 \def\Fld@endForm{\@endForm}
5789 \newif\ifForm@html
5790 \Form@htmlfalse
5791 \def\Fld@boolkey#1#2{%
5792   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5793 }
5794 \define@key{Form}{action}{%
5795   \hyper@normalise\Hy@DefFormAction{#1}%
5796 }
5797 \def\Hy@DefFormAction{\def\Fld@action}
5798 \def\Fld@enc@html{html}
5799 \define@key{Form}{encoding}{%
5800   \def\Hy@tempa{#1}%
5801   \ifx\Hy@tempa\enc@html
5802     \Form@htmltrue
5803     \def\Fld@export{html}%
5804   \else
5805     \Hy@Warning{%
5806       Form `encoding' key with \MessageBreak
5807       unknown value `#1'%
5808     }%
5809     \Form@htmlfalse

```

```

5810 \fi
5811 }
5812 \define@key{Form}{method}{%
5813 \lowercase{\def\Hy@temp{#1}}}%
5814 \@ifundefined{Form@method@\Hy@temp}{%
5815 \onelevel@sanitize\Hy@temp
5816 \Hy@Error{%
5817   Unknown method ``\Hy@temp'.\MessageBreak
5818   Known values are `post' and `get'%
5819 }\@ehc
5820 }{%
5821 \let\Form@method\Hy@temp
5822 \ifcase\@nameuse{Form@method@\Hy@temp} %
5823 \Fld@getmethodfalse
5824 \else
5825 \Fld@getmethodtrue
5826 \fi
5827 }%
5828 }
5829 \def\Form@method{}
5830 \@namedef{Form@method@post}{0}
5831 \@namedef{Form@method@get}{1}

5832 \newif\ifHyField@NeedAppearances
5833 \def\HyField@NeedAppearancesfalse{%
5834 \global\let\ifHyField@NeedAppearances\iffalse
5835 }
5836 \def\HyField@NeedAppearancetrue{%
5837 \global\let\ifHyField@NeedAppearances\iftrue
5838 }
5839 \HyField@NeedAppearancetrue
5840 \define@key{Form}{NeedAppearances}[true]{%
5841 \edef\Hy@tempa{#1}}%
5842 \ifx\Hy@tempa\Hy@true
5843 \HyField@NeedAppearancetrue
5844 \else
5845 \ifx\Hy@tempa\Hy@false
5846 \HyField@NeedAppearancesfalse
5847 \else
5848 \Hy@Error{%
5849   Unexpected value ``\Hy@tempa'.\MessageBreak
5850   of option `NeedAppearances' instead of\MessageBreak
5851   `true' or `false'%
5852 }\@ehc
5853 \fi
5854 \fi
5855 }
5856 \def\Field@boolkey#1#2{%
5857 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5858 }
5859 \ifHy@texht
5860 \newtoks\Field@toks
5861 \Field@toks={ }%
5862 \def\Field@addtoks#1#2{%
5863 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}}%

```

```

5864 \processme
5865 }%
5866 \else
5867 \def\Hy@WarnHTMLFieldOption#1{%
5868 \Hy@Warning{%
5869 HTML field option `#1'\MessageBreak
5870 is ignored%
5871 }%
5872 }%
5873 \fi
5874 \def\Fld@checkequals#1=#2=#3\\{%
5875 \def\@currDisplay{#1}%
5876 \ifx\\#2\\%
5877 \def\@currValue{#1}%
5878 \else
5879 \def\@currValue{#2}%
5880 \fi
5881 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5882 }
5883 \define@key{Field}{loc}{%
5884 \def\Fld@loc{#1}%
5885 }
5886 \define@key{Field}{checked}[true]{%
5887 \lowercase{\Field@boolkey{#1}}{checked}%
5888 }
5889 \define@key{Field}{disabled}[true]{%
5890 \lowercase{\Field@boolkey{#1}}{disabled}%
5891 }
5892 \ifHy@texht
5893 \define@key{Field}{accesskey}{%
5894 \Field@addtoks{accesskey}{#1}%
5895 }%
5896 \define@key{Field}{tabkey}{%
5897 \Field@addtoks{tabkey}{#1}%
5898 }%
5899 \else
5900 \define@key{Field}{accesskey}{%
5901 \Hy@WarnHTMLFieldOption{accesskey}%
5902 }%
5903 \define@key{Field}{tabkey}{%
5904 \Hy@WarnHTMLFieldOption{tabkey}%
5905 }%
5906 \fi
5907 \define@key{Field}{name}{%
5908 \def\Fld@name{#1}%
5909 }
5910 \let\Fld@altname\relax
5911 \define@key{Field}{altname}{%
5912 \def\Fld@altname{#1}%
5913 }
5914 \let\Fld@mappingname\relax
5915 \define@key{Field}{mappingname}{%
5916 \def\Fld@mappingname{#1}%
5917 }

```

```

5918 \define@key{Field}{width}{%
5919   \def\Fld@width{#1}%
5920   \Field@Width#1\setbox0=\hbox{m}%
5921 }
5922 \define@key{Field}{maxlen}{%
5923   \def\Fld@maxlen{#1}%
5924 }
5925 \define@key{Field}{menulength}{%
5926   \Fld@menulength=#1\relax
5927 }
5928 \define@key{Field}{height}{%
5929   \def\Fld@height{#1}%
5930 }
5931 \define@key{Field}{charsize}{%
5932   \setlength{\Fld@charsize}{#1}%
5933 }
5934 \define@key{Field}{borderwidth}{%
5935   \Hy@defaultbp\Fld@borderwidth{#1}%
5936 }
5937 \def\Hy@defaultbp#1#2{%
5938   \begingroup
5939   \afterassignment\Hy@defaultbpAux
5940   \dimen@=#2bp\relax{#1}{#2}%
5941 }
5942 \def\Hy@defaultbpAux#1\relax#2#3{%
5943   \ifx!#1!%
5944     \endgroup
5945     \def#2{#3}%
5946   \else
5947     \edef\x{\endgroup
5948       \def\noexpand#2{%
5949         \strip@pt\dimexpr\dimen@*800/803\relax
5950       }%
5951     }\x
5952   \fi
5953 }%
5954 \define@key{Field}{borderstyle}{%
5955   \let\Hy@temp\Fld@borderstyle
5956   \def\Fld@borderstyle{#1}%
5957   \Hy@Match\Fld@borderstyle{}{%
5958     ^[SDBIU]$%
5959   }{}{%
5960     \Hy@Warning{%
5961       Invalid value ` \@pdfborderstyle'\MessageBreak
5962       for option `pdfborderstyle'. Valid values:\MessageBreak
5963       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5964       \space\space I (Inset), U (Underline)\MessageBreak
5965       Option setting is ignored%
5966     }%
5967     \let\Fld@borderstyle\Hy@temp
5968   }%
5969 }
5970 \define@key{Field}{bordersep}{%
5971   \def\Fld@bordersep{#1}%

```

```

5972 }
5973 \define@key{Field}{default}{%
5974   \Hy@pdfstringdef\Fld@default{#1}%
5975 }
5976 \define@key{Field}{align}{%
5977   \def\Fld@align{#1}%
5978 }
5979 \define@key{Field}{value}{%
5980   \Hy@pdfstringdef\Fld@value{#1}%
5981 }
5982 \define@key{Field}{checkboxsymbol}{%
5983   \Fld@DingDef\Fld@cbsymbol{#1}%
5984 }
5985 \define@key{Field}{radiosymbol}{%
5986   \Fld@DingDef\Fld@radiosymbol{#1}%
5987 }
5988 \def\Fld@DingDef#1#2{%
5989   \let\Fld@temp\ltx@empty
5990   \Fld@@@DingDef#2\ding{ }\@nil
5991   \let#1\Fld@temp
5992 }
5993 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
5994   \expandafter\def\expandafter\Fld@temp\expandafter{%
5995     \Fld@temp
5996     #1%
5997   }%
5998   \ifx\\#3\\%
5999     \expandafter\@gobble
6000   \else
6001     \begingroup
6002     \lccode`0=#2\relax
6003     \lowercase{\endgroup
6004       \expandafter\def\expandafter\Fld@temp\expandafter{%
6005         \Fld@temp
6006         0%
6007       }%
6008     }%
6009     \expandafter\@firstofone
6010   \fi
6011   {%
6012     \Fld@@@DingDef#3\@nil
6013   }%
6014 }

6015 \define@key{Field}{rotation}{%
6016   \def\Fld@rotation{#1}%
6017 }

6018 \define@key{Field}{backgroundcolor}{%
6019   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6020 }
6021 \define@key{Field}{bordercolor}{%
6022   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6023 }
6024 \define@key{Field}{color}{%

```

```

6025 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6026 }

6027 \let\Fld@onclick@code\ltx@empty
6028 \let\Fld@format@code\ltx@empty
6029 \let\Fld@validate@code\ltx@empty
6030 \let\Fld@calculate@code\ltx@empty
6031 \let\Fld@keystroke@code\ltx@empty
6032 \let\Fld@onfocus@code\ltx@empty
6033 \let\Fld@onblur@code\ltx@empty
6034 \let\Fld@onmousedown@code\ltx@empty
6035 \let\Fld@onmouseup@code\ltx@empty
6036 \let\Fld@onenter@code\ltx@empty
6037 \let\Fld@onexit@code\ltx@empty
6038 \def\Hy@temp#1{%
6039   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6040 }
6041 \def\Hy@@temp#1#2{%
6042   \ifHy@pdfa
6043     \define@key{Field}{#2}{%
6044       \Hy@Error{%
6045         PDF/A: Additional action `#2' is prohibited%
6046       }\@ehc
6047     }%
6048   \else
6049     \define@key{Field}{#2}{%
6050       \def#1{##1}%
6051     }%
6052   \fi
6053 }
6054 \Hy@temp{keystroke}
6055 \Hy@temp{format}
6056 \Hy@temp{validate}
6057 \Hy@temp{calculate}
6058 \Hy@temp{onfocus}
6059 \Hy@temp{onblur}
6060 \Hy@temp{onenter}
6061 \Hy@temp{onexit}

6062 \let\Fld@calculate@sortkey\ltx@empty
6063 \define@key{Field}{calculatesortkey}[1]{%
6064   \def\Fld@calculate@sortkey{#1}%
6065 }

6066 \ifHy@texht
6067   \def\Hy@temp#1{%
6068     \define@key{Field}{#1}{%
6069       \Field@addtoks{#1}{##1}%
6070     }%
6071   }%
6072 \else
6073   \def\Hy@temp#1{%
6074     \define@key{Field}{#1}{%
6075       \Hy@WarnHTMLFieldOption{#1}%
6076     }%
6077   }%

```

```

6078 \fi
6079 \Hy@temp{ondblclick}
6080 \Hy@temp{onmousedown}
6081 \Hy@temp{onmouseup}
6082 \Hy@temp{onmouseover}
6083 \Hy@temp{onmousemove}
6084 \Hy@temp{onmouseout}
6085 \Hy@temp{onkeydown}
6086 \Hy@temp{onkeyup}
6087 \Hy@temp{onselect}
6088 \Hy@temp{onchange}
6089 \Hy@temp{onkeypress}
6090 \ifHy@texht
6091   \define@key{Field}{onclick}{%
6092     \Field@addtoks{onclick}{#1}%
6093   }%
6094 \else
6095   \ifHy@pdfa
6096     \define@key{Field}{onclick}{%
6097       \Hy@Error{%
6098         PDF/A: Action `onclick' is prohibited%
6099       } \@ehc
6100     }%
6101   \else
6102     \define@key{Field}{onclick}{%
6103       \def\Fld@onclick@code{#1}%
6104     }%
6105   \fi
6106 \fi

6107 \DeclareRobustCommand\TextField{%
6108   \@ifnextchar[{\@TextField}{\@TextField[]}%
6109 }
6110 \DeclareRobustCommand\ChoiceMenu{%
6111   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6112 }
6113 \DeclareRobustCommand\CheckBox{%
6114   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6115 }
6116 \DeclareRobustCommand\PushButton{%
6117   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6118 }
6119 \DeclareRobustCommand\Gauge{%
6120   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6121 }
6122 \DeclareRobustCommand\Submit{%
6123   \@ifnextchar[{\@Submit}{\@Submit[]}%
6124 }
6125 \DeclareRobustCommand\Reset{%
6126   \@ifnextchar[{\@Reset}{\@Reset[]}%
6127 }
6128 \def\LayoutTextField#1#2{% label, field
6129   \def\Hy@temp{#1}%
6130   \ifx\Hy@temp\@empty
6131     #2%

```



```

6132 \else
6133   #1 #2%
6134 \fi
6135 }
6136 \def\LayoutChoiceField#1#2{% label, field
6137   \def\Hy@temp{#1}%
6138   \ifx\Hy@temp\@empty
6139     #2%
6140   \else
6141     #1 #2%
6142   \fi
6143 }
6144 \def\LayoutCheckField#1#2{% label, field
6145   \def\Hy@temp{#1}%
6146   \ifx\Hy@temp\@empty
6147     #2%
6148   \else
6149     #1 #2%
6150   \fi
6151 }
6152 \def\LayoutPushButtonField#1{% button
6153   #1%
6154 }
6155 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6156 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6157 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6158 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6159 \def\MakeButtonField#1{%
6160   \sbox0{%
6161     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6162   }%
6163   \@tempdima\ht0 %
6164   \advance\@tempdima by \Fld@borderwidth bp %
6165   \advance\@tempdima by \Fld@borderwidth bp %
6166   \ht0\@tempdima
6167   \@tempdima\dp0 %
6168   \advance\@tempdima by \Fld@borderwidth bp %
6169   \advance\@tempdima by \Fld@borderwidth bp %
6170   \dp0\@tempdima
6171   \box0\relax
6172 }
6173 \def\DefaultHeightofSubmit{14pt}
6174 \def\DefaultWidthofSubmit{2cm}
6175 \def\DefaultHeightofReset{14pt}
6176 \def\DefaultWidthofReset{2cm}
6177 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6178 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6179 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6180 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6181 \def\DefaultHeightofText{\normalbaselineskip}
6182 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6183 \def\DefaultWidthofText{3cm}
6184 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6185 \def\DefaultOptionsofReset{print,name=Reset,noexport}

```

```

6186 \def\DefaultOptionsofPushButton{print}
6187 \def\DefaultOptionsofCheckBox{print}
6188 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6189 \def\DefaultOptionsofListBox{print}
6190 \def\DefaultOptionsofComboBox{print,edit,sort}
6191 \def\DefaultOptionsofPopdownBox{print}
6192 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

6193 \ifHy@hyperfigures
6194 \Hy@Info{Hyper figures ON}%
6195 \else
6196 \Hy@Info{Hyper figures OFF}%
6197 \fi
6198 \ifHy@nesting
6199 \Hy@Info{Link nesting ON}%
6200 \else
6201 \Hy@Info{Link nesting OFF}%
6202 \fi
6203 \ifHy@hyperindex
6204 \Hy@Info{Hyper index ON}%
6205 \else
6206 \Hy@Info{Hyper index OFF}%
6207 \fi
6208 \ifHy@backref
6209 \Hy@Info{backreferencing ON}%
6210 \else
6211 \Hy@Info{backreferencing OFF}%
6212 \fi
6213 \ifHy@colorlinks
6214 \Hy@Info{Link coloring ON}%
6215 \else
6216 \Hy@Info{Link coloring OFF}%
6217 \fi
6218 \ifHy@ocgcolorlinks
6219 \Hy@Info{Link coloring with OCG ON}%
6220 \else
6221 \Hy@Info{Link coloring with OCG OFF}%
6222 \fi
6223 \ifHy@pdfa
6224 \Hy@Info{PDF/A mode ON}%
6225 \else
6226 \Hy@Info{PDF/A mode OFF}%
6227 \fi

```

21 Low-level utility macros

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

```

6228 \edef\hyper@hash{\string#}

```

```

6229 \edef\hyper@tilde{\string~}
6230 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6231 \def\@currentHref{Doc-Start}
6232 \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.

```

6233 \Hy@AtBeginDocument{%
6234   \Hy@pdfstringtrue
6235   \PDF@SetupDoc
6236   \let\PDF@SetupDoc\@empty
6237   \Hy@DisableOption{pdfpagescrop}%
6238   \Hy@DisableOption{pdfpagemode}%
6239   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6240   \Hy@DisableOption{pdfdirection}%
6241   \Hy@DisableOption{pdfviewarea}%
6242   \Hy@DisableOption{pdfviewclip}%
6243   \Hy@DisableOption{pdfprintarea}%
6244   \Hy@DisableOption{pdfprintclip}%
6245   \Hy@DisableOption{pdfprintscaling}%
6246   \Hy@DisableOption{pdfduplex}%
6247   \Hy@DisableOption{pdfpicktraybypdfsize}%
6248   \Hy@DisableOption{pdfprintpagerange}%
6249   \Hy@DisableOption{pdfnumcopies}%
6250   \Hy@DisableOption{pdfstartview}%
6251   \Hy@DisableOption{pdfstartpage}%
6252   \Hy@DisableOption{pdftoolbar}%
6253   \Hy@DisableOption{pdfmenubar}%
6254   \Hy@DisableOption{pdfwindowui}%
6255   \Hy@DisableOption{pdfwindow}%
6256   \Hy@DisableOption{pdfcenterwindow}%
6257   \Hy@DisableOption{pdfdisplaydoctitle}%
6258   \Hy@DisableOption{pdfpagelayout}%
6259   \Hy@DisableOption{pdflang}%
6260   \Hy@DisableOption{baseurl}%
6261   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6262   \Hy@pdfstringfalse
6263 }

```

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

```

6264 \@ifundefined{@kernel@ref}
6265 {\LetLtxMacro\NoHy@OrgRef\ref
6266  \DeclareRobustCommand*\ref{%
6267   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6268  }
6269  \LetLtxMacro\NoHy@OrgPageRef\pageref
6270  \DeclareRobustCommand*\pageref{%
6271   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6272  }}

```

22 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hypertext functions doing anything. This is used, for instance, in the Elsevier classes, to stop `hyperref` playing havoc in the front matter.

```

6273 \def\NoHyper{%
6274   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6275   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6276   \global\let\hyper@livelink\hyper@link
6277   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6278   \let\hyper@anchor\ltx@gobble
6279   \let\hyper@anchorstart\ltx@gobble
6280   \def\hyper@anchorend{\Hy@xspace@end}%
6281   \let\hyper@linkstart\ltx@gobbletwo
6282   \def\hyper@linkend{\Hy@xspace@end}%
6283   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6284   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6285   \let\Hy@backout\@gobble
6286 }
6287 \def\stop@hyper{%
6288   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6289   \let\Hy@backout\@gobble
6290   \let\hyper@@anchor\ltx@gobble
6291   \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6292   \let\hyper@anchor\ltx@gobble
6293   \let\hyper@anchorstart\ltx@gobble
6294   \def\hyper@anchorend{\Hy@xspace@end}%
6295   \let\hyper@linkstart\ltx@gobbletwo
6296   \def\hyper@linkend{\Hy@xspace@end}%
6297   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6298   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6299 }
6300 \def\endNoHyper{%
6301   \global\let\hyper@link\hyper@livelink
6302 }
6303 \end{package}

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package `nohyperref` is a dummy package that defines some low level and some top-level commands. It is done for `jadetex`, which calls `hyperref` low-level commands, but it would also be useful with people using normal `hyperref`, who really do not want the package loaded at all.

Some low-level commands:

```

6304 (*nohyperref)
6305 \RequirePackage{letltxmacro}[2008/06/13]
6306 \let\hyper@@anchor\@gobble
6307 \def\hyper@link##1##2##3{##3}%
6308 \let\hyper@anchorstart\@gobble
6309 \let\hyper@anchorend\@empty

```

```

6310 \let\hyper@linkstart\@gobbletwo
6311 \let\hyper@linkend\@empty
6312 \def\hyper@linkurl#1#2{#1}%
6313 \def\hyper@linkfile#1#2#3{#1}%
6314 \def\hyper@link@[#1]#2#3{#1}%
6315 \let\PDF@SetupDoc\@empty
6316 \let\PDF@FinishDoc\@empty
6317 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6318 \def\Acrobatmenu#1#2{\leavevmode#2}
6319 \let\pdfstringdefDisableCommands\@gobbletwo
6320 \let\texorpdfstring\@firstoftwo
6321 \let\pdfbookmark\@undefined
6322 \newcommand\pdfbookmark[3][]{ }
6323 \let\phantomsection\@empty
6324 \let\hypersetup\@gobble
6325 \let\hyperbaseurl\@gobble
6326 \newcommand*{\href}[3][]{#3}
6327 \let\hyperdef\@gobbletwo
6328 \let\hyperlink\@gobble
6329 \let\hypertarget\@gobble
6330 \def\hyperref{%
6331   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6332 }
6333 \long\def\@gobbleopt[#1]{ }
6334 \let\hyperpage\@empty

```

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

```

6335 \@if@t@r\fmtversion{2022-06-01}
6336 {}%
6337 {%
6338   \LetLtxMacro\NoHy@OrgRef\ref
6339   \DeclareRobustCommand*{\ref}{%
6340     \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6341   }
6342   \LetLtxMacro\NoHy@OrgPageRef\pageref
6343   \DeclareRobustCommand*{\pageref}{%
6344     \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6345   }%
6346 }
6347 \</nohyperref>

```

24 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

6348 (*package)
6349 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\newlabel` is defined to cope with the extra arguments. change 2022-03-28:

removed the code for `\contentsline`, it is no longer needed as `\contentsline` has now always four arguments.

```

6350 \if@filesw
6351 \immediate\write\@auxout{%
6352 \string\providecommand\string\HyperFirstAtBeginDocument{%
6353 \string\AtBeginDocument}^^J%
6354 \string\HyperFirstAtBeginDocument{%
6355 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6356 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6357 \string\gdef\string\newlabel\string#1\string#2{%
6358 \string\newlabelxx{\string#1}\string#2}^^J%
6359 \string\gdef\string\newlabelxx%
6360 \string#1\string#2\string#3\string#4\string#5\string#6{%
6361 \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.

```

6362 \string\AtEndDocument{%
6363 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6364 \string\let\string\newlabel\string\oldnewlabel^^J%
6365 \string\fi%
6366 }^^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.

```

6367 \string\fi%
6368 }^^J%
6369 \string\global\string\let\string\hyper@last\relax^^J%
6370 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6371 }%
6372 \fi
6373 \let\HyperFirstAtBeginDocument\ltx@firstofone

```

Now the code to deal with adding the `hyperref` package to a document with aux and toc written the standard way.

If `hyperref` was used last time, do nothing. change 2022-03-28: removed the test for an old toc. `\contentsline` has now always four arguments.

```

6374 \ifx\hyper@last\@undefined
6375 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}}%
6376 \fi
6377 }

```

25 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the `\expandafter \cmd@to@cs \string \title` and `\expandafter \cmd@to@cs \string \author`.

```

6378 \ifHy@pdfusetitle
6379 \let\HyOrg@title\title
6380 \let\HyOrg@author\author
6381 \def\title{\ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6382 \def\Hy@scanopttitle[#1]{%
6383 \gdef\Hy@title{#1}%

```

```

6384 \HyOrg@title[{#1}]%
6385 }%
6386 \def\Hy@scantitle#1{%
6387 \gdef\Hy@title{#1}%
6388 \HyOrg@title{#1}%
6389 }%
6390 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6391 \def\Hy@scanoptauthor[#1]{%
6392 \gdef\Hy@author{#1}%
6393 \HyOrg@author[{#1}]%
6394 }%
6395 \def\Hy@scanauthor#1{%
6396 \gdef\Hy@author{#1}%
6397 \HyOrg@author{#1}%
6398 }%

```

The case, that `\expandafter \cmd@to@cs \string \title` , or `\expandafter \cmd@to@cs \string \author` are given before `hyperref` is loaded, is much more complicate, because LaTeX initializes the macros `\expandafter \cmd@to@cs \string \@title` and `\expandafter \cmd@to@cs \string \@author` with LaTeX error and warning messages.

```

6399 \begingroup
6400 \def\process@me#1\@nil#2{%
6401 \expandafter\let\expandafter\x\csname @#2\endcsname
6402 \edef\y{\expandafter\strip@prefix\meaning\x}%
6403 \def\c##1#1##2\@nil{%
6404 \ifx\\##1\\%
6405 \else
6406 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6407 \expandafter{\x}%
6408 \fi
6409 }%
6410 \expandafter\c\y\relax#1\@nil
6411 }%
6412 \expandafter\process@me\string\@latex@\@nil{title}%
6413 \expandafter\process@me\string\@latex@\@nil{author}%
6414 \endgroup
6415 \fi
6416 \Hy@DisableOption{pdfusetitle}

```

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

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

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

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

A possible ¹removes its argument.

```

6417 \def\Hy@UseMaketitleString#1{%
6418 \ltx@ifundefined{Hy@#1}{-}%
6419 \begingroup
6420 \let\Hy@saved@hook\pdfstringdefPreHook

```

```

6421 \pdfstringdefDisableCommands{%
6422 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6423 \let\newline\\%
6424 \def\and{; }%
6425 \let\thanks\@gobble%
6426 }%
6427 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6428 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6429 \csname Hy@#1\endcsname\@empty
6430 }%
6431 \fi
6432 \global\let\pdfstringdefPreHook\Hy@saved@hook
6433 \endgroup
6434 }%
6435 }
6436 \def\Hy@newline@title#1{ #1}
6437 \def\Hy@newline@author#1{, #1}
6438 \def\Hy@UseMaketitleInfos{%
6439 \Hy@UseMaketitleString{title}%
6440 \Hy@UseMaketitleString{author}%
6441 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6442 \RequirePackage{atbegshi}[2007/09/09]
6443 \let\Hy@EveryPageHook\ltx@empty
6444 \let\Hy@EveryPageBoxHook\ltx@empty
6445 \let\Hy@FirstPageHook\ltx@empty
6446 \AtBeginShipout{%
6447 \Hy@EveryPageHook
6448 \ifx\Hy@EveryPageBoxHook\ltx@empty
6449 \else
6450 \setbox\AtBeginShipoutBox=\vbox{%
6451 \offinterlineskip
6452 \Hy@EveryPageBoxHook
6453 \box\AtBeginShipoutBox
6454 }%
6455 \fi
6456 }
6457 \ltx@iffileloaded{hpdftex.def}{%
6458 \AtBeginShipout{%
6459 \Hy@FirstPageHook
6460 \global\let\Hy@FirstPageHook\ltx@empty
6461 }%
6462 }{%
6463 \AtBeginShipoutFirst{%
6464 \Hy@FirstPageHook
6465 }%

```



```

6466 }
6467 \g@addto@macro\Hy@FirstPageHook{%
6468   \PDF@FinishDoc
6469   \global\let\PDF@FinishDoc\ltx@empty
6470 }

```

27.1 PDF /PageLabels

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

```

6471 \ifHy@pdfpagelabels
6472   \begingroup\expandafter\expandafter\expandafter\endgroup
6473   \expandafter\ifx\csname thepage\endcsname\relax
6474     \Hy@pdfpagelabelsfalse
6475     \Hy@WarningNoLine{%
6476       Option `pdfpagelabels' is turned off\MessageBreak
6477       because \string\thepage\space is undefined%
6478     }%
6479     \csname fi\endcsname
6480     \csname iffalse\expandafter\endcsname
6481   \fi

```

\thispdfpagelabel The command `\expandafter \cmd@to@cs \string \thispdfpagelabel` allows to label a special page without the redefinition of `\expandafter \cmd@to@cs \string \thepage` for the page.

```

6482 \def\thispdfpagelabel#1{%
6483   \gdef\HyPL@thisLabel{#1}%
6484 }%
6485 \global\let\HyPL@thisLabel\relax

```

\HyPL@Labels The page labels are collected in `\expandafter \cmd@to@cs \string \HyPL @Labels` and set at the end of the document.

```

6486 \let\HyPL@Labels\ltx@empty

```

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

```

6487 \newcount\Hy@abspage
6488 \Hy@abspage=0 %

```

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

```

6489 \def\HyPL@LastType{init}%
6490 \def\HyPL@LastNumber{0}%
6491 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6492 \def\HyPL@arabic{D}%
6493 \def\HyPL@Roman{R}%
6494 \def\HyPL@roman{r}%
6495 \def\HyPL@Alph{A}%
6496 \def\HyPL@alph{a}%
6497 \let\HyPL@SlidesSetPage\ltx@empty
6498 \ltx@ifclassloaded{slides}{%
6499   \def\HyPL@SlidesSetPage{%
6500     \advance\c@page\ltx@one

```

```

6501 \ifnum\value{page}>\ltx@one
6502 \protected@edef\HyPL@SlidesOptionalPage{%
6503 \Hy@SlidesFormatOptionalPage{\thepage}%
6504 }%
6505 \else
6506 \let\HyPL@SlidesOptionalPage\ltx@empty
6507 \fi
6508 \advance\c@page-\ltx@one
6509 \def\HyPL@page{%
6510 \csname the\Hy@SlidesPage\endcsname
6511 \HyPL@SlidesOptionalPage
6512 }%
6513 }%
6514 }{}%

```

`\HyPL@EveryPage` If a page is shipout and the page number is known, `\expandafter \cmd@to@cs`
`\string \HyPL @EveryPage` has to be called. It stores the current page label.

```

6515 \def\HyPL@EveryPage{%
6516 \begingroup
6517 \ifx\HyPL@thisLabel\relax
6518 \let\HyPL@page\thepage
6519 \HyPL@SlidesSetPage
6520 \else
6521 \let\HyPL@page\HyPL@thisLabel
6522 \global\let\HyPL@thisLabel\relax
6523 \fi
6524 \let\HyPL@Type\relax
6525 \ifnum\c@page>0 %
6526 \ifx\HyPL@SlidesSetPage\ltx@empty
6527 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6528 \fi
6529 \fi
6530 \let\Hy@temp Y%
6531 \ifx\HyPL@Type\HyPL@LastType
6532 \else
6533 \let\Hy@temp N%
6534 \fi
6535 \ifx\HyPL@Type\relax
6536 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6537 \else
6538 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6539 \fi
6540 \ifx\HyPL@Prefix\HyPL@LastPrefix
6541 \else
6542 \let\Hy@temp N%
6543 \fi
6544 \if Y\Hy@temp
6545 \advance\c@page by -1 %
6546 \ifnum\HyPL@LastNumber=\the\c@page\relax
6547 \else
6548 \let\Hy@temp N%
6549 \fi
6550 \Hy@StepCount\c@page
6551 \fi

```

```

6552 \if N\Hy@temp
6553 \ifx\HyPL@Type\relax
6554 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6555 \else
6556 \HyPL@StorePageLabel{%
6557 \ifx\HyPL@Prefix\@empty
6558 \else
6559 /P(\HyPL@Prefix)%
6560 \fi
6561 /S/\csname HyPL\HyPL@Type\endcsname
6562 \ifnum\the\c@page=1 %
6563 \else
6564 \space/St \the\c@page
6565 \fi
6566 }%
6567 \fi
6568 \fi
6569 \xdef\HyPL@LastNumber{\the\c@page}%
6570 \global\let\HyPL@LastType\HyPL@Type
6571 \global\let\HyPL@LastPrefix\HyPL@Prefix
6572 \endgroup
6573 \Hy@GlobalStepCount\Hy@abspage
6574 }%

```

`\HyPL@CheckThePage` Macro `\expandafter \cmd@to@cs \string \HyPL @CheckThePage` calls `\expandafter \cmd@to@cs \string \HyPL @CheckThePage` that does the job.

```

6575 \def\HyPL@CheckThePage#1\@nil{%
6576 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6577 }%

```

`\HyPL@@CheckThePage` The first check is, is `\expandafter \cmd@to@cs \string \thepage` is defined such as in \LaTeX , e.g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\expandafter \cmd@to@cs \string \csname` before.

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

```

6578 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6579 \def\Hy@tempa{#4}%
6580 \def\Hy@tempb{\csname\endcsname\c@page}%
6581 \ifx\Hy@tempa\Hy@tempb
6582 \expandafter\ifx\csname HyPL#3\endcsname\relax
6583 \else
6584 \def\HyPL@Type{#3}%
6585 \def\HyPL@Prefix{#2}%
6586 \fi
6587 \else
6588 \begingroup
6589 \let\Hy@next\endgroup
6590 \let\HyPL@found\@undefined
6591 \def\arabic{\HyPL@Format{arabic}}%
6592 \def\Roman{\HyPL@Format{Roman}}%
6593 \def\roman{\HyPL@Format{roman}}%
6594 \def\Alph{\HyPL@Format{Alph}}%

```

```

6595 \def\alph{\HyPL@Format{alph}}%
6596 \protected@edef\Hy@temp{#1}%
6597 \ifx\HyPL@found\relax
6598 \toks@{\expandafter{\Hy@temp}}%
6599 \edef\Hy@next{\endgroup
6600 \noexpand\HyPL@@@CheckThePage\the\toks@
6601 \noexpand\HyPL@found\relax\noexpand\@nil
6602 }%
6603 \fi
6604 \Hy@next
6605 \fi
6606 }%

```

`\HyPL@Format` The help macro `\expandafter \cmd@to@cs \string \HyPL @Format` is executed while a `\expandafter \cmd@to@cs \string \protected @edef` in the second check method of `\expandafter \cmd@to@cs \string \HyPL @@@CheckThePage`. The first occurrences of, for example, `\arabic{page}` is marked by `\expandafter \cmd@to@cs \string \HyPL @found` that is also defined by `\expandafter \cmd@to@cs \string \csname .`

```

6607 \def\HyPL@Format#1#2{%
6608 \ifx\HyPL@found\@undefined
6609 \expandafter\ifx\csname c@#2\endcsname\c@page
6610 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6611 \else
6612 \expandafter\noexpand\csname#1\endcsname{#2}%
6613 \fi
6614 \else
6615 \expandafter\noexpand\csname#1\endcsname{#2}%
6616 \fi
6617 }%

```

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

```

6618 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6619 \def\Hy@tempa{#3}%
6620 \def\Hy@tempb{\HyPL@found\relax}%
6621 \ifx\Hy@tempa\Hy@tempb
6622 \def\HyPL@Type{#2}%
6623 \def\HyPL@Prefix{#1}%
6624 \fi
6625 }%

```

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

```

6626 \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 `\expandafter \cmd@to@cs \string \HyPL @Labels` has the meaning of `\expandafter \cmd@to@cs \string \HyPL @Useless`.

```

6627 \def\HyPL@Useless{0<</S/D>>}%
6628 \@onelevel@sanitize\HyPL@Useless

```

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

```

6629 \def\HyPL@SetPageLabels{%
6630   \@onelevel@sanitize\HyPL@Labels
6631   \ifx\HyPL@Labels\@empty
6632   \else
6633     \ifx\HyPL@Labels\HyPL@Useless
6634     \else
6635       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>>}%
6636     \fi
6637   \fi
6638 }%

6639 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6640 \fi

```

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

```

6641 \Hy@DisableOption{pdfpagelabels}
6642 \</package>

```

27.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\expandafter \cmd@to@cs \string \pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```

6643 < *pdfTeX>
6644 \pdf@ifdraftmode{%
6645   \let\Hy@PutCatalog\ltx@gobble
6646 }{%
6647   \let\Hy@PutCatalog\pdfcatalog
6648 }
6649 < /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 `\expandafter \cmd@to@cs \string \VTeXversion` reports 660.

```

6650 < *vTeX>
6651 \providecommand*{\XR@ext}{pdf}
6652 \edef\Hy@VTeXversion{%
6653   \ifx\VTeXversion\@undefined
6654     \z@
6655   \else
6656     \ifx\VTeXversion\relax
6657     \z@
6658   \else
6659     \VTeXversion
6660   \fi
6661 \fi
6662 }
6663 \begingroup
6664 \ifnum\Hy@VTeXversion<660 %

```

```

6665 \gdef\Hy@PutCatalog#1{%
6666 \Hy@WarningNoLine{%
6667 VTeX 6.59g or above required for pdfpagelabels%
6668 }%
6669 }%
6670 \else
6671 \gdef\Hy@PutCatalog#1{%
6672 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6673 }%
6674 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6675 \ifx\#2\%
6676 \else
6677 \immediate\special{!pdfpagelabels #2}%
6678 \fi
6679 }%
6680 \fi
6681 \endgroup
6682 \</vtx>

6683 \<*pdftex | vtx>

```

`\HyPL@StorePageLabel` This macro adds the entry `#1` to `\expandafter \cmd@to@cs \string \HyPL@Labels`.

```

6684 \ifHy@pdfpagelabels
6685 \def\HyPL@StorePageLabel#1{%
6686 \toks@ \expandafter{\HyPL@Labels}%
6687 \xdef\HyPL@Labels{%
6688 \the\toks@
6689 \the\Hy@abspage<<#1>>%
6690 }%
6691 }%

```

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.

```

6692 \RequirePackage{atveryend}[2009/12/07]%
6693 \AtVeryEndDocument{%
6694 \HyPL@SetPageLabels
6695 }%

6696 \fi
6697 \</pdftex | vtx>

```

27.1.2 xetex

```

6698 \<*xetex>
6699 \HyPsd@LoadUnicode
6700 \Hy@unicodetrue
6701 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6702 \else
6703 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6704 \fi
6705 \HyPsd@LoadStringEncoding
6706 \define@key{Hyp}{unicode}[true]{%

```

```

6707 \Hy@boolkey{unicode}{#1}%
6708 \ifHy@unicode
6709 \else
6710 \Hy@Warning{%
6711 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6712 option setting `unicode=false'%
6713 }%
6714 \Hy@unicodetrue
6715 \fi
6716 }
6717 \define@key{Hyp}{pdfencoding}{%
6718 \edef\HyPsd@temp{#1}%
6719 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6720 \let\HyPsd@pdfencoding\HyPsd@temp
6721 \else
6722 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6723 \let\HyPsd@pdfencoding\HyPsd@temp
6724 \else
6725 \Hy@Warning{%
6726 XeTeX driver only supports\MessageBreak
6727 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6728 setting `pdfencoding=\HyPsd@temp'%
6729 }%
6730 \fi
6731 \fi
6732 }
6733 \let\HyXeTeX@CheckUnicode\relax

```

Since 2016 (x)dvipdfmx has a special to control the spacing of annotation borders.
So let's make use of it:

```

6734 \def\setpdfinkmargin#1{%
6735 \begingroup
6736 \setlength{\dimen@}{#1}%
6737 \special{dvipdfmx:config g \strip@pt\dimen@}%
6738 \endgroup}
6739 \</xetex>

```

set the pdf version

```

6740 \<dvipdfm|xetex>
6741 \special{pdf:majorversion \Hy@pdf@majorversion}
6742 \special{pdf:minorversion \Hy@pdf@minorversion}
6743 \</dvipdfm|xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6744 \<*pdfmarkbase>
6745 \begingroup
6746 \@ifundefined{headerps@out}{}{%
6747 \toks@\expandafter{\Hy@FirstPageHook}%
6748 \xdef\Hy@FirstPageHook{%
6749 \noexpand\headerps@out{%
6750 systemdict /pdfmark known%
6751 {%
6752 userdict /?pdfmark systemdict /exec get put%
6753 }{%
6754 userdict /?pdfmark systemdict /pop get put %

```

```

6755      userdict /pdfmark systemdict /cleartomark get put%
6756      }%
6757      ifelse%
6758      }%
6759      \the\toks@
6760      }%
6761      }%
6762 \endgroup
6763 </pdfmarkbase>

```

\Hy@PutCatalog

```

6764 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6765 <*pdfmarkbase>
6766 \def\Hy@PutCatalog#1{%
6767   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6768 }
6769 </pdfmarkbase>

6770 <*pdfmarkbase | dvipdfm | xetex>
6771 \ifHy@pdfpagelabels

```

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

```

6772 \def\HyPL@StorePageLabel#1{%
6773   \if@filesw
6774     \begingroup
6775     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6776     \immediate\write\@mainaux{%
6777       \string\HyPL@Entry{\Hy@tempa}%
6778     }%
6779     \endgroup
6780   \fi
6781 }%

```

Write a dummy definition of `\expandafter \cmd@to@cs \string \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.

```

6782 \Hy@AtBeginDocument{%
6783   \if@filesw
6784     \immediate\write\@mainaux{%
6785       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6786     }%
6787   \fi
6788   \ifx\HyPL@Labels\@empty
6789     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6790   \else
6791     \HyPL@SetPageLabels
6792   \fi
6793   \let\HyPL@Entry\@gobble
6794 }%

```

\HyPL@Entry

```

6795 \def\HyPL@Entry#1{%
6796   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6797     \HyPL@Labels

```



```

6798     #1%
6799   }%
6800 }%

6801 \fi
6802 </pdfmarkbase | dvipdfm | xetex>
6803 <*packageEnd>

6804 \ifx\MaybeStopEarly\relax
6805 \else
6806   \Hy@stoppedearlytrue
6807   \expandafter\MaybeStopEarly
6808 \fi
6809 \Hy@stoppedearlyfalse

```

28 Automated L^AT_EX hypertext cross-references

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

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

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

Start with a fallback for equations

```

6810 \def\Hy@CounterExists#1{%
6811   \begingroup\expandafter\expandafter\expandafter\endgroup
6812   \expandafter\ifx\csname c@#1\endcsname\relax
6813     \expandafter\@gobble
6814   \else
6815     \begingroup\expandafter\expandafter\expandafter\endgroup
6816     \expandafter\ifx\csname the#1\endcsname\relax
6817       \expandafter\expandafter\expandafter\@gobble
6818     \else
6819       \expandafter\expandafter\expandafter\@firstofone
6820     \fi
6821   \fi
6822 }
6823 \Hy@CounterExists{section}{%
6824   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6825 }
6826 \providecommand\theHequation{\arabic{equation}}}%

```

```

6827 \Hy@CounterExists{part}{%
6828   \providecommand\theHpart{\arabic{part}}}%
6829 }
6830 \ltx@ifundefined{thechapter}{%
6831   \providecommand\theHsection   {\arabic{section}}}%
6832   \providecommand\theHfigure    {\arabic{figure}}}%
6833   \providecommand\theHtable     {\arabic{table}}}%
6834 }{%
6835   \providecommand\theHchapter   {\arabic{chapter}}}%
6836   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6837   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
6838   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
6839 }
6840 \providecommand\theHsubsection  {\theHsection.\arabic{subsection}}
6841 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6842 \providecommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
6843 \providecommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
6844 \providecommand\theHtheorem     {\theHsection.\arabic{theorem}}
6845 \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.

```

6846 \let\H@item\item
6847 \newcounter{Item}
6848 \def\theHItem{\arabic{Item}}
6849 \def\item{%
6850   \@hyper@itemfalse
6851   \if@nmbrlist\@hyper@itemtrue\fi
6852   \H@item
6853 }
6854 \providecommand\theHenumi   {\theHItem}
6855 \providecommand\theHenumii  {\theHItem}
6856 \providecommand\theHenumiii {\theHItem}
6857 \providecommand\theHenumiv  {\theHItem}
6858 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6859 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6860 \@ifundefined{theHHmpfootnote}{%
6861   \let\theHHmpfootnote\theHHfootnote
6862 }{}

```

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.

```

6863 \let\H@refstepcounter\refstepcounter
6864 \edef\name@of@eq{equation}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional. change 2022-04-22: removed test for the slide counter and for the equation name. change 2022-05-02: added the new boolean set by `\LinkTargetOn/\LinkTargetOff`

```

6865 \newif\if@hyper@item
6866 \newif\if@skiphyperref

```

```

6867 \@hyper@itemfalse
6868 \@skiphyperrfalse
6869 \ExplSyntaxOn
6870 \def\refstepcounter#1{%
6871   \legacy_if:nF {Hy@pdfstring}
6872   {
6873     \H@refstepcounter{#1}%
6874     \bool_lazy_and:nnT
6875       { \l__hyp_target_create_bool }
6876       { ! \legacy_if_p:n{ @skiphyperr } }
6877     {
6878       \legacy_if:nTF { @hyper@item }
6879       {
6880         \stepcounter{Item}%
6881         \hyper@refstepcounter{Item}%
6882         \@hyper@itemfalse
6883       }
6884       {
6885         \hyper@refstepcounter{#1}%
6886       }
6887     }
6888   }
6889 }
6890 \ExplSyntaxOff
6891 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS_{La}T_EX 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.

```

6892 \@ifpackageloaded{amsmath}{ }\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6893 \def\hyper@refstepcounter#1{%
6894   \edef\This@name{#1}%
6895   \ifx\This@name\name@of@eq
6896     \@ifundefined{theHequation}{%
6897       \make@stripped@name{\theequation}%
6898       \let\theHequation\newname
6899     }{}%
6900   \fi
6901   \HyCnt@ProvideTheHCounter{#1}%
6902   \hyper@makecurrent{#1}%
6903   \ifmeasuring@
6904   \else
6905     \Hy@raisedlink{%
6906       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6907     }%
6908   \fi
6909 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@<ckpt>`, the clear counter list of the artificial counter `@ckpt`, L^AT_EX remembers the defined counters (needed for `\include`). We check the clear counter lists, whether our counter is present. If we found it, then we add the parent counter

value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because L^AT_EX', substring search `\in@` can be used.

```

6910 \def\HyCnt@ProvideTheHCounter#1{%
6911   \@ifundefined{theH#1}{%
6912     \expandafter\def\csname theH#1\endcsname{}%
6913   \def\Hy@temp{\@elt{#1}}%
6914   \ltx@onelevel@sanitize\Hy@temp
6915   \let\HyOrg@elt\@elt
6916   \edef\@elt{%
6917     \noexpand\HyCnt@LookForParentCounter
6918     \expandafter\noexpand\csname theH#1\endcsname
6919   }%
6920   \cl@@ckpt
6921   \let\@elt\HyOrg@elt
6922   \expandafter
6923   \ltx@LocalAppendToMacro\csname theH#1\endcsname
6924   \expandafter{%
6925     \expandafter\@arabic\csname c@#1\endcsname
6926   }%
6927 }{}%
6928 }

```

`\Hy@LookForParentCounter`

```

6929 \def\HyCnt@LookForParentCounter#1#2{%
6930   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6931   \ltx@ifundefined{cl@#2}{%
6932   }{%
6933     \ltx@onelevel@sanitize\Hy@temp@A
6934     \edef\Hy@temp@A{%
6935       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
6936     }\Hy@temp@A
6937     \ifin@
6938       \ltx@ifundefined{theH#2}{%
6939         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6940         \expandafter{%
6941           \expandafter\@arabic\csname c@#2\endcsname.%
6942         }%
6943       }{%
6944         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6945         \expandafter{%
6946           \csname theH#2\endcsname.%
6947         }%
6948       }%
6949     \fi
6950   }%
6951 }

```

After `\expandafter \cmd@to@cs \string \appendix` “chapter” (or “section” for classes without chapter) should be replaced by “appendix” to get `\expandafter \cmd@to@cs \string \autoref` work. Macro `\expandafter \cmd@to@cs \string \Hy @chapapp` contains the current valid name like `\expandafter \cmd@to@cs \string \@chapapp`, which cannot be used, because this string depends on the current language.

The “french” package defines counter `\expandafter \cmd@to@cs \string \thechapter` by `\expandafter \cmd@to@cs \string \newcounter {chapter}`, if `\expandafter \cmd@to@cs \string \@ifundefined{chapter}`.

```

6952 \begingroup\expandafter\expandafter\expandafter\endgroup
6953 \expandafter\ifx\csname chapter\endcsname\relax
6954 \def\Hy@chapterstring{section}%
6955 \else
6956 \def\Hy@chapterstring{chapter}%
6957 \fi
6958 \def\Hy@appendixstring{appendix}
6959 \def\Hy@chapapp{\Hy@chapterstring}
6960 \ltx@ifundefined{appendix}{%
6961 }{%
6962 \let\HyOrg@appendix\appendix
6963 \def\Hy@AlphNoErr#1{%
6964 \ifnum\value{#1}>26 %
6965 \Alph\number\value{#1}%
6966 \else
6967 \ifnum\value{#1}<1 %
6968 \Alph\number\value{#1}%
6969 \else
6970 \Alph{#1}%
6971 \fi
6972 \fi
6973 }%
6974 \def\appendix{%
6975 \ltx@ifundefined{chapter}{%
6976 \gdef\theHsection{\Hy@AlphNoErr{section}}}%
6977 }{%
6978 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
6979 }%
6980 \xdef\Hy@chapapp{\Hy@appendixstring}%
6981 \HyOrg@appendix
6982 }%
6983 }

```

`\Hy@Test@alph`

```

6984 \def\Hy@Test@alph#1{%
6985 \ifcase#1\or
6986 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6987 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6988 u\or v\or w\or x\or y\or z%
6989 \else
6990 \@ctrerr
6991 \fi
6992 }

```

`\Hy@Test@Alph`

```

6993 \def\Hy@Test@Alph#1{%
6994 \ifcase#1\or
6995 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6996 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6997 U\or V\or W\or X\or Y\or Z%
6998 \else

```

```

6999 \ctrerr
7000 \fi
7001 }

```

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

```

7002 \NewHook{__hyp/target/setname }
7003 \define@key{Hyp}{next-anchor}{%
7004   \AddToHookNext{__hyp/target/setname}%
7005   {\Hy@MakeCurrentHref{#1}}}%
7006 }

```

`\hyper@makecurrent` Because of Babel mucking around, nullify `\textlatin` when making names. And `\@number` because of babel's `lrbabel.def`. change 2021-08-15: For new formats we add a hook which allows to overwrite the name of the next destination.

```

7007 \def\hyper@makecurrent#1{%
7008   \begingroup
7009   \Hy@safe@activestruer
7010   \edef\Hy@param{#1}%
7011   \ifx\Hy@param\Hy@chapterstring
7012     \let\Hy@param\Hy@chapapp
7013   \fi
7014   \ifHy@hypertextnames
7015     \let\@number\@firstofone
7016     \def\@fnsymbol##1{\fnsymbol\number##1}%
7017     \def\@arabic##1{\number##1}%
7018     \ifx\@alph\Hy@Test@alph
7019       \else
7020         \def\@alph{alph\number}%
7021       \fi
7022     \ifx\@Alph\Hy@Test@Alph
7023       \else
7024         \def\@Alph{Alph\number}%
7025       \fi
7026     \ifHy@naturalnames
7027       \let\textlatin\@firstofone
7028       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7029     \else
7030       \xdef\HyperGlobalCurrentHref{%
7031         \csname
7032           the%
7033           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7034           #1%
7035         \endcsname
7036       }%
7037     \fi
7038     \xdef\HyperGlobalCurrentHref{%
7039       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7040     }%
7041   \else
7042     \Hy@GlobalStepCount\Hy@linkcounter
7043     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7044   \fi
7045 \endgroup
7046 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref

```

```

7047 \ifHy@localanchorname
7048 \let\@currentHref\HyperLocalCurrentHref
7049 \else
7050 \global\let\@currentHref\HyperGlobalCurrentHref
7051 \fi
7052 \UseHook{__hyp/target/setname}%
7053 }

```

`\Hy@MakeCurrentHref`

```

7054 \def\Hy@MakeCurrentHref#1{%
7055 \edef\HyperLocalCurrentHref{#1}%
7056 \@onelevel@sanitize\HyperLocalCurrentHref
7057 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7058 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7059 \ifHy@localanchorname
7060 \let\@currentHref\HyperLocalCurrentHref
7061 \else
7062 \global\let\@currentHref\HyperGlobalCurrentHref
7063 \fi
7064 }

```

`\Hy@MakeCurrentHrefAuto` This command is e.g. used to create destinations for unnumbered sections and chapters. For new formats we add a hook which allows to overwrite the name of the next destination.

```

7065 \def\Hy@MakeCurrentHrefAuto#1{%
7066 \Hy@GlobalStepCount\Hy@linkcounter
7067 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7068 \UseHook{__hyp/target/setname}}

```

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

```

7069 \def\@currentHlabel{\@currentHref}

```

29 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\expandafter \cmd@to@cs \string \hypergetref` and `\expandafter \cmd@to@cs \string \hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

7070 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
7071 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

30 Package titlesec and titletoc support

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

Package titlesec support:

```

7072 \@ifpackageloaded{titlesec}{%
7073 \def\ttl@Hy@steplink#1{%
7074 \Hy@MakeCurrentHrefAuto{#1*}%
7075 \edef\ttl@Hy@saveanchor{%
7076 \noexpand\Hy@raisedlink{%
7077 \noexpand\hyper@anchorstart{\@currentHref}%

```

```

7078 \noexpand\hyper@anchorend
7079 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7080 \noexpand\ttl@Hy@PatchSaveWrite
7081 }%
7082 }%
7083 }%
7084 \def\ttl@Hy@PatchSaveWrite{%
7085 \begingroup
7086 \toks@{\expandafter\ttl@savewrite}%
7087 \edef\x{\endgroup
7088 \def\noexpand\ttl@savewrite{%
7089 \let\noexpand\@currentHref
7090 \noexpand\ttl@Hy@SavedCurrentHref
7091 \the\toks@
7092 }%
7093 }%
7094 \x
7095 }%
7096 \def\ttl@Hy@refstepcounter#1{%
7097 \let\ttl@b\Hy@raisedlink
7098 \def\Hy@raisedlink##1{%
7099 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7100 }%
7101 \refstepcounter{#1}%
7102 \let\Hy@raisedlink\ttl@b
7103 }%
7104 }{}

```

31 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net). This fix will no longer be needed with latex 2021-11-15.

```

7105 \@if@t@r\fmtversion{2021-11-15}
7106 {}%
7107 {
7108 \AtBeginDocument{%
7109 \def\Hy@varioref@undefined{???}{??}{-}{-}}
7110 \ifpackageloaded{varioref}{%
7111 \def\vref@pagenum#1#2{%
7112 \@ifundefined{r@#2}{%
7113 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7114 }-}%
7115 \edef#1{\getpagerefnumber{#2}}%
7116 }%
7117 }{}
7118 }
7119 }

```


32 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by hyperref's `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\expandafter \cmd@to@cs \string \LT @array`: replace `\expandafter \cmd@to@cs \string \refstepcounter` by the original `\expandafter \cmd@to@cs \string \H @refstepcounter` without anchor generation

```

7120 \@ifpackageloaded{longtable}{%
7121   \begingroup
7122   \def\y{\LT@array}%
7123   \@ifundefined{scr@LT@array}{%
7124     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7125     }\def\y{\scr@LT@array}}%
7126   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7127     \expandafter\endgroup
7128     \expandafter\def\y[##1]##2{%
7129       \H@refstepcounter{##1}%
7130       \hyper@makecurrent{table}%
7131       \let\Hy@LT@currentHref\@currentHref
7132       #2\@sharp###3###4%
7133     }%
7134   }%
7135   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

Patch of `\expandafter \cmd@to@cs \string \LT @start`: add anchor before first line after `\vskip\LTpre`

```

7136   \begingroup
7137   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7138     \endgroup
7139     \def\LT@start{%
7140       #1%
7141       \ifvoid\LT@foot#2\fi
7142       \let\@currentHref\Hy@LT@currentHref
7143       \Hy@raisedlink{%
7144         \hyper@anchorstart{\@currentHref}\hyper@anchorend
7145       }%
7146       #3%
7147     }%
7148   }%
7149   \expandafter\x\LT@start\@nil
7150 }{}

```

33 Equations

We want to make the whole equation a target anchor. Overload equation, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 40). 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.

```

7151 \let\new@refstepcounter\refstepcounter
7152 \let\H@equation\equation

```

```

7153 \let\H@endequation\endequation
7154 \ifpackageloaded{amsmath}{%
7155   \long\def\Hy@temp{%
7156     \incr@eqnum
7157     \mathdisplay@push
7158     \st@rredfalse \global\@eqnswtrue
7159     \mathdisplay{equation}%
7160   }%
7161   \ifx\Hy@temp\equation
7162     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7163       \csname iftrue\endcsname
7164     \else
7165       \long\def\equation{%
7166         \mathdisplay@push
7167         \st@rredfalse \global\@eqnswtrue
7168         \mathdisplay{equation}%
7169         \incr@eqnum
7170       }%
7171     \fi
7172   \fi
7173 }{%
7174 \def\equation{%
7175   \let\refstepcounter\H@refstepcounter
7176   \H@equation
7177   \@ifundefined{theHequation}{%
7178     \make@stripped@name{\theequation}%
7179     \let\theHequation\newname
7180   }{}%
7181   \hyper@makecurrent{equation}%

```

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

```

7182   \mathopen{%
7183     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7184   }%
7185   \let\refstepcounter\new@refstepcounter
7186 }%
7187 \def\endequation{%
7188   \ifx\Hy@raisedlink\ltx@empty
7189     \hyper@anchorend
7190   \else
7191     \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7192   \fi
7193   \H@endequation
7194 }%
7195 }

```

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.

```

7196 \newif\if@eqnstar
7197 \@eqnstarfalse
7198 \let\H@eqnarray\eqnarray

```

```

7199 \let\H@endeqnarray\endeqnarray
7200 \def\eqnarray{%
7201   \let\Hy@reserved@a\relax
7202   \def\@currentHref{%
7203     \H@eqnarray
7204     \if@eqnstar
7205     \else
7206       \ifx\\ \@currentHref\\
7207       \else
7208         \@ifundefined{theHequation}{%
7209           \make@stripped@name{\theequation}%
7210           \let\theHequation\newname
7211         }{}%
7212         \hyper@makecurrent{equation}%
7213         \mathopen{%
7214           \Hy@raisedlink{%
7215             \hyper@anchorstart{\@currentHref}\hyper@anchorend
7216           }%
7217         }%
7218       \fi
7219     \fi
7220 }
7221 \def\endeqnarray{%
7222   \H@endeqnarray
7223 }

```

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.

```

7224 \@namedef{eqnarray*}{%
7225   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7226 }
7227 \@namedef{endeqnarray*}{%
7228   \nonumber\endeqnarray\@eqnstarfalse
7229 }

```

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

```

7230 \ltx@ifundefined{subeqnarray}{}{}%
7231 \let\H@subeqnarray\subeqnarray
7232 \let\H@endsubeqnarray\endsubeqnarray
7233 \def\subeqnarray{%
7234   \let\Hy@reserved@a\relax
7235   \H@subeqnarray
7236   \@ifundefined{theHequation}{%
7237     \make@stripped@name{\theequation}%
7238     \let\theHequation\newname
7239   }{}%
7240   \hyper@makecurrent{equation}%
7241   \hyper@anchorstart{\@currentHref}\hyper@anchorend
7242 }%
7243 \def\endsubeqnarray{%
7244   \H@endsubeqnarray
7245 }%
7246 \providecommand\theHsubequation{\theHequation\alph{subequation}}%

```

7247 }

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

```

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

Support for amsmath's subequations:

```

7266 \begingroup\expandafter\expandafter\expandafter\endgroup
7267 \expandafter\ifx\csname subequations\endcsname\relax
7268 \else
7269   \let\HyOrg@subequations\subequations
7270   \def\subequations{%
7271     \stepcounter{equation}%
7272     \protected@edef\theHparentequation{%
7273       \ifundefined{theHequation}\theequation\theHequation
7274     }%
7275     \addtocounter{equation}{-1}%
7276     \HyOrg@subequations
7277     \def\theHequation{\theHparentequation\alph{equation}}%
7278     \ignorespaces
7279   }%
7280 \fi
```

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

```

7281 \Hy@AtBeginDocument{%
7282   \@ifpackageloaded{cleveref}{%
7283     \let\Hy@savedthm\@thm
7284     \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7285   }{%
7286     \@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

7287 \def\Hy@temp#1#2#3{%
7288   \ifhmode\unskip\unskip\par\fi

```

```

7289 \normalfont
7290 \trivlist
7291 \let\thmheadnl\relax
7292 \let\thm@swap\@gobble
7293 \let\thm@indent\indent % indent
7294 \thm@headfont{\scshape}% heading font small caps
7295 \thm@notefont{\fontseries\mddefault\upshape}%
7296 \thm@headpunct{.}% add period after heading
7297 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7298 \thm@space@setup
7299 #1% style overrides
7300 \@topsep \thm@preskip % used by thm head
7301 \@topsepadd \thm@postskip % used by \@endparenv
7302 \def\@tempa{#2}\ifx\@empty\@tempa
7303 \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7304 \else
7305 \refstepcounter{#2}%
7306 \def\@tempa{%
7307 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7308 }%
7309 \fi
7310 \@tempa
7311 }%
7312 \ifx\Hy@temp\@thm
7313 \def\@thm#1#2#3{%
7314 \ifhmode
7315 \unskip\unskip\par
7316 \fi
7317 \normalfont
7318 \trivlist
7319 \let\thmheadnl\relax
7320 \let\thm@swap\@gobble
7321 \let\thm@indent\indent % indent
7322 \thm@headfont{\scshape}% heading font small caps
7323 \thm@notefont{\fontseries\mddefault\upshape}%
7324 \thm@headpunct{.}% add period after heading
7325 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7326 \thm@space@setup
7327 #1% style overrides
7328 \@topsep \thm@preskip % used by thm head
7329 \@topsepadd \thm@postskip % used by \@endparenv
7330 \def\dth@counter{#2}%
7331 \ifx\@empty\dth@counter
7332 \def\@tempa{%
7333 \@oparg{\@begintheorem{#3}{}}}%
7334 }%
7335 \else
7336 \H@refstepcounter{#2}%
7337 \hyper@makecurrent{#2}%
7338 \let\Hy@dth@currentHref\@currentHref
7339 \def\@tempa{%
7340 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7341 }%
7342 \fi

```

```

7343 \@tempa
7344 }%
7345 \else
7346 \def\@thm#1#2#3{%
7347 \ifhmode
7348 \unskip\unskip\par
7349 \fi
7350 \normalfont
7351 \trivlist
7352 \let\thmheadnl\relax
7353 \let\thm@swap\@gobble
7354 \thm@notefont{\fontseries\mddefault\upshape}%
7355 \thm@headpunct{.}% add period after heading
7356 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7357 \thm@space@setup
7358 #1% style overrides
7359 \@topsep \thm@preskip % used by thm head
7360 \@topsepadd \thm@postskip % used by \@endparenv
7361 \def\dth@counter{#2}%
7362 \ifx\@empty\dth@counter
7363 \def\@tempa{%
7364 \@oparg{\@begintheorem{#3}{}}{}%
7365 }%
7366 \else
7367 \H@refstepcounter{#2}%
7368 \hyper@makecurrent{#2}%
7369 \let\Hy@dth@currentHref\@currentHref
7370 \def\@tempa{%
7371 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7372 }%
7373 \fi
7374 \@tempa
7375 }%
7376 \fi
7377 \dth@everypar={%
7378 \@minipagefalse
7379 \global\@newlistfalse
7380 \@nparitemfalse
7381 \if@inlabel
7382 \global\@inlabelfalse
7383 \begingroup
7384 \setbox\z@\lastbox
7385 \ifvoid\z@
7386 \kern-\itemindent
7387 \fi
7388 \endgroup
7389 \ifx\@empty\dth@counter
7390 \else
7391 \Hy@raisedlink{%
7392 \hyper@anchorstart{%
7393 \ltx@ifundefined{Hy@dth@currentHref}%
7394 \@currentHref\Hy@dth@currentHref
7395 }\hyper@anchorend
7396 }%

```

```

7397 \fi
7398 \unhbox\@labels
7399 \fi
7400 \if@nobreak
7401 \@nobreakfalse \clubpenalty\@M
7402 \else
7403 \clubpenalty\@clubpenalty \everypar{ }%
7404 \fi
7405 }%
7406 }%

```

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

```

7407 {%
7408 \let\Hy@savethm\@thm
7409 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7410 }%
7411 }%
7412 }

```

34 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original. If `\hyper@nopath@footnote` is defined we don't patch but assume that addings links to footnotes is handled elsewhere.

```

7413 \@ifundefined{hyper@nopath@footnote}{%
7414 \ifHy@hyperfootnotes
7415 \newcounter{Hfootnote}%
7416 \let\H@@footnotetext\@footnotetext
7417 \let\H@@footnotemark\@footnotemark
7418 \def\@xfootnotenext[#1]{%
7419 \begingroup
7420 \csname c@\@mpfn\endcsname #1\relax
7421 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7422 \endgroup
7423 \ifx\@footnotetext\@mpfootnotetext
7424 \expandafter\H@@mpfootnotetext
7425 \else
7426 \expandafter\H@@footnotetext
7427 \fi
7428 }%
7429 \def\@xfootnotemark[#1]{%
7430 \begingroup
7431 \c@footnote #1\relax
7432 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
7433 \endgroup
7434 \H@@footnotemark
7435 }%
7436 \let\H@@mpfootnotetext\@mpfootnotetext
7437 \long\def\@mpfootnotetext#1{%
7438 \H@@mpfootnotetext{%

```

```

7439 \ifHy@nesting
7440 \expandafter\ltx@firstoftwo
7441 \else
7442 \expandafter\ltx@secondoftwo
7443 \fi
7444 {%
7445 \expandafter\hyper@@anchor\expandafter{%
7446 \Hy@footnote@currentHref
7447 }{\ignorespaces #1}%
7448 }{%
7449 \Hy@raisedlink{%
7450 \expandafter\hyper@@anchor\expandafter{%
7451 \Hy@footnote@currentHref
7452 }{\relax}%
7453 }\ignorespaces #1%
7454 }%
7455 }%
7456 }%
7457 \long\def\@footnotetext#1{%
7458 \H@@@footnotetext{%
7459 \ifHy@nesting
7460 \expandafter\ltx@firstoftwo
7461 \else
7462 \expandafter\ltx@secondoftwo
7463 \fi
7464 {%
7465 \expandafter\hyper@@anchor\expandafter{%
7466 \Hy@footnote@currentHref
7467 }{\ignorespaces #1}%
7468 }{%
7469 \Hy@raisedlink{%
7470 \expandafter\hyper@@anchor\expandafter{%
7471 \Hy@footnote@currentHref
7472 }{\relax}%
7473 }%
7474 \let\@currentHref\Hy@footnote@currentHref
7475 \let\@currentlabelname\@empty
7476 \ignorespaces #1%
7477 }%
7478 }%
7479 }%

```

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.

```

7480 \def\@footnotemark{%
7481 \leavevmode
7482 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7483 \stepcounter{Hfootnote}%
7484 \global\let\Hy@saved@currentHref\@currentHref
7485 \hyper@makecurrent{Hfootnote}%
7486 \global\let\Hy@footnote@currentHref\@currentHref

```



```

7487 \global\let\@currentHref\Hy@saved@currentHref
7488 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7489 \@makefnmark
7490 \hyper@linkend
7491 \ifhmode\spacefactor\@x@sf\fi
7492 \relax
7493 }%

```

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

```

7494 \@ifpackageloaded{tabularx}{%
7495 \let\HyOrg@TX@endtabularx\TX@endtabularx
7496 \def\Hy@tabularx@hook{%
7497 \let\@footnotetext\H@@footnotetext
7498 \let\@footnotemark\H@@footnotemark
7499 \let\@mpfootnotetext\H@@mpfootnotetext
7500 }%
7501 \begingroup
7502 \toks@\expandafter{\TX@endtabularx}%
7503 \xdef\Hy@gtemp{%
7504 \noexpand\Hy@tabularx@hook
7505 \the\toks@
7506 }%
7507 \endgroup
7508 \let\TX@endtabularx\Hy@gtemp
7509 }{}%

```

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

```

7510 \@ifpackageloaded{longtable}{%
7511 \CheckCommand{\LT@p@ftntext}[1]{%
7512 \edef\@tempa{%
7513 \the\LT@p@ftn
7514 \noexpand\footnotetext[\the\c@footnote]%
7515 }%
7516 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7517 }%
7518 \long\def\LT@p@ftntext#1{%
7519 \edef\@tempa{%
7520 \the\LT@p@ftn
7521 \begingroup
7522 \noexpand\c@footnote=\the\c@footnote\relax
7523 \noexpand\protected\xdef\noexpand\@thefnmark{%
7524 \noexpand\thempfn
7525 }%
7526 \noexpand\Hy@LT@footnotetext{%
7527 \Hy@footnote@currentHref
7528 }%
7529 }%
7530 \global\LT@p@ftn\expandafter{%
7531 \@tempa{#1}%
7532 \endgroup
7533 }%

```

```

7534 }%
7535 \long\def\Hy@LT@footnotetext#1#2{%
7536   \H@@footnotetext{%
7537     \ifHy@nesting
7538       \hyper@@anchor{#1}{#2}%
7539     \else
7540       \Hy@raisedlink{%
7541         \hyper@@anchor{#1}{\relax}%
7542       }%
7543       \def\@currentHref{#1}%
7544       \let\@currentlabelname\@empty
7545       #2%
7546     \fi
7547   }%
7548 }%
7549 }{}%

```

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

```

7550 \ifpackageloaded{fancyvrb}{%
7551   \def\V@@footnotetext{%
7552     \insert\footins\bgroup
7553     \csname reset@font\endcsname
7554     \footnotesize
7555     \interlinepenalty\interfootnotelinepenalty
7556     \splittopskip\footnotesep
7557     \splitmaxdepth\dp\strutbox
7558     \floatingpenalty \@MM
7559     \hsize\columnwidth
7560     \@parboxrestore
7561     \def\@currentcounter{footnote}%
7562     \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7563     \@makefntext{}%
7564     \rule{\z@}{\footnotesep}%
7565     \bgroup
7566     \aftergroup\V@@@footnotetext
7567     \Hy@raisedlink{%
7568       \expandafter\hyper@@anchor\expandafter{%
7569         \Hy@footnote@currentHref
7570       }\relax}%
7571     }%
7572     \let\@currentHref\Hy@footnote@currentHref
7573     \let\@currentlabelname\@empty
7574     \ignorespaces
7575   }%
7576 }{}%

```

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

```

7577 \def\Hy@temp#1{%
7578   \begingroup
7579   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7580   \endgroup
7581   \@footnotemark
7582 }%

```

```

7583 \ifx\Hy@temp\footref
7584 \def\footref#1{%
7585 \begingroup
7586 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7587 \endgroup
7588 \H@@footnotemark
7589 }%
7590 \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.

```

7591 \let\HyOrg@maketitle\maketitle
7592 \def\maketitle{%
7593 \let\Hy@saved@footnotemark\@footnotemark
7594 \let\Hy@saved@footnotetext\@footnotetext
7595 \let\@footnotemark\H@@footnotemark
7596 \let\@footnotetext\H@@footnotetext
7597 \@ifnextchar[\Hy@maketitle@optarg{% ]
7598 \HyOrg@maketitle
7599 \Hy@maketitle@end
7600 }%
7601 }%
7602 \def\Hy@maketitle@optarg[#1]{%
7603 \HyOrg@maketitle[#1]}%
7604 \Hy@maketitle@end
7605 }%
7606 \def\Hy@maketitle@end{%
7607 \ifx\@footnotemark\H@@footnotemark
7608 \let\@footnotemark\Hy@saved@footnotemark
7609 \fi
7610 \ifx\@footnotetext\H@@footnotetext
7611 \let\@footnotetext\Hy@saved@footnotetext
7612 \fi
7613 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\xdef\cmd@to@cs` `\string \realfootnote` ?

```

7614 \def\realfootnote{%
7615 \@ifnextchar[\@xfootnote%]
7616 {\stepcounter{\@mpfn}}%
7617 \protected@xdef\@thefnmark{\thempfn}%
7618 \H@@@footnotemark\H@@@footnotetext
7619 }%
7620 }%
7621 \fi
7622 }{}
7623 \Hy@DisableOption{hyperfootnotes}
7624 \</packageEnd>
7625 \< *check>
7626 \checklatex
7627 \checkcommand\def\@xfootnotenext[#1]{%
7628 \begingroup

```

```

7629 \csname c@\@mpfn\endcsname #1\relax
7630 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7631 \endgroup
7632 \@footnotetext
7633 }
7634 \checkcommand\def\@xfootnotemark[#1]{%
7635 \begingroup
7636 \c@footnote #1\relax
7637 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7638 \endgroup
7639 \@footnotemark
7640 }
7641 \checkcommand\def\@footnotemark{%
7642 \leavevmode
7643 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7644 \@makefnmark
7645 \ifhmode\spacefactor\@x@sf\fi
7646 \relax
7647 }
7648 \</check>
7649 \*packageEnd>

```

35 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

7650 \def\caption{%
7651 \ifx\@captype\@undefined
7652 \@latex@error{\noexpand\caption outside float}\@ehd
7653 \expandafter\@gobble
7654 \else
7655 \H@refstepcounter\@captype
7656 \let\Hy@tempa\@caption
7657 \@ifundefined{float@caption}{%
7658 }{%
7659 \expandafter\ifx\csname @float@c@\@captype\endcsname
7660 \float@caption
7661 \let\Hy@tempa\Hy@float@caption
7662 \fi
7663 }%
7664 \expandafter\@firstofone
7665 \fi
7666 {\@dblarg{\Hy@tempa\@captype}}}%
7667 }
7668 \long\def\@caption#1[#2]#3{%
7669 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7670 \csname iftrue\endcsname
7671 \global\let\@currentHref\hc@currentHref
7672 \else
7673 \hyper@makecurrent{\@captype}%
7674 \fi
7675 \@ifundefined{NR@getttitle}{%
7676 \def\@currentlabelname{#2}%

```

```

7677 }{%
7678   \NR@getttitle{#2}%
7679 }%
7680 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7681   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7682 }%
7683 \begingroup
7684   \@parboxrestore
7685   \if@minipage
7686     \setminipage
7687   \fi
7688   \normalsize
7689   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7690     \csname iftrue\endcsname
7691     \global\@capstartfalse
7692     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7693   \else
7694     \@makecaption{\csname fnum@#1\endcsname}{%
7695       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7696   \ifHy@nesting
7697     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7698   \else
7699     \Hy@raisedlink{%
7700       \expandafter\hyper@@anchor\expandafter{%
7701         \@currentHref
7702       }\relax}%
7703   }%
7704   #3%
7705 \fi
7706 }%
7707 \fi
7708 \par
7709 \endgroup
7710 }

```

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’.

```

7711 \let\Hy@float@caption\@caption
7712 \newcommand{\HyNew@float@makebox}[1]{%
7713   \HyOrg@float@makebox{%
7714     #1\relax
7715     \ifx\Hy@float@currentHref\@undefined
7716     \else
7717       \expandafter\hyper@@anchor\expandafter{%
7718         \Hy@float@currentHref
7719       }\relax}%
7720     \global\let\Hy@float@currentHref\@undefined
7721   \fi
7722 }%
7723 }%

```

```

7724 \ifpackageloaded{float}{%
7725   \def\Hy@float@caption{%
7726     \ifx\Hy@float@currentHref\@undefined
7727       \hyper@makecurrent{\@captive}%
7728       \global\let\Hy@float@currentHref\@currentHref
7729     \else
7730       \let\@currentHref\Hy@float@currentHref
7731     \fi
7732   \float@caption
7733 }%
7734 \let\HyOrg@float@makebox\float@makebox
7735 \let\float@makebox\HyNew@float@makebox
7736 }{}

7737 \</packageEnd>
7738 \< *check>
7739 \checklatex[1999/06/01 - 2000/06/01]
7740 \checkcommand\def\caption{%
7741   \ifx\@captive\@undefined
7742     \@latex@error{\noexpand\caption outside float}\@ehd
7743     \expandafter\@gobble
7744   \else
7745     \refstepcounter\@captive
7746     \expandafter\@firstofone
7747   \fi
7748   {\@dblarg{\@caption\@captive}}}%
7749 }

7750 \checkcommand\long\def\@caption#1[#2]#3{%
7751   \par
7752   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7753     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7754   }%
7755   \begingroup
7756     \@parboxrestore
7757     \if@minipage
7758       \@setminipage
7759     \fi
7760     \normalsize
7761     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7762   \endgroup
7763 }
7764 \</check>
7765 \< *packageEnd>

```

36 Bibliographic references

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

However, let's make an attempt to get *natbib* right, because that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for

us, so all we need to do is activate them.

```

7766 \def\hyper@natlinkstart#1{%
7767   \Hy@backout{#1}%
7768   \hyper@linkstart{cite}{cite.#1}%
7769   \def\hyper@nat@current{#1}%
7770 }
7771 \def\hyper@natlinkend{%
7772   \hyper@linkend
7773 }
7774 \def\hyper@natlinkbreak#1#2{%
7775   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7776 }
7777 \def\hyper@natanchorstart#1{%
7778   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7779 }
7780 \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.

```

7781 \ltx@ifundefined{NAT@parse}{%
7782   \providecommand*\@extra@binfo{}%
7783   \providecommand*\@extra@b@citeb{}%
7784   \def\bibcite#1#2{%
7785     \@newl@bel{b}{#1\@extra@binfo}{%
7786       \hyper@@link[cite]{cite.#1\@extra@b@citeb}{#2}%
7787     }%
7788   }%
7789   \gdef\@extra@binfo{}%

```

Package `babel` redefines `\@expandafter \cmd@to@cs \string \bibcite` with macro `\@expandafter \cmd@to@cs \string \bbl @cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

7790 \let\Hy@bibcite\bibcite
7791 \begingroup
7792   \@ifundefined{bbl@cite@choice}{}{%
7793     \g@addto@macro\bbl@cite@choice{%
7794       \let\bibcite\Hy@bibcite
7795     }%
7796   }%
7797 \endgroup

```

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

```

7798 \providecommand*\@BIBLABEL{\@biblabel}%
7799 \def\@bibitem[#1]#2{%
7800   \@skiphyperrtrue
7801   \H@item[%
7802     \ifx\Hy@raisedlink\@empty
7803       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7804       \@BIBLABEL{#1}%
7805       \hyper@anchorend
7806     \else
7807       \Hy@raisedlink{%
7808         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend

```

```

7809     }%
7810     \@BIBLABEL{#1}%
7811     \fi
7812     \hfill
7813 }%
7814 \@skiphyperreffalse
7815 \if@filesw
7816   \begingroup
7817     \let\protect\noexpand
7818     \immediate\write\@auxout{%
7819       \string\bibcite{#2}{#1}%
7820     }%
7821   \endgroup
7822 \fi
7823 \ignorespaces
7824 }%

```

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

```

7825 \def\@bibitem#1{%
7826   \@skiphyperreftrue\H@item\@skiphyperreffalse
7827   \Hy@raisedlink{%
7828     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7829   }%
7830   \if@filesw
7831     \begingroup
7832       \let\protect\noexpand
7833       \immediate\write\@auxout{%
7834         \string\bibcite{#1}{\the\value{\@listctr}}}%
7835     }%
7836   \endgroup
7837 \fi
7838 \ignorespaces
7839 }%
7840 }{}

7841 \</packageEnd>
7842 \< *check>
7843 \checklatex
7844 \checkcommand\def\@bibitem[#1]#2{%
7845   \item[\@biblabel{#1}\hfill]%
7846   \if@filesw
7847     {%
7848       \let\protect\noexpand
7849       \immediate\write\@auxout{%
7850         \string\bibcite{#2}{#1}%
7851       }%
7852     }%
7853   \fi
7854   \ignorespaces
7855 }
7856 \checkcommand\def\@bibitem#1{%
7857   \item
7858   \if@filesw
7859     \immediate\write\@auxout{%

```



```

7860 \string\bibcite{#1}{\the\value{\@listctr}}}%
7861 }%
7862 \fi
7863 \ignorespaces
7864 }
7865 </check>
7866 <*packageEnd>

```

36.1 Package harvard

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

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

```

7867 \ifpackageloaded{harvard}{%
7868 \Hy@AtBeginDocument{%
7869 \Hy@Info{*** compatibility with harvard **** }%
7870 \Hy@raiselinksfalse
7871 \def\harvardcite#1#2#3#4{%
7872 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{#1}{#2}}%
7873 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{#1}{#3}}%
7874 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{#1}{#4}}%
7875 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7876 }%
7877 \def\HAR@citetoaux#1{%
7878 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7879 \ifHy@backref
7880 \ifx\@empty\@currentlabel
7881 \else
7882 \@bsphack
7883 \if@filesw
7884 \protected@write\@auxout{}{%
7885 \string\@writefile{brf}{%
7886 \string\backcite{#1}{%
7887 {\thepage}{\@currentlabel}{\@currentHref}%
7888 }%
7889 }%
7890 }%
7891 \fi
7892 \@esphack
7893 \fi
7894 \fi
7895 }%
7896 \def\harvarditem{%
7897 \ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
7898 }%
7899 \def\@harvarditem[#1]#2#3#4#5\par{%
7900 \item[]%
7901 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7902 \if@filesw

```

```

7903 \begingroup
7904 \def\protect##1{\string ##1\space}%
7905 \ifthenelse{\equal{#1}{\null}}{%
7906   {\def\next{{#4}{#2}{#2}{#3}}}%
7907   {\def\next{{#4}{#2}{#1}{#3}}}%
7908   \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7909 \endgroup
7910 \fi
7911 \protect\hspace*{-\labelwidth}%
7912 \protect\hspace*{-\labelsep}%
7913 \ignorespaces
7914 #5%
7915 \ifHy@backref
7916 \newblock
7917 \backref{\csname br@#4\endcsname}%
7918 \fi
7919 \par
7920 }%

```

\HAR@checkcitations Package hyperref has added `\expandafter \cmd@to@cs \string \hyper @@link`, so the original test `\expandafter \cmd@to@cs \string \HAR @checkcitations` will fail every time and always will appear the “Changed labels” warning. So we have to redefine `\expandafter \cmd@to@cs \string \Har @checkcitations`:

```

7921 \long\def\HAR@checkcitations#1#2#3#4{%
7922   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
7923   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7924     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
7925     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7926       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
7927     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7928       \else
7929         \@tempswatrue
7930       \fi
7931     \else
7932       \@tempswatrue
7933     \fi
7934   \else
7935     \@tempswatrue
7936   \fi
7937 }%
7938 }%
7939 }{}

```

36.2 Package chicago

The links by `\expandafter \cmd@to@cs \string \citeN` and `\expandafter \cmd@to@cs \string \shortciteN` should include the closing parentheses.

```

7940 \@ifpackageloaded{chicago}{%

```

\citeN

```

7941 \def\citeN{%
7942   \def\@citesep{-1000}%

```

```

7943 \def\@cite##1##2{##1}%
7944 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
7945 \@citedata@opt
7946 }%

\shortciteN
7947 \def\shortciteN{%
7948 \def\@citesep{-1000}%
7949 \def\@cite##1##2{##1}%
7950 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
7951 \@citedata@opt
7952 }%

\@citedata@opt
7953 \def\@citedata@opt{%
7954 \let\@cite@opt\@empty
7955 \@ifnextchar [{%
7956 \@tempswatrue
7957 \@citedatax@opt
7958 }{%
7959 \@tempswafalse
7960 \@citedatax[]%
7961 }%
7962 }%

\@citedatax@opt
7963 \def\@citedatax@opt[#1]{%
7964 \def\@cite@opt{, #1}%
7965 \@citedatax[{#1}]%
7966 }%

7967 }{}

```

37 Page numbers

The last page should not contain a /Dur key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdf-pageduration={}}`. This can be set with `\expandafter \cmd@to@cs \string \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.

```

7968 \ltx@ifclassloaded{slides}{%
7969 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7970 \def\Hy@PageAnchorSlidesPlain{%
7971 \advance\c@page\ltx@one
7972 \edef\Hy@TempPageAnchor{%
7973 \noexpand\hyper@{#1}%
7974 page.\the\c@slide.\the\c@overlay.\the\c@note%
7975 \ifnum\c@page=\ltx@one
7976 \else
7977 .\the\c@page

```

```

7978     \fi
7979   }%
7980 }%
7981   \advance\c@page-\ltx@one
7982 }%
7983 \def\Hy@PageAnchorSlide{%
7984   \advance\c@page\ltx@one
7985   \ifnum\c@page>\ltx@one
7986     \ltx@ifundefined{theHpage}{%
7987       \protected@edef\Hy@TheSlideOptionalPage{%
7988         \Hy@SlidesFormatOptionalPage{theHpage}%
7989       }%
7990     }{%
7991       \protected@edef\Hy@TheSlideOptionalPage{%
7992         \Hy@SlidesFormatOptionalPage{theHpage}%
7993       }%
7994     }%
7995   \else
7996     \def\Hy@TheSlideOptionalPage{}%
7997   \fi
7998   \advance\c@page-\ltx@one
7999   \pdfstringdef\@the@H@page{%
8000     \csname
8001       the%
8002       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8003       \Hy@SlidesPage
8004     \endcsname
8005     \Hy@TheSlideOptionalPage
8006   }%
8007   \ltx@gobblethree
8008 }%
8009 \def\Hy@SlidesPage{slide}%
8010 \g@addto@macro\slide{%
8011   \def\Hy@SlidesPage{slide}%
8012 }%
8013 \g@addto@macro\overlay{%
8014   \def\Hy@SlidesPage{overlay}%
8015 }%
8016 \g@addto@macro\note{%
8017   \def\Hy@SlidesPage{note}%
8018 }%
8019 }{%
8020 \def\Hy@PageAnchorSlidesPlain{}%
8021 \def\Hy@PageAnchorSlide{}%
8022 }
8023 \def\Hy@EveryPageAnchor{%
8024   \Hy@DistillerDestFix
8025   \ifHy@pageanchor
8026     \ifHy@hypertextnames
8027       \ifHy@plainpages
8028         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8029         \Hy@PageAnchorSlidesPlain
8030       \else
8031         \begingroup

```

```

8032     \let\@number\@firstofone
8033     \Hy@unicodedefalse
8034     \Hy@PageAnchorSlide
8035     \pdfstringdef\@the@H@page{\thepage}%
8036     \endgroup
8037     \EdefUnescapeString\@the@H@page{\@the@H@page}%
8038     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8039     \fi
8040   \else
8041     \Hy@GlobalStepCount\Hy@pagecounter
8042     \def\Hy@TempPageAnchor{%
8043       \hyper@@anchor{page.\the\Hy@pagecounter}%
8044     }%
8045     \fi
8046   \vbox to 0pt{%
8047     \kern\voffset
8048     \kern\topmargin
8049     \kern-1bp\relax
8050     \hbox to 0pt{%
8051       \kern\hoffset
8052       \kern\ifodd\value{page}%
8053         \oddsidemargin
8054       \else
8055         \evensidemargin
8056       \fi
8057       \kern-1bp\relax
8058       \Hy@TempPageAnchor\relax
8059     \hss
8060   }%
8061   \vss
8062 }%
8063 \fi
8064 }
8065 \g@addto@macro\Hy@EveryPageBoxHook{%
8066   \Hy@EveryPageAnchor
8067 }

```

38 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble. In newer L^AT_EX releases this is defined to put a % at the end of the line in the tocfile.

```

8068 \providecommand\protected@file@percent{}
8069 \def\addcontentsline#1#2#3{% toc extension, type, tag
8070   \begingroup
8071     \let\label\@gobble
8072     \ifx\@currentHref\@empty
8073       \Hy@Warning{%
8074         No destination for bookmark of \string\addcontentsline,%
8075         \MessageBreak destination is added%

```

```

8076 }%
8077 \phantomsection
8078 \fi
8079 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8080 \begingroup
8081 \def\Hy@tempa{#1}%
8082 \ifx\Hy@tempa\Hy@bookmarkstype
8083 \Hy@WarningNoLine{%
8084     bookmark level for unknown #2 defaults to 0%
8085 }%
8086 \else
8087 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8088 \fi
8089 \endgroup
8090 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8091 \fi
8092 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8093 \Hy@writebookmark{\csname the#2\endcsname}%
8094 {#3}%
8095 {\@currentHref}%
8096 {\Hy@toplevel}%
8097 {#1}%
8098 \ifHy@verbose
8099 \begingroup
8100 \def\Hy@tempa{#3}%
8101 \@onelevel@sanitize\Hy@tempa
8102 \let\temp@online\on@line
8103 \let\on@line\@empty
8104 \Hy@Info{%
8105     bookmark\temp@online:\MessageBreak
8106     thecounter {\csname the#2\endcsname}\MessageBreak
8107     text {\Hy@tempa}\MessageBreak
8108     reference {\@currentHref}\MessageBreak
8109     toplevel {\Hy@toplevel}\MessageBreak
8110     type {#1}%
8111 }%
8112 \endgroup
8113 \fi
8114 \addtocontents{#1}{%
8115 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8116 }%
8117 \endgroup
8118 }

```

`\contentsline` The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8119 \def\contentsline#1#2#3#4{%
8120 \begingroup
8121 \Hy@safe@activetrue
8122 \edef\x{\endgroup
8123 \def\noexpand\Hy@tocdestname{#4}%
8124 }\x
8125 \ifx\Hy@tocdestname\ltx@empty

```

```

8126 \csname l@#1\endcsname{#2}{#3}%
8127 \else
8128 \ifcase\Hy@linktoc % none
8129 \csname l@#1\endcsname{#2}{#3}%
8130 \or % section
8131 \csname l@#1\endcsname{%
8132 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8133 }{#3}%
8134 \or % page
8135 \def\Hy@temp{#3}%
8136 \ifx\Hy@temp\ltx@empty
8137 \csname l@#1\endcsname{#2}{#3}%
8138 \else
8139 \csname l@#1\endcsname{#{#2}}{#3}%
8140 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8141 }%
8142 \fi
8143 \else % all
8144 \def\Hy@temp{#3}%
8145 \ifx\Hy@temp\ltx@empty
8146 \csname l@#1\endcsname{%
8147 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8148 }{}%
8149 \else
8150 \csname l@#1\endcsname{%
8151 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8152 }{#3}%
8153 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8154 }%
8155 \fi
8156 \fi
8157 \fi
8158 }

8159 \</packageEnd>
8160 \< *check>
8161 \checklatex
8162 \checkcommand\def\addcontentsline#1#2#3{%
8163 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8164 }
8165 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8166 \</check>
8167 \< *packageEnd>

```

39 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

8168 \let\H@definecounter\@definecounter
8169 \def\@definecounter#1{%
8170 \H@definecounter{#1}%
8171 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8172 }

```

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.

```

8173 \let\H@newctr\@newctr
8174 \def\@newctr#1[#2]{%
8175   \H@newctr#1[#2]}%
8176 \expandafter\gdef\csname theH#1\endcsname{%
8177   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
8178 }%
8179 }

```

40 AMS¹TeX 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.

```

8180 \@ifpackageloaded{amsmath}{%
8181   \def\Hy@make@anchor{%
8182     \Hy@MakeCurrentHrefAuto{AMS}%
8183     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8184   }%
8185   \def\Hy@make@df@tag@@#1{%
8186     \gdef\df@tag{%
8187       \maketag@@@{\Hy@make@anchor#1}%
8188       \def\@currentlabel{#1}%
8189     }%
8190   }%
8191   \def\Hy@make@df@tag@@@#1{%
8192     \gdef\df@tag{%
8193       \tagform@{\Hy@make@anchor#1}%
8194       \toks@{\xp{p@equation{#1}}}%
8195       \edef\@currentlabel{\the\toks@}%
8196     }%
8197   }%
8198   \let\HyOrg@make@df@tag@@\make@df@tag@@
8199   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8200   \let\make@df@tag@@\Hy@make@df@tag@@
8201   \let\make@df@tag@@@\Hy@make@df@tag@@@
8202 }{}

```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

8203 \@ifpackagewith{hyperref}{pdftex}{%
8204   \let\H@seteqlabel\@seteqlabel
8205   \def\@seteqlabel#1{%
8206     \H@seteqlabel{#1}%
8207     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8208     \Hy@raisedlink{%
8209       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8210     }%

```



```

8211 }%
8212 }{}

```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```

\let\H@tagform@tagform@
\def>tagform@#1{%
  \maketag@@@{hyper@@anchor{currentHref}%
    {ignorespaces#1\unskip}}}%
}
\def\eqref#1{\textup{H@tagform@{ref{#1}}}}

```

40.1 \@addtoreset and \numberwithin patches

\@addtoreset puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command \theHcounter is redefined in order to add the parent counter.

```

8213 \let\HyOrg@addtoreset\@addtoreset
8214 \def\@addtoreset#1#2{%
8215   \HyOrg@addtoreset{#1}{#2}%
8216   \expandafter\xdef\csname theH#1\endcsname{%
8217     \expandafter\noexpand
8218     \csname the\ifundefined{theH#2}{H#2\endcsname
8219       .\noexpand\the\noexpand\value{#1}%
8220   }%
8221 }

```

\numberwithin A appropriate definition of hyperref's companion counter (\@expandafter \cmd@to@cs \string \theH ...) is added for correct link names.

```

8222 \endpackage
8223 \check
8224 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8225 \checkcommand\newcommand{\numberwithin}[3]{\arabic{}}
8226 \ifundefined{c@#2}{\nocounterr{#2}}{}
8227 \ifundefined{c@#3}{\nocnterr{#3}}{}
8228 \@addtoreset{#2}{#3}%
8229 \exp\xdef\csname the#2\endcsname{%
8230   \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8231 }%
8232 }%
8233 }%
8234 }%
8235 \endcheck
8236 \endpackage
8237 \ifpackageloaded{amsmath}{%
8238   \renewcommand*\numberwithin[3]{\arabic{}}
8239   \ifundefined{c@#2}{\nocounterr{#2}}{}
8240   \ifundefined{c@#3}{\nocnterr{#3}}{}
8241   \HyOrg@addtoreset{#2}{#3}%
8242   \exp\xdef\csname the#2\endcsname{%
8243     \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8244   }%

```

```

8245 \xp\xdef\csname theH#2\endcsname{%
8246 \xp\@nx
8247 \csname the\@ifundefined{theH#3}{H#3\endcsname
8248 \@nx#1{#2}%
8249 }%
8250 }%
8251 }%
8252 }%
8253 }{}

```

41 Included figures

Simply intercept the low level graphics package macro.

```

8254 \ifHy@hyperfigures
8255 \let\Hy@Gin@setfile\Gin@setfile
8256 \def\Gin@setfile#1#2#3{%
8257 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8258 }%
8259 \fi
8260 \Hy@DisableOption{hyperfigures}

```

42 hyperindex entries

Internal command names are prefixed with `\expandafter \cmd@to@cs \string \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.

```

8261 \ifHy@hyperindex
8262 \def\HyInd@ParenLeft{({}%
8263 \def\HyInd@ParenRight{)}}%
8264 \def\hyperindexformat#1#2{%
8265 \let\HyOrg@hyperpage\hyperpage
8266 \let\hyperpage\@firstofone
8267 #1{\HyOrg@hyperpage{#2}}%
8268 \let\hyperpage\HyOrg@hyperpage
8269 }%
8270 \Hy@nextfalse
8271 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8272 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8273 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8274 \begingroup
8275 \lccode`\|=\expandafter\HyInd@EncapChar\relax
8276 \lccode`\/=``\relax
8277 \lowercase{\endgroup
8278 \ifHy@next

```

```

8279 \let\HyInd@org@wrindex\@wrindex
8280 \def\@wrindex#1#2{\HyInd@wrindex{#1}#2||\}%
8281 \def\HyInd@wrindex#1#2|#3|#4\{\%
8282 \ifx\|#3\%
8283 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8284 \else
8285 \HyInd@@@wrindex{#1}{#2}#3\%
8286 \fi
8287 }%
8288 \def\HyInd@@@wrindex#1#2#3#4\{\%
8289 \def\Hy@temp@A{#3}%
8290 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8291 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8292 \relax
8293 \HyInd@org@wrindex{#1}{%
8294 #2|hyperindexformat{/#3#4}%
8295 }%
8296 \else
8297 \ifx\|#4\%
8298 \ifx\Hy@temp@A\HyInd@ParenRight
8299 \HyInd@org@wrindex{#1}{#2|#3}%
8300 \else
8301 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8302 \fi
8303 \else
8304 \HyInd@org@wrindex{#1}{%
8305 #2|#3hyperindexformat{/#4}%
8306 }%
8307 \fi
8308 \fi
8309 }%
8310 \else
8311 \def\@wrindex#1{\@wrindex#1||\}%
8312 \def\@wrindex#1|#2|#3\{\%
8313 \if@filesw
8314 \ifx\|#2\%
8315 \protected@write\@indexfile{\%
8316 \string\indexentry{#1|hyperpage}{\thepage}%
8317 }%
8318 \else
8319 \HyInd@@@wrindex{#1}#2\%
8320 \fi
8321 \fi
8322 \endgroup
8323 \@esphack
8324 }%
8325 \def\HyInd@@@wrindex#1#2#3\{\%
8326 \def\Hy@temp@A{#2}%
8327 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8328 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8329 \relax
8330 \protected@write\@indexfile{\%
8331 \string\indexentry{%
8332 #1|hyperindexformat{/#2#3}%

```

```

8333     }{\thepage}%
8334   }%
8335 \else
8336   \ifx\\#3\\%
8337     \ifx\Hy@temp@A\HyInd@ParenRight
8338       \HyInd@DefKey{#1}%
8339       \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8340         \let\Hy@temp\ltx@empty
8341       }{%
8342         \expandafter\let\expandafter\Hy@temp
8343         \csname HyInd@(\HyInd@key)\endcsname
8344       }%
8345       \protected@write\@indexfile{}{%
8346         \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8347       }%
8348     \else
8349       \protected@write\@indexfile{}{%
8350         \string\indexentry{#1|#2hyperpage}{\thepage}%
8351       }%
8352       \HyInd@DefKey{#1}%
8353       \expandafter
8354       \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8355         hyperpage%
8356       }%
8357     \fi
8358 \else
8359   \protected@write\@indexfile{}{%
8360     \string\indexentry{%
8361       #1|#2hyperindexformat{/#3}%
8362     }{\thepage}%
8363   }%
8364   \ifx\Hy@temp@A\HyInd@ParenLeft
8365     \HyInd@DefKey{#1}%
8366     \expandafter
8367     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8368       hyperindexformat{/#3}%
8369     }%
8370   \fi
8371 \fi
8372 \fi
8373 }%
8374 \def\HyInd@DefKey#1{%
8375   \begingroup
8376   \let\protect\@unexpandable@protect
8377   \edef\Hy@temp{#1}%
8378   \ltx@onelevel@sanitize\Hy@temp
8379   \global\let\HyInd@key\Hy@temp
8380   \endgroup
8381 }%
8382 \fi
8383 }%
8384 \fi
8385 \Hy@DisableOption{hyperindex}
8386 \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.

```
8387 \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.

```
8388 \def\hyperpage#1{%
8389   \HyInd@hyperpage#1\nohyperpage{}\@nil
8390 }
8391 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8392   \HyInd@@hyperpage{#1}%
8393   #2%
8394   \def\Hy@temp{#3}%
8395   \ifx\Hy@temp\@empty
8396   \else
8397     \ltx@ReturnAfterFi{%
8398       \HyInd@hyperpage#3\@nil
8399     }%
8400   \fi
8401 }
8402 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8403 \def\@hyperpage#1--#2--#3\{\{%
8404   \ifx\#2\%
8405     \@commahyperpage{#1}%
8406   \else
8407     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8408   \fi
8409 }
8410 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
8411 \def\@@commahyperpage#1, #2,#3\{\{%
8412   \ifx\#2\%
8413     \HyInd@pagelink{#1}%
8414   \else
8415     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8416   \fi
8417 }
```

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

```
8418 \def\HyInd@pagelink#1{%
8419   \begingroup
8420   \toks@={}%
8421   \HyInd@removespaces#1 \@nil
8422   \endgroup
8423 }
8424 \def\HyInd@removespaces#1 #2\@nil{%
8425   \toks@=\expandafter{\the\toks@#1}%
8426   \ifx\#2\%
8427     \edef\x{\the\toks@}%
8428     \ifx\x\@empty
8429     \else
8430       \hyperlink{page.\the\toks@}{\the\toks@}%
8431     \fi
```

```

8432 \else
8433 \ltx@ReturnAfterFi{%
8434 \HyInd@removespaces#2\@nil
8435 }%
8436 \fi
8437 }

```

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.)

```

8438 \ifHy@texht
8439 \expandafter\endinput
8440 \fi
8441 \let\real@setref\@setref
8442 \def\@setref#1#2#3{% csname, extract group, refname
8443 \ifx#1\relax
8444 \protect\G@refundefinedtrue
8445 \nfss@text{\reset@font\bfseries ??}%
8446 \@latex@warning{%
8447 Reference `#3' on page \thepage \space undefined%
8448 }%
8449 \else
8450 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8451 \fi
8452 }

```

`\expandafter \cmd@to@cs \string \Hy @setref@link` extracts the reference information entries, because `\expandafter \cmd@to@cs \string \hyper @@link` does not expand arguments for the automatic link type detection.

```

8453 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8454 \begingroup
8455 \toks0={\hyper@@link{#5}{#4}}%
8456 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8457 \edef\x{\endgroup
8458 \the\toks0 {\the\toks1 }%
8459 }%
8460 \x
8461 }
8462 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8463 \ifx#1\relax
8464 \protect\G@refundefinedtrue
8465 \nfss@text{\reset@font\bfseries ??}%
8466 \@latex@warning{%
8467 Reference `#3' on page \thepage \space undefined%
8468 }%
8469 \else
8470 \protect\hyper@@link
8471 {\expandafter\@fifthoffive#1}%
8472 {page.\expandafter\@secondoffive#1}%
8473 {\expandafter\@secondoffive#1}%
8474 \fi
8475 }
8476 \endpackage
8477 \check

```

```

8478 \checklatex
8479 \checkcommand\def\@setref#1#2#3{%
8480   \ifx#1\relax
8481     \protect\G@refundefinedtrue
8482     \nfss@text{\reset@font\bfseries ??}%
8483     \@latex@warning{%
8484       Reference `#3' on page \thepage\space undefined%
8485     }%
8486   \else
8487     \expandafter#2#1\null
8488   \fi
8489 }
8490 \</check>
8491 \<packageEnd>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

8492 \def\HyRef@StarSetRef#1{%
8493   \begingroup
8494   \Hy@safe@activestrue
8495   \let\protect\@unexpandable@protect
8496   \edef\x{#1}%
8497   \@onelevel@sanitize\x
8498   \edef\x{\endgroup
8499     \noexpand\HyRef@@StarSetRef
8500     \expandafter\noexpand\csname r@\x\endcsname{\x}%
8501   }%
8502   \x
8503 }
8504 \def\HyRef@@StarSetRef#1#2#3{%
8505   \ifx#1\@undefined
8506     \let#1\relax
8507   \fi
8508   \real@setref#1#3{#2}%
8509 }
8510 \def\@refstar#1{%
8511   \HyRef@StarSetRef{#1}\@firstoffive
8512 }
8513 \def\@pagerefstar#1{%
8514   \HyRef@StarSetRef{#1}\@secondoffive
8515 }
8516 \def\@namerefstar#1{%
8517   \HyRef@StarSetRef{#1}\@thirdoffive
8518 }
8519 \def\@Refstar#1{%
8520   \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8521 }%
8522 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8523   \MakeUppercase#1%
8524 }%
8525 \def\HyRef@Ref#1{%
8526   \hyperref[{#1}]{\Ref*{#1}}%
8527 }%
8528 \Hy@AtBeginDocument{%

```

```
8529 \@ifpackageloaded{varioref}{%
```

This are the patches for a varioref newer after 2019-09 Older versions are no longer supported. If `\hyper@nopatch@varioref` is defined we don't patch but assume that varioref handles the hyperlinks.

```
8530 \@ifundefined{hyper@nopatch@varioref}
8531 {
8532   \renewcommand\Vref@star[2][]{%
8533     \begingroup
8534     \let\T@pageref\@pagerefstar
8535     \Ref*{#2}
8536     \vpageref[#1]{#2}%
8537   \endgroup
8538 }%
8539 \renewcommand\Vr@f[2][]{%
8540   \begingroup
8541   \let\T@pageref\@pagerefstar
8542   \hyperref[{#2}]{%
8543     \Ref*{#2}
8544     \vpageref[#1]{#2}%
8545   }%
8546   \endgroup
8547 }%
8548 \renewcommand\vr@f[2][]{%
8549   \begingroup
8550   \let\T@pageref\@pagerefstar
8551   \hyperref[{#2}]{%
8552     \ref*{#2}
8553     \vpageref[#1]{#2}%
8554   }%
8555   \endgroup
8556 }%
8557 \renewcommand\vref@star[2][]{%
8558   \begingroup
8559   \let\T@pageref\@pagerefstar
8560   \ref*{#2}
8561   \vpageref[#1]{#2}%
8562   \endgroup
8563 }%
8564 }{}%
8565 }{}%
8566 }

8567 \DeclareRobustCommand*\autopageref{%
8568   \@ifstar{%
8569     \HyRef@autopagerefname\pageref*%
8570   }\HyRef@autopageref
8571 }
8572 \def\HyRef@autopageref#1{%
8573   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8574 }
8575 \def\HyRef@autopagerefname{%
8576   \ltx@ifundefined{pageautorefname}{%
8577     \ltx@ifundefined{pagename}{%
8578       \Hy@Warning{No autoref name for `page'}%
```



```

8579 }{%
8580 \pagename\nobreakspace
8581 }%
8582 }{%
8583 \pageautorefname\nobreakspace
8584 }%
8585 }

```

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

```

8586 \NewDocumentCommand\autoref{s}
8587 {
8588   \leavevmode
8589   \IfBooleanTF{#1}{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}}
8590 \def\HyRef@autoref#1#2{%
8591   \begingroup
8592   \Hy@safe@activetrue
8593   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8594   \endgroup
8595   \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8596     \HyRef@ShowKeysRef{#2}%
8597     \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8598     \edef\HyRef@thisref{%
8599       \expandafter\@fourthoffive#1\@empty\@empty\@empty
8600     }%
8601     \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8602     \Hy@safe@activesfalse
8603     #3{%
8604       \expandafter\@fifthoffive#1\@empty\@empty\@empty
8605     }{%
8606       \expandafter\@fourthoffive#1\@empty\@empty\@empty
8607     }{%
8608       \HyRef@currentHtag
8609       \expandafter\@firstoffive#1\@empty\@empty\@empty
8610       \null
8611     }%
8612   \else
8613     \protect\G@refundefinedtrue
8614     \nfss@text{\reset@font\bfseries ??}%
8615     \@latex@warning{%
8616       Reference `#2' on page \thepage\space undefined%
8617     }%
8618   \fi
8619 }
8620 \def\HyRef@testreftype#1.#2\{%
8621   \ltx@ifundefined{#1autorefname}{%
8622     \ltx@ifundefined{#1name}{%
8623       \HyRef@StripStar#1\*\@nil{#1}%
8624       \ltx@ifundefined{\HyRef@name autorefname}{%
8625         \ltx@ifundefined{\HyRef@name name}{%
8626           \def\HyRef@currentHtag{}%
8627           \Hy@Warning{No autoref name for `#1'}%
8628         }{%
8629           \edef\HyRef@currentHtag{%

```

```

8630         \expandafter\noexpand\csname\HyRef@name name\endcsname
8631         \noexpand~%
8632     }%
8633 }%
8634 }{%
8635     \edef\HyRef@currentHtag{%
8636         \expandafter\noexpand
8637         \csname\HyRef@name autorefname\endcsname
8638         \noexpand~%
8639     }%
8640 }%
8641 }{%
8642     \edef\HyRef@currentHtag{%
8643         \expandafter\noexpand\csname#1name\endcsname
8644         \noexpand~%
8645     }%
8646 }%
8647 }{%
8648     \edef\HyRef@currentHtag{%
8649         \expandafter\noexpand\csname#1autorefname\endcsname
8650         \noexpand~%
8651     }%
8652 }%
8653 }
8654 \def\HyRef@StripStar#1*\#2\@nil#3{%
8655     \def\HyRef@name{#2}%
8656     \ifx\HyRef@name\HyRef@CaseStar
8657         \def\HyRef@name{#1}%
8658     \else
8659         \def\HyRef@name{#3}%
8660     \fi
8661 }
8662 \def\HyRef@CaseStar{*\\}
8663 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8664 \let\HyRef@ShowKeysRef\@gobble
8665 \def\HyRef@ShowKeysInit{%
8666     \ifcsname SK@@label\endcsname
8667         \ifx\SK@ref\@empty
8668             \else
8669                 \def\HyRef@ShowKeysRef{%
8670                     \SK@\SK@@ref
8671                 }%
8672             \fi
8673         \fi
8674 }
8675 \@ifpackageloaded{showkeys}{%
8676     \HyRef@ShowKeysInit
8677 }{%
8678     \Hy@AtBeginDocument{%
8679         \@ifpackageloaded{showkeys}{%
8680             \HyRef@ShowKeysInit

```

```

8681   }{}%
8682   }%
8683 }

```

Defaults for the names that `\expandafter \cmd@to@cs \string \autoref` uses.

```

8684 \providecommand*\AMSautorefname{\equationautorefname}
8685 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8686 \providecommand*\Itemautorefname{\itemautorefname}
8687 \providecommand*\itemautorefname{item}
8688 \providecommand*\equationautorefname{Equation}
8689 \providecommand*\footnoteautorefname{footnote}
8690 \providecommand*\itemautorefname{item}
8691 \providecommand*\figureautorefname{Figure}
8692 \providecommand*\tableautorefname{Table}
8693 \providecommand*\partautorefname{Part}
8694 \providecommand*\appendixautorefname{Appendix}
8695 \providecommand*\chapterautorefname{chapter}
8696 \providecommand*\sectionautorefname{section}
8697 \providecommand*\subsectionautorefname{subsection}
8698 \providecommand*\subsubsectionautorefname{subsubsection}
8699 \providecommand*\paragraphautorefname{paragraph}
8700 \providecommand*\subparagraphautorefname{subparagraph}
8701 \providecommand*\FancyVerbLineautorefname{line}
8702 \providecommand*\theoremautorefname{Theorem}
8703 \providecommand*\pageautorefname{page}
8704 \</packageEnd>

```

43 Configuration files

43.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_{TEX} offers `\pdfescapestring`.

```

8705 <{*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
8706 \begingroup\expandafter\expandafter\expandafter\endgroup
8707 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8708   \begingroup
8709     \catcode`\| =0 %
8710     \@makeother\%
8711     \@firstofone{\endgroup
8712       |def|Hy@pstringdef#1#2{%
8713         |begingroup
8714           |edef~{|string~}%
8715           |xdef|Hy@gtemp{#2}%
8716         |endgroup
8717         |let#1|Hy@gtemp

```

```

8718 |@onelevel@sanitize#1%
8719 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
8720 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8721 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8722 }%
8723 |def|Hy@ExchangeBackslash#1\#2|@nil{%
8724 #1%
8725 |ifx|\#2\|}%
8726 |else
8727 \\\%
8728 |ltx@ReturnAfterFi{%
8729 |Hy@ExchangeBackslash#2|@nil
8730 }%
8731 |fi
8732 }%
8733 }%
8734 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8735 #1%
8736 \ifx\#2\|}%
8737 \else
8738 \@backslashchar(%
8739 \ltx@ReturnAfterFi{%
8740 \Hy@ExchangeLeftParenthesis#2\@nil
8741 }%
8742 \fi
8743 }%
8744 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8745 #1%
8746 \ifx\#2\|}%
8747 \else
8748 \@backslashchar)%
8749 \ltx@ReturnAfterFi{%
8750 \Hy@ExchangeRightParenthesis#2\@nil
8751 }%
8752 \fi
8753 }%
8754 \else
8755 \def\Hy@pstringdef#1#2{%
8756 \begingroup
8757 \edef~{\string~}%
8758 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8759 \endgroup
8760 \let#1\Hy@gtemp
8761 }%
8762 \fi
8763 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

43.2 pdftex

```

8764 <*pdfTeX>
8765 \providecommand*{\XR@ext}{pdf}
8766 \Hy@setbreaklinks{true}
8767 \def\HyPat@ObjRef{%
8768 [0-9]*[1-9][0-9]* 0 R%

```

8769 }

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

```
8770 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8771 \def\Hy@pdfminorversion{\pdfminorversion}%
8772 \ifHy@ocgcolorlinks
8773   \ifnum\Hy@pdfmajorminor@version<105 %
8774     \kvsetkeys{Hyp}{pdfversion=1.5}%
8775   \fi
8776 \fi
8777 \ifHy@setpdfversion
8778   \ifnum\Hy@pdf@majorminor@version<105 %
8779     \ltx@ifundefined{pdfobjcompresslevel}{%
8780       }{%
8781         \ifHy@verbose
8782           \Hy@InfoNoLine{%
8783             PDF object streams are disabled, because they are%
8784             \MessageBreak
8785             not supported in requested PDF version %
8786             \Hy@pdf@majorversion.\Hy@pdf@minorversion
8787           }%
8788         \fi
8789         \pdfobjcompresslevel=\ltx@zero
8790       }%
8791     \fi
8792     \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8793     \else
8794       \let\Hy@temp\ltx@empty
8795       \def\Hy@temp@A#1#2{%
8796         \ifnum#1>\ltx@zero
8797           \edef\Hy@temp{%
8798             \Hy@temp
8799             \space\space
8800             \the#1\space #2%
8801             \ifnum#1=\ltx@one\else s\fi
8802             \MessageBreak
8803           }%
8804         \fi
8805       }%
8806       \Hy@temp@A\pdflastobj{PDF object}%
8807       \Hy@temp@A\pdflastxform{form XObject}%
8808       \Hy@temp@A\pdflastximage{image XObject}%
8809       \Hy@temp@A\pdflastannot{annotation}%
8810       \ltx@ifundefined{pdflastlink}{%
8811         }{%
8812           \Hy@temp@A\pdflastlink{link}%
8813         }%
8814       \ifx\Hy@temp\ltx@empty
```

```

8815 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
8816 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
8817 \else
8818 \let\Hy@temp@A\ltx@empty
8819 \ifnum\Hy@pdf@majorminor@version=104 %
8820 \IfFileExists{pdf14.sty}{%
8821 \def\Hy@temp@A{%
8822 \MessageBreak
8823 Or \string\RequirePackage{pdf14} can be used%
8824 \MessageBreak
8825 before \string\documentclass\space as shortcut%
8826 }%
8827 }{}%
8828 \fi
8829 \Hy@WarningNoLine{%
8830 The PDF version number could not be set,\MessageBreak
8831 because some PDF objects are already written:%
8832 \MessageBreak
8833 \Hy@temp
8834 The version should be set as early as possible:%
8835 \MessageBreak
8836 \space\space
8837 \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
8838 \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
8839 \string\relax
8840 \ifnum\Hy@pdf@majorminor@version<105 %
8841 \ltx@ifundefined{pdfobjcompresslevel}{%
8842 }{%
8843 \MessageBreak
8844 \space\space
8845 \string\pdfobjcompresslevel=0\string\relax
8846 }%
8847 \fi
8848 \Hy@temp@A
8849 }%
8850 \fi
8851 \fi
8852 \PackageInfo{hyperref}{%
8853 \expandafter\string\Hy@pdfmajorversion.%
8854 \expandafter\string\Hy@pdfminorversion
8855 :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
8856 }%
8857 \fi
8858 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
8859 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
8860 \Hy@DisableOption{pdfversion}%

8861 \ifHy@ocgcolorlinks
8862 \pdf@ifdraftmode{}{%
8863 \immediate\pdfobj{%
8864 <<%
8865 /Type/OCG%
8866 /Name(View)%
8867 /Usage<<%
8868 /Print<<%

```

```

8869         /PrintState/OFF%
8870     >>%
8871     /View<<%
8872         /ViewState/ON%
8873     >>%
8874 >>%
8875 >>%
8876 }%
8877 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
8878 \immediate\pdfobj{%
8879     <<%
8880         /Type/OCG%
8881         /Name(Print)%
8882         /Usage<<%
8883             /Print<<%
8884                 /PrintState/ON%
8885             >>%
8886             /View<<%
8887                 /ViewState/OFF%
8888             >>%
8889         >>%
8890     >>%
8891 }%
8892 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
8893 \immediate\pdfobj{%
8894     [%
8895         \OBJ@OCG@view\space\OBJ@OCG@print
8896     ]%
8897 }%
8898 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
8899 \pdfcatalog{%
8900     /OCProperties<<%
8901         /OCGs \OBJ@OCGs
8902     /D<<%
8903         /OFF[\OBJ@OCG@print]%
8904         /AS[%
8905             <<%
8906                 /Event/View%
8907                 /OCGs \OBJ@OCGs
8908                 /Category[/View]%
8909             >>%
8910             <<%
8911                 /Event/Print%
8912                 /OCGs \OBJ@OCGs
8913                 /Category[/Print]%
8914             >>%
8915             <<%
8916                 /Event/Export%
8917                 /OCGs \OBJ@OCGs
8918                 /Category[/Print]%
8919             >>%
8920         ]%
8921     >>%
8922 >>%

```

```

8923 }%
8924 \begingroup
8925 \edef\x{\endgroup
8926 \pdfpageresources{%
8927 \the\pdfpageresources
8928 /Properties<<%
8929 /OCView \OBJ@OCG@view
8930 /OCPrint \OBJ@OCG@print
8931 >>%
8932 }%
8933 }%
8934 \x
8935 }%
8936 \Hy@AtBeginDocument{%
8937 \def\Hy@colorlink#1{%
8938 \begingroup
8939 \ifHy@ocgcolorlinks
8940 \def\Hy@ocgcolor{#1}%
8941 \setbox0=\hbox\bgroup\color@begingroup
8942 \else
8943 \HyColor@UseColor#1%
8944 \fi
8945 }%
8946 \def\Hy@endcolorlink{%
8947 \ifHy@ocgcolorlinks
8948 \color@endgroup\egroup
8949 \mbox{%
8950 \pdfliteral page{/OC/OCPrint BDC}%
8951 \rlap{\copy0}%
8952 \pdfliteral page{EMC/OC/OCView BDC}%
8953 \begingroup
8954 \expandafter\HyColor@UseColor\Hy@ocgcolor
8955 \box0 %
8956 \endgroup
8957 \pdfliteral page{EMC}%
8958 }%
8959 \fi
8960 \endgroup
8961 }%
8962 }%
8963 \else
8964 \Hy@DisableOption{ocgcolorlinks}%
8965 \fi

```

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

```

8966 \def\setpdfinkmargin#1{%
8967 \begingroup
8968 \setlength{\dimen@}{#1}%
8969 \expandafter\endgroup
8970 \expandafter\pdfinkmargin\the\dimen@\relax
8971 }
8972 \pdfinkmargin1pt %

```

First set up the default linking

```

8973 \providecommand*\@pdfview{XYZ}

```


First define the anchors:

```

8974 \Hy@WrapperDef\new@pdfink#1{%
8975   \ifhmode
8976     \@savsf\spacefactor
8977   \fi
8978   \Hy@SaveLastskip
8979   \Hy@VerboseAnchor{#1}%
8980   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8981   \Hy@DestName\Hy@pstringDest\@pdfview
8982   \Hy@RestoreLastskip
8983   \ifhmode
8984     \spacefactor\@savsf
8985   \fi
8986 }
8987 \let\pdf@endanchor\@empty

```

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

```

8988 \def\Hy@DestName#1#2{%
8989   \pdfdest name{#1}#2\relax
8990 }

```

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.

```

9001 \providecommand*\@pdfborder{0 0 1}
9002 \providecommand*\@pdfborderstyle{}
9003 \def\Hy@undefinedname{UNDEFINED}
9004 \def\find@pdfink#1#2{%
9005   \leavevmode
9006   \protected@edef\Hy@testname{#2}%
9007   \ifx\Hy@testname\@empty
9008     \Hy@Warning{%
9009       Empty destination name,\MessageBreak
9010       using '\Hy@undefinedname'%
9011     }%
9012     \let\Hy@testname\Hy@undefinedname
9013   \else
9014     \Hy@pstringdef\Hy@testname{%
9015       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9016     }%
9017   \fi
9018   \Hy@StartlinkName{%
9019     \ifHy@pdfa /F 4\fi
9020     \Hy@setpdfborder
9021     \Hy@setpdfhighlight
9022     \ifx\CurrentBorderColor\relax
9023       \else
9024         /C[\CurrentBorderColor]%
9025     \fi
9026   }\Hy@testname
9027   \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

9018 }
9019 \def\Hy@StartlinkName#1#2{%
9020 \pdfstartlink attr{#1}goto name{#2}\relax
9021 }
9022 \def\close@pdfink{%
9023 \Hy@endcolorlink
9024 \Hy@VerboseLinkStop
9025 \pdfendlink
9026 }
9027 \def\hyper@anchor#1{%
9028 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9029 }
9030 \def\hyper@anchorstart#1{%
9031 \new@pdfink{#1}%
9032 \Hy@activeanchortrue
9033 }
9034 \def\hyper@anchorend{%
9035 \pdf@endanchor
9036 \Hy@activeanchorfalse
9037 }
9038 \def\hyper@linkstart#1#2{%
9039 \Hy@VerboseLinkStart{#1}{#2}%
9040 \ltx@ifundefined{@#1bordercolor}{%
9041 \let\CurrentBorderColors\relax
9042 }{%
9043 \edef\CurrentBorderColors{\csname @#1bordercolor\endcsname}%
9044 }%
9045 \find@pdfink{#1}{#2}%
9046 }
9047 \def\hyper@linkend{\close@pdfink}
9048 \def\hyper@link#1#2#3{%
9049 \Hy@VerboseLinkStart{#1}{#2}%
9050 \ltx@ifundefined{@#1bordercolor}{%
9051 \let\CurrentBorderColors\relax
9052 }{%
9053 \edef\CurrentBorderColors{\csname @#1bordercolor\endcsname}%
9054 }%
9055 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9056 \close@pdfink
9057 }
9058 \let\CurrentBorderColors\@linkbordercolor
9059 \def\hyper@linkurl#1#2{%
9060 \begingroup
9061 \Hy@pstringdef\Hy@pstringURI{#2}%
9062 \hyper@chars
9063 \leavevmode
9064 \pdfstartlink
9065 attr{%
9066 \Hy@setpdfborder
9067 \Hy@setpdfhighlight
9068 \ifx\@urlbordercolor\relax
9069 \else
9070 /C[\@urlbordercolor]%
9071 \fi

```

```

9072 }%
9073 user{%
9074 /Subtype/Link%
9075 \ifHy@pdfa /F 4\fi
9076 /A<<%
9077 /Type/Action%
9078 /S/URI%
9079 /URI(\Hy@pstringURI)%
9080 \ifHy@href@ismap
9081 /IsMap true%
9082 \fi
9083 \Hy@href@nextactionraw
9084 >>%
9085 }%
9086 \relax
9087 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9088 \close@pdfink
9089 \endgroup
9090 }
9091 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9092 \begingroup
9093 \def\Hy@pstringF{#2}%
9094 \Hy@CleanupFile\Hy@pstringF
9095 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9096 \Hy@pstringdef\Hy@pstringD{#3}%
9097 \Hy@MakeRemoteAction
9098 \leavevmode
9099 \pdfstartlink
9100 attr{%
9101 \Hy@setpdfborder
9102 \Hy@setpdfhighlight
9103 \ifx\@filebordercolor\relax
9104 \else
9105 /C[\@filebordercolor]%
9106 \fi
9107 }%
9108 user {%
9109 /Subtype/Link%
9110 \ifHy@pdfa /F 4\fi
9111 /A<<%
9112 /F(\Hy@pstringF)%
9113 /S/GoToR%
9114 \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}

```

```

9115     \ifx\|#3\|%
9116     /D[\Hy@href@page\@pdfremotestartview]%
9117     \else
9118     /D(\Hy@pstringD)%
9119     \fi
9120     \Hy@href@nextactionraw
9121     >>%
9122     }%
9123     \relax
9124     \Hy@colorlink\@filecolor#1\Hy@xspace@end
9125     \close@pdflink
9126 \endgroup
9127 }
9128 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9129 \begingroup
9130 \Hy@pstringdef\Hy@pstringF{#1}%
9131 \Hy@pstringdef\Hy@pstringP{#3}%
9132 \leavevmode
9133 \pdfstartlink
9134 attr{%
9135 \Hy@setpdfborder
9136 \Hy@setpdfhighlight
9137 \ifx\@runbordercolor\relax
9138 \else
9139 /C[\@runbordercolor]%
9140 \fi
9141 }%
9142 user {%
9143 /Subtype/Link%
9144 \ifHy@pdfa /F 4\fi
9145 /A<<%
9146 /F(\Hy@pstringF)%
9147 /S/Launch%
9148 \Hy@SetNewWindow
9149 \ifx\|#3\|%
9150 \else
9151 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9152 \fi
9153 \Hy@href@nextactionraw
9154 >>%
9155 }%
9156 \relax
9157 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9158 \close@pdflink
9159 \endgroup
9160 }

```

\PDF@SetupDox

```

9161 \def\PDF@SetupDoc{%
9162 \ifx\@pdfpagescrop\@empty
9163 \else
9164 \edef\process@me{%
9165 \pdfpagesattr={%

```

```

9166     /CropBox[\@pdfpagescrop]%
9167     \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9168     \else
9169     ^^J\the\pdfpagesattr
9170     \fi
9171 }%
9172 }%
9173 \process@me
9174 \fi
9175 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9176 \pdfcatalog{%
9177 /PageMode/\@pdfpagemode
9178 \ifx\@baseurl\@empty
9179 \else
9180 /URI<</Base(\Hy@pstringB)>>%
9181 \fi
9182 }%
9183 \ifx\@pdfstartpage\@empty
9184 \else
9185 \ifx\@pdfstartview\@empty
9186 \else
9187 openaction goto page\@pdfstartpage{\@pdfstartview}%
9188 \fi
9189 \fi
9190 \edef\Hy@temp{%
9191 \ifHy@pdftoolbar\else /HideToolbar true\fi
9192 \ifHy@pdfmenubar\else /HideMenubar true\fi
9193 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9194 \ifHy@pdfwindow /FitWindow true\fi
9195 \ifHy@pdfcenterwindow /CenterWindow true\fi
9196 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9197 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9198 \Hy@UseNameKey{Direction}\@pdfdirection
9199 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9200 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9201 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9202 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9203 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9204 \Hy@UseNameKey{Duplex}\@pdfduplex
9205 \ifx\@pdfpicktraybypdfsize\@empty
9206 \else
9207 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9208 \fi
9209 \ifx\@pdfprintpagerange\@empty
9210 \else
9211 /PrintPageRange[\@pdfprintpagerange]%
9212 \fi
9213 \ifx\@pdfnumcopies\@empty
9214 \else
9215 /NumCopies \@pdfnumcopies
9216 \fi
9217 }%
9218 \pdfcatalog{%
9219 \ifx\Hy@temp\@empty

```

```

9220 \else
9221 /ViewerPreferences<<\Hy@temp>>%
9222 \fi
9223 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9224 \ifx\@pdflang\relax
9225 \else
9226 /Lang(\@pdflang)%
9227 \fi
9228 }%
9229 }

```

\PDF@FinishDoc

```

9230 \def\PDF@FinishDoc{%
9231 \pdf@ifdraftmode{ }{%
9232 \Hy@UseMaketitleInfos
9233 \HyInfo@GenerateAddons
9234 \pdfinfo{%
9235 /Author(\@pdfauthor)%
9236 /Title(\@pdftitle)%
9237 /Subject(\@pdfsubject)%
9238 /Creator(\@pdfcreator)%
9239 \ifx\@pdfcreationdate\@empty
9240 \else
9241 /CreationDate(\@pdfcreationdate)%
9242 \fi
9243 \ifx\@pdfmoddate\@empty
9244 \else
9245 /ModDate(\@pdfmoddate)%
9246 \fi
9247 \ifx\@pdfproducer\relax
9248 \else
9249 /Producer(\@pdfproducer)%
9250 \fi
9251 /Keywords(\@pdfkeywords)%
9252 \ifx\@pdftrapped\@empty
9253 \else
9254 /Trapped/\@pdftrapped
9255 \fi
9256 \HyInfo@Addons
9257 }%
9258 }%
9259 \Hy@DisableOption{pdfauthor}%
9260 \Hy@DisableOption{pdftitle}%
9261 \Hy@DisableOption{pdfsubject}%
9262 \Hy@DisableOption{pdfcreator}%
9263 \Hy@DisableOption{addtopdfcreator}%
9264 \Hy@DisableOption{pdfcreationdate}%
9265 \Hy@DisableOption{pdfmoddate}%
9266 \Hy@DisableOption{pdfproducer}%
9267 \Hy@DisableOption{pdfkeywords}%
9268 \Hy@DisableOption{pdftrapped}%
9269 \Hy@DisableOption{pdfinfo}%
9270 }

```

\hyper@pagetransition \expandafter \cmd@to@cs \string \@pdfpagetransition is initialized with \ex-

`pandafter \cmd@to@cs \string \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 `\\expandafter \cmd@to@cs \string \pdfpageattr` .

```

9271 \def\hyper@pagetransition{%
9272   \ifx\@pdfpagetransition\relax
9273   \else
9274     \expandafter\Hy@RemoveTransPageAttr
9275     \the\pdfpageattr^^J/Trans{}}>>\END
9276   \ifx\@pdfpagetransition\empty
9277   \else
9278     \edef\@processme{%
9279       \global\pdfpageattr{%
9280         \the\pdfpageattr
9281         ^^J/Trans << /S /\@pdfpagetransition\space >>%
9282       }%
9283     }%
9284     \@processme
9285   \fi
9286 \fi
9287 }
```

`\Hy@RemoveTransPageAttr` Macro `\\expandafter \cmd@to@cs \string \Hy @RemoveTransPageAttr` removes a `/Trans` entry from `\\expandafter \cmd@to@cs \string \pdfpageattr` . It is called with the end marker `^^J/Trans{}}>>\END`. The trick is the empty group that does not appear in legal `\\expandafter \cmd@to@cs \string \pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

9288 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9289   \ifx\#2\%
9290     \global\pdfpageattr{#1}%
9291   \else
9292     \Hy@RemoveTransPageAttr#1#4\END
9293   \fi
9294 }
```

`\hyper@pageduration` `\\expandafter \cmd@to@cs \string \@pdfpageduration` is initialized with `\\expandafter \cmd@to@cs \string \relax` . So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\\expandafter \cmd@to@cs \string \pdfpageattr` .

```

9295 \def\hyper@pageduration{%
9296   \ifx\@pdfpageduration\relax
9297   \else
9298     \expandafter
9299     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9300   \ifx\@pdfpageduration\empty
9301   \else
9302     \edef\@processme{%
9303       \global\pdfpageattr{%
9304         \the\pdfpageattr
9305         ^^J/Dur \@pdfpageduration\space
9306       }%
9307     }%
9308     \@processme
```

```

9309 \fi
9310 \fi
9311 }

```

`\Hy@RemoveDurPageAttr` Macro `\expandafter \cmd@to@cs \string \Hy @RemoveDurPageAttr` removes a `/Dur` entry from `\expandafter \cmd@to@cs \string \pdfpageattr`. It is called with the end marker `^^J/Dur{} \END`. The trick is the empty group that does not appear in legal `\expandafter \cmd@to@cs \string \pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

9312 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9313 \ifx\#2\%
9314 \global\pdfpageattr{#1}%
9315 \else
9316 \Hy@RemoveDurPageAttr#1#4\END
9317 \fi
9318 }

9319 \pdf@ifdraftmode{}{%
9320 \g@addto@macro\Hy@EveryPageHook{%
9321 \hyper@pagetransition
9322 \hyper@pageduration
9323 }%
9324 }

```

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

```

9325 \pdfifx{
9326 *pdfifx | xetex
9327 \Hy@AtBeginDocument{%
9328 \ifHy@setpagesize
9329 \expandafter\@firstofone
9330 \else
9331 \expandafter\@gobble
9332 \fi
9333 {%
9334 \@ifclassloaded{seminar}{%
9335 *pdfifx
9336 \setlength{\pdfhorigin}{1truein}%
9337 \setlength{\pdfvorigin}{1truein}%
9338 \pdfifx
9339 \ifportrait
9340 \ifdim\paperwidth=\z@
9341 \else
9342 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9343 \fi
9344 \ifdim\paperheight=\z@
9345 \else
9346 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9347 \fi
9348 \else
9349 \ifdim\paperheight=\z@
9350 \else
9351 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%

```



```

9352     \fi
9353     \ifdim\paperwidth=\z@
9354     \else
9355         \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9356     \fi
9357 \fi
9358 }{%
9359 \ltx@ifundefined{stockwidth}{%
9360     \ifdim\paperwidth>\z@
9361         \setlength{\pdfpagewidth}{\paperwidth}%
9362     \fi
9363     \ifdim\paperheight>\z@
9364         \setlength{\pdfpageheight}{\paperheight}%
9365     \fi
9366 }{%
9367     \ifdim\stockwidth>\z@
9368         \setlength{\pdfpagewidth}{\stockwidth}%
9369     \fi
9370     \ifdim\stockheight>\z@
9371         \setlength{\pdfpageheight}{\stockheight}%
9372     \fi
9373 }%
9374 }%
9375 }%
9376 \Hy@DisableOption{setpagesize}%
9377 }
9378 </pdfTeX | xetex>
9379 <*pdfTeX>
9380 \def\Acrobatmenu#1#2{%
9381 \Hy@Acrobatmenu{#1}{#2}{%
9382 \leavevmode
9383 \EdefEscapeName\Hy@temp@menu{#1}%
9384 \pdfstartlink
9385 attr{%
9386 \Hy@setpdfborder
9387 \Hy@setpdfhighlight
9388 \ifx\@menubordercolor\relax
9389 \else
9390 /C[\@menubordercolor]%
9391 \fi
9392 }%
9393 user{%
9394 /Subtype/Link%
9395 \ifHy@pdfa /F 4\fi
9396 /A<<%
9397 /S/Named%
9398 /N/\Hy@temp@menu
9399 \Hy@href@nextactionraw
9400 >>%
9401 }%
9402 \relax
9403 \Hy@colorlink\@menucolor#2%
9404 \close@pdflink
9405 }%

```

9406 }

43.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package 'atbegshi' `\AtBeginShipoutFirst` does not add a additional box layer.

change 2020-10-01: the code has been removed as outdated.

9407 `\pdfTeX`

43.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a *name* command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the *name* command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

9408 `{*hypertex}`

9409 `\providecommand*{\XR@ext}{dvi}`

```

9410 \let\PDF@FinishDoc\ltx@empty
9411 \def\PDF@SetupDoc{%
9412   \ifx\@baseurl\@empty
9413   \else
9414     \special{html:<base href="\@baseurl">}%
9415   \fi
9416 }
9417 \Hy@WrapperDef\hyper@anchor#1{%
9418   \Hy@SaveLastskip
9419   \Hy@VerboseAnchor{#1}%
9420   \begingroup
9421     \let\protect=\string
9422     \hyper@chars
9423     \special{html:<a name=%
9424       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9425   \endgroup
9426   \Hy@activeanchortrue
9427   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9428   \special{html:</a>}%
9429   \Hy@activeanchorfalse
9430   \Hy@RestoreLastskip
9431 }
9432 \Hy@WrapperDef\hyper@anchorstart#1{%
9433   \Hy@SaveLastskip
9434   \Hy@VerboseAnchor{#1}%
9435   \begingroup
9436     \hyper@chars
9437     \special{html:<a name=%
9438       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9439   \endgroup
9440   \Hy@activeanchortrue
9441 }
9442 \def\hyper@anchorend{%
9443   \special{html:</a>}%
9444   \Hy@activeanchorfalse
9445   \Hy@RestoreLastskip
9446 }
9447 \def\@urltype{url}
9448 \def\hyper@linkstart#1#2{%
9449   \Hy@VerboseLinkStart{#1}{#2}%
9450   \expandafter\Hy@colorlink\csname @#1color\endcsname
9451   \def\Hy@tempa{#1}%
9452   \ifx\Hy@tempa\@urltype
9453     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9454   \else
9455     \begingroup
9456       \hyper@chars
9457       \special{html:<a href=%
9458         \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%
9459     \endgroup
9460   \fi
9461 }
9462 \def\hyper@linkend{%
9463   \special{html:</a>}%

```

```

9464 \Hy@endcolorlink
9465 }
9466 \def\hyper@linkfile#1#2#3{%
9467 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9468 }
9469 \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.

```

9470 \leavevmode
9471 \ifHy@raiselinks
9472 \Hy@SaveSpaceFactor
9473 \Hy@SaveSavedSpaceFactor
9474 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9475 \Hy@RestoreSavedSpaceFactor
9476 \@linkdim\dp\@tempboxa
9477 \lower\@linkdim\hbox{%
9478 \hyper@chars
9479 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9480 }%
9481 \Hy@colorlink\@urlcolor
9482 \Hy@RestoreSpaceFactor
9483 #1%
9484 \Hy@SaveSpaceFactor
9485 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvilhs processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

9486 \advance\@linkdim by -6.5\p@
9487 \raise\@linkdim\hbox{\special{html:</a>}}%
9488 \Hy@endcolorlink
9489 \Hy@RestoreSpaceFactor
9490 \else
9491 \begingroup
9492 \hyper@chars
9493 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9494 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9495 \special{html:</a>}}%
9496 \Hy@endcolorlink
9497 \endgroup
9498 \fi
9499 }

```

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

```

9500 \def\hyper@link#1#2#3{%
9501 \Hy@VerboseLinkStart{#1}{#2}%
9502 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
9503 }
9504 \def\hyper@image#1#2{%
9505 \begingroup
9506 \hyper@chars
9507 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%

```

```

9508 \endgroup
9509 }
9510 </hypertex>
9511 <*dviwindo>

```

43.4 dviwindo

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

This was more or less blindly copied from the `hypertex` cfg. For dviwindo, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```

9512 \providecommand*\XR@ext}{dvi}
9513 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9514 \Hy@WrapperDef\hyper@anchor#1{%
9515   \Hy@SaveLastskip
9516   \Hy@VerboseAnchor{#1}%
9517   \begingroup
9518     \let\protect=\string
9519     \special{mark: #1}%
9520   \endgroup
9521   \Hy@activeanchortrue
9522   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9523   \Hy@activeanchorfalse
9524   \Hy@RestoreLastskip
9525 }
9526 \Hy@WrapperDef\hyper@anchorstart#1{%
9527   \Hy@SaveLastskip
9528   \Hy@VerboseAnchor{#1}%
9529   \special{mark: #1}%
9530   \Hy@activeanchortrue
9531 }
9532 \def\hyper@anchorend{%
9533   \Hy@activeanchorfalse
9534   \Hy@RestoreLastskip
9535 }
9536 \def\hyper@linkstart#1#2{%
9537   \Hy@VerboseLinkStart{#1}{#2}%
9538   \expandafter\Hy@colorlink\csname @#1color\endcsname
9539   \special{button: %
9540     10000000 %
9541     \number\baselineskip\space
9542     #2%
9543   }%
9544 }
9545 \def\hyper@linkend{%
9546   \Hy@endcolorlink

```

```

9547 }
9548 \def\hyper@link#1#2#3{%
9549 \Hy@VerboseLinkStart{#1}{#2}%
9550 \leavevmode
9551 \ifHy@raiselinks
9552 \Hy@SaveSpaceFactor
9553 \Hy@SaveSavedSpaceFactor
9554 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9555 \Hy@RestoreSavedSpaceFactor
9556 \@linkdim\dp\@tempboxa
9557 \lower\@linkdim\hbox{%
9558 \special{button: %
9559 \number\wd\@tempboxa\space
9560 \number\ht\@tempboxa\space
9561 #2%
9562 }%
9563 \expandafter\Hy@colorlink\csname @#1color\endcsname
9564 \Hy@RestoreSpaceFactor
9565 #3\Hy@xspace@end
9566 \Hy@SaveSpaceFactor
9567 \Hy@endcolorlink
9568 }%
9569 \@linkdim\ht\@tempboxa
9570 \advance\@linkdim by -6.5\p@
9571 \raise\@linkdim\hbox{}}%
9572 \Hy@RestoreSpaceFactor
9573 \else
9574 \special{button: %
9575 \number\wd\@tempboxa\space
9576 \number\ht\@tempboxa\space
9577 #2%
9578 }%
9579 \expandafter\Hy@colorlink\csname @#1color\endcsname
9580 #3\Hy@xspace@end
9581 \Hy@endcolorlink
9582 \fi
9583 }
9584 \def\hyper@linkurl#1#2{%
9585 \begingroup
9586 \hyper@chars
9587 \leavevmode
9588 \ifHy@raiselinks
9589 \Hy@SaveSpaceFactor
9590 \Hy@SaveSavedSpaceFactor
9591 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9592 \Hy@RestoreSavedSpaceFactor
9593 \@linkdim\dp\@tempboxa
9594 \lower\@linkdim\hbox{%
9595 \special{button: %
9596 \number\wd\@tempboxa\space
9597 \number\ht\@tempboxa\space
9598 launch: \wwwbrowser\space
9599 #2%
9600 }%

```

```

9601 \Hy@colorlink\@urlcolor
9602 \Hy@RestoreSpaceFactor
9603 #1\Hy@xspace@end
9604 \Hy@SaveSpaceFactor
9605 \Hy@endcolorlink
9606 }%
9607 \@linkdim\ht\@tempboxa
9608 \advance\@linkdim by -6.5\p@
9609 \raise\@linkdim\hbox{}%
9610 \Hy@RestoreSpaceFactor
9611 \else
9612 \special{button: %
9613 \number\wd\@tempboxa\space
9614 \number\ht\@tempboxa\space
9615 launch: \wwwbrowser\space
9616 #2%
9617 }%
9618 \Hy@colorlink\@urlcolor
9619 #1\Hy@xspace@end
9620 \Hy@endcolorlink
9621 \fi
9622 \endgroup
9623 }
9624 \def\hyper@linkfile#1#2#3{%
9625 \begingroup
9626 \hyper@chars
9627 \leavevmode
9628 \ifHy@raiselinks
9629 \Hy@SaveSpaceFactor
9630 \Hy@SaveSavedSpaceFactor
9631 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9632 \Hy@RestoreSavedSpaceFactor
9633 \@linkdim\dp\@tempboxa
9634 \lower\@linkdim\hbox{%
9635 \special{button: %
9636 \number\wd\@tempboxa\space
9637 \number\ht\@tempboxa\space
9638 #3,%
9639 file: #2%
9640 }%
9641 \Hy@colorlink\@filecolor
9642 \Hy@RestoreSpaceFactor
9643 #1\Hy@xspace@end
9644 \Hy@SaveSpaceFactor
9645 \Hy@endcolorlink
9646 }%
9647 \@linkdim\ht\@tempboxa
9648 \advance\@linkdim by -6.5\p@
9649 \raise\@linkdim\hbox{}%
9650 \Hy@RestoreSpaceFactor
9651 \else
9652 \special{button: %
9653 \number\wd\@tempboxa\space
9654 \number\ht\@tempboxa\space

```

```

9655     #3,%
9656     file: #2%
9657 }%
9658 \Hy@colorlink\@filecolor
9659     #1\Hy@xspace@end
9660 \Hy@endcolorlink
9661 \fi
9662 \endgroup
9663 }
9664 \HyInfo@AddonUnsupportedtrue
9665 \def\PDF@FinishDoc{%
9666 \Hy@UseMaketitleInfos
9667 \HyInfo@TrappedUnsupported
9668 \special{PDF: Keywords \@pdfkeywords}%
9669 \special{PDF: Title \@pdftitle}%
9670 \special{PDF: Creator \@pdfcreator}%
9671 \ifx\@pdfcreationdate\@empty
9672 \else
9673 \special{PDF: CreationDate \@pdfcreationdate}%
9674 \fi
9675 \ifx\@pdfmoddate\@empty
9676 \else
9677 \special{PDF: ModDate \@pdfmoddate}%
9678 \fi
9679 \special{PDF: Author \@pdfauthor}%
9680 \ifx\@pdfproducer\relax
9681 \else
9682 \special{PDF: Producer \@pdfproducer}%
9683 \fi
9684 \special{PDF: Subject \@pdfsubject}%
9685 \Hy@DisableOption{pdfauthor}%
9686 \Hy@DisableOption{pdftitle}%
9687 \Hy@DisableOption{pdfsubject}%
9688 \Hy@DisableOption{pdfcreator}%
9689 \Hy@DisableOption{addtopdfcreator}%
9690 \Hy@DisableOption{pdfcreationdate}%
9691 \Hy@DisableOption{pdfcreationdate}%
9692 \Hy@DisableOption{pdfmoddate}%
9693 \Hy@DisableOption{pdfproducer}%
9694 \Hy@DisableOption{pdfkeywords}%
9695 \Hy@DisableOption{pdftrapped}%
9696 \Hy@DisableOption{pdfinfo}%
9697 }
9698 \def\PDF@SetupDoc{%
9699 \ifx\@baseurl\@empty
9700 \else
9701 \special{PDF: Base \@baseurl}%
9702 \fi
9703 \ifx\@pdfpagescrop\@empty\else
9704 \special{PDF: BBox \@pdfpagescrop}%
9705 \fi
9706 \def\Hy@temp{}%
9707 \ifx\@pdfstartpage\@empty
9708 \else

```



```

9709 \ifx\@pdfstartview\@empty
9710 \else
9711 \edef\Hy@temp{%
9712 ,Page=\@pdfstartpage
9713 ,View=\@pdfstartview
9714 }%
9715 \fi
9716 \fi
9717 \edef\Hy@temp{%
9718 \noexpand\pdfmark{%
9719 pdfmark=/DOCVIEW,%
9720 PageMode=/\@pdfpagemode
9721 \Hy@temp
9722 }%
9723 }%
9724 \Hy@temp
9725 \ifx\@pdfpagescrop\@empty
9726 \else
9727 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9728 \fi
9729 \edef\Hy@temp{%
9730 \ifHy@pdftoolbar\else /HideToolbar true\fi
9731 \ifHy@pdfmenubar\else /HideMenubar true\fi
9732 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9733 \ifHy@pdffitwindow /FitWindow true\fi
9734 \ifHy@pdfcenterwindow /CenterWindow true\fi
9735 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9736 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9737 \Hy@UseNameKey{Direction}\@pdfdirection
9738 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9739 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9740 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9741 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9742 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9743 \Hy@UseNameKey{Duplex}\@pdfduplex
9744 \ifx\@pdfpicktraybypdfsize\@empty
9745 \else
9746 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9747 \fi
9748 \ifx\@pdfprintpagerange\@empty
9749 \else
9750 /PrintPageRange[\@pdfprintpagerange]%
9751 \fi
9752 \ifx\@pdfnumcopies\@empty
9753 \else
9754 /NumCopies \@pdfnumcopies
9755 \fi
9756 }%
9757 \pdfmark{pdfmark=/PUT,%
9758 Raw={%
9759 \string{Catalog\string}<<%
9760 \ifx\Hy@temp\@empty
9761 \else
9762 /ViewerPreferences<<\Hy@temp>>%

```

```

9763     \fi
9764     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9765     \ifx\@pdflang\relax
9766     \else
9767         /Lang(\@pdflang)%
9768     \fi
9769     >>%
9770 }%
9771 }%
9772 }
9773 </dviwindo>
9774 <*dvipdfm | xetex>

```

43.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

(x)dvipdfmx replaces destination names by numbers. This makes it impossible to link from an external document with xr-hyper, so from version 7.00j on this is suppressed with a config special.

```

9775 \special{dvipdfmx:config C 0x0010}
9776 \providecommand*\XR@ext}{pdf}
9777 \Hy@setbreaklinks{true}
9778 \def\HyPat@ObjRef{%
9779   @[\^ ]+}%
9780 }
9781 \newsavebox{\pdfm@box}
9782 \def\@pdfm@mark#1{\special{pdf:#1}}
9783 \Hy@WrapperDef\@pdfm@dest#1{%
9784   \Hy@SaveLastskip
9785   \Hy@VerboseAnchor{#1}%
9786   \begingroup
9787     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9788     \def\x{XYZ}%
9789     \ifx\x\@pdfview
9790       \def\x{XYZ @xpos @ypos null}%
9791     \else
9792       \def\x{FitH}%
9793       \ifx\x\@pdfview
9794         \def\x{FitH @ypos}%
9795       \else
9796         \def\x{FitBH}%
9797         \ifx\x\@pdfview
9798           \def\x{FitBH @ypos}%
9799         \else
9800           \def\x{FitV}%
9801           \ifx\x\@pdfview
9802             \def\x{FitV @xpos}%
9803           \else
9804             \def\x{FitBV}%
9805             \ifx\x\@pdfview
9806               \def\x{FitBV @xpos}%
9807             \else
9808               \def\x{Fit}%

```

```

9809         \ifx\x\@pdfview
9810         \let\x\@pdfview
9811     \else
9812         \def\x{FitB}%
9813         \ifx\x\@pdfview
9814             \let\x\@pdfview
9815         \else
9816             \def\x{FitR}%
9817             \ifx\x\@pdfview
9818                 \Hy@Warning{'pdfview=FitR' is not supported}%
9819                 \def\x{XYZ @xpos @ypos null}%
9820             \else
9821                 \@onelevel@sanitize\@pdfview
9822                 \Hy@Warning{%
9823                     Unknown value '\@pdfview' for pdfview%
9824                 }%
9825                 \def\x{XYZ @xpos @ypos null}%
9826             \fi
9827         \fi
9828     \fi
9829 \fi
9830 \fi
9831 \fi
9832 \fi
9833 \fi
9834 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9835 \endgroup
9836 \Hy@RestoreLastskip
9837 }
9838 \providecommand*\@pdfview{XYZ}
9839 \providecommand*\@pdfborder{0 0 1}
9840 \providecommand*\@pdfborderstyle{}
9841 \def\hyper@anchor#1{%
9842     \@pdfm@dest{#1}%
9843 }
9844 \def\hyper@anchorstart#1{%
9845     \Hy@activeanchortrue
9846     \@pdfm@dest{#1}%
9847 }
9848 \def\hyper@anchorend{%
9849     \Hy@activeanchorfalse
9850 }
9851 \newcounter{Hy@AnnotLevel}
9852 \ifHy@ocgcolorlinks
9853     \def\OBJ@OCG@view{@OCG@view}%
9854     \@pdfm@mark{%
9855         obj \OBJ@OCG@view <<%
9856         /Type/OCG%
9857         /Name(View)%
9858         /Usage<<%
9859         /Print<<%
9860         /PrintState/OFF%
9861         >>%

```

```

9862     /View<<%
9863     /ViewState/ON%
9864     >>%
9865     >>%
9866     >>%
9867 }%
9868 \@pdfm@mark{close \OBJ@OCG@view}%
9869 \def\OBJ@OCG@print{@OCG@print}%
9870 \@pdfm@mark{%
9871   obj \OBJ@OCG@print <<%
9872     /Type/OCG%
9873     /Name(Print)%
9874     /Usage<<%
9875     /Print<<%
9876     /PrintState/ON%
9877     >>%
9878     /View<<%
9879     /ViewState/OFF%
9880     >>%
9881     >>%
9882     >>%
9883 }%
9884 \@pdfm@mark{close \OBJ@OCG@print}%
9885 \def\OBJ@OCGs{@OCGs}%
9886 \@pdfm@mark{%
9887   obj \OBJ@OCGs [%
9888     \OBJ@OCG@view\space\OBJ@OCG@print
9889   ]%
9890 }%
9891 \@pdfm@mark{close \OBJ@OCGs}%
9892 \@pdfm@mark{%
9893   put @catalog <<%
9894     /OCProperties<<%
9895     /OCGs \OBJ@OCGs
9896     /D<<%
9897     /OFF[\OBJ@OCG@print]%
9898     /AS[%
9899       <<%
9900         /Event/View%
9901         /OCGs \OBJ@OCGs
9902         /Category[/View]%
9903       >>%
9904       <<%
9905         /Event/Print%
9906         /OCGs \OBJ@OCGs
9907         /Category[/Print]%
9908       >>%
9909       <<%
9910         /Event/Export%
9911         /OCGs \OBJ@OCGs
9912         /Category[/Print]%
9913       >>%
9914     ]%
9915     >>%

```

```

9916     >>%
9917     >>%
9918 }%
9919 \AtBeginShipout{%
9920   \setbox\AtBeginShipoutBox=\hbox{%
9921     \copy\AtBeginShipoutBox
9922     \@pdfm@mark{%
9923       put @resources <<%
9924         /Properties<<%
9925         /OCView \OBJ@OCG@view
9926         /OCPrint \OBJ@OCG@print
9927       >>%
9928       >>%
9929     }%
9930   }%
9931 }%
9932 \Hy@AtBeginDocument{%
9933   \def\Hy@colorlink#1{%
9934     \begingroup
9935     \ifHy@ocgcolorlinks
9936       \def\Hy@ocgcolor{#1}%
9937       \setbox0=\hbox\bgroup\color@begingroup
9938     \else
9939       \HyColor@UseColor#1%
9940     \fi
9941   }%
9942   \def\Hy@endcolorlink{%
9943     \ifHy@ocgcolorlinks
9944       \color@endgroup\egroup
9945       \mbox{%
9946         \@pdfm@mark{content /OC/OCPrint BDC}%
9947         \rlap{\copy0}%
9948         \@pdfm@mark{content EMC/OC/OCView BDC}%
9949         \begingroup
9950           \expandafter\HyColor@UseColor\Hy@ocgcolor
9951           \box0 %
9952         \endgroup
9953         \@pdfm@mark{content EMC}%
9954       }%
9955     \fi
9956   \endgroup
9957 }%
9958 }%
9959 \else
9960   \Hy@DisableOption{ocgcolorlinks}%
9961 \fi

```

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

```

9962 \def\Hy@BeginAnnot#1{%
9963   \global\advance\c@Hy@AnnotLevel\@ne
9964   \ifnum\c@Hy@AnnotLevel=\@ne
9965     #1%
9966   \fi

```

```

9967 }
9968 \def\Hy@EndAnnot{%
9969   \ifnum\value{Hy@AnnotLevel}=\@ne
9970     \Hy@endcolorlink
9971     \@pdfm@mark{eann}%
9972   \fi
9973   \global\advance\c@Hy@AnnotLevel\m@ne
9974 }

9975 \def\Hy@undefinedname{UNDEFINED}
9976 \def\hyper@linkstart#1#2{%
9977   \Hy@VerboseLinkStart{#1}{#2}%
9978   \leavevmode
9979   \Hy@BeginAnnot{%
9980     \protected@edef\Hy@testname{#2}%
9981     \ifx\Hy@testname\@empty
9982       \Hy@Warning{%
9983         Empty destination name,\MessageBreak
9984         using '\Hy@undefinedname'%
9985       }%
9986       \let\Hy@testname\Hy@undefinedname
9987     \else
9988       \Hy@pstringdef\Hy@testname{%
9989         \expandafter\HyperDestNameFilter\expandafter{%
9990           \Hy@testname
9991         }%
9992       }%
9993     \fi
9994     \@pdfm@mark{%
9995       bann<<%
9996       /Type/Annot%
9997       /Subtype/Link%
9998       \ifHy@pdfa /F 4\fi
9999       \Hy@setpdfborder
10000      \Hy@setpdfhighlight
10001      \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10002        \else
10003          /C[\csname @#1bordercolor\endcsname]%
10004        \fi
10005        /A<<%
10006        /S/GoTo%
10007        /D(\Hy@testname)%
10008        \Hy@href@nextactionraw
10009        >>%
10010      >>%
10011    }%
10012    \expandafter\Hy@colorlink\csname @#1color\endcsname
10013  }%
10014 }
10015 \def\hyper@linkend{\Hy@EndAnnot}%
10016 \def\hyper@link#1#2#3{%
10017   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10018 }
10019 \def\hyper@linkfile#1#2#3{%
10020   \leavevmode

```

```

10021 \Hy@BeginAnnot{%
10022 \def\Hy@pstringF{#2}%
10023 \Hy@CleanupFile\Hy@pstringF
10024 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10025 \Hy@pstringdef\Hy@pstringD{#3}%
10026 \Hy@MakeRemoteAction
10027 \@pdfm@mark{%
10028   bann<<%
10029   /Type/Annot%
10030   /Subtype/Link%
10031   \ifHy@pdfa /F 4\fi
10032   \Hy@setpdfborder
10033   \Hy@setpdfhighlight
10034   \ifx\@filebordercolor\relax
10035   \else
10036     /C[\@filebordercolor]%
10037   \fi
10038   /A<<%
10039   /S/GoToR%
10040   /F(\Hy@pstringF)%
10041   /D%
10042   \ifx\#3\%
10043     [\Hy@href@page\@pdfremotestartview]%
10044   \else
10045     (\Hy@pstringD)%
10046   \fi
10047   \Hy@SetNewWindow
10048   \Hy@href@nextactionraw
10049   >>%
10050   >>%
10051   }%
10052   \Hy@colorlink\@filecolor
10053 }%
10054 #1\Hy@xspace@end
10055 \Hy@endAnnot
10056 }
10057 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10058 \leavevmode
10059 \Hy@BeginAnnot{%
10060 \Hy@pstringdef\Hy@pstringF{#1}%
10061 \Hy@pstringdef\Hy@pstringP{#3}%
10062 \@pdfm@mark{%
10063   bann<<%
10064   /Type/Annot%
10065   /Subtype/Link%
10066   \ifHy@pdfa /F 4\fi
10067   \Hy@setpdfborder
10068   \Hy@setpdfhighlight
10069   \ifx\@runbordercolor\relax
10070   \else
10071     /C[\@runbordercolor]%
10072   \fi
10073   /A<<%
10074   /F(\Hy@pstringF)%

```

```

10075      /S/Launch%
10076      \Hy@SetNewWindow
10077      \ifx\|#3\|%
10078      \else
10079      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10080      \fi
10081      \Hy@href@nextactionraw
10082      >>%
10083      >>%
10084      }%
10085      \Hy@colorlink\@runcolor
10086      }%
10087      #2\Hy@xspace@end
10088      \Hy@EndAnnot
10089      }
10090      \def\hyper@linkurl#1#2{%
10091      \leavevmode
10092      \Hy@BeginAnnot{%
10093      \Hy@pstringdef\Hy@pstringURI{#2}%
10094      \@pdfm@mark{%
10095      bann<<%
10096      /Type/Annot%
10097      /Subtype/Link%
10098      \ifHy@pdfa /F 4\fi
10099      \Hy@setpdfborder
10100      \Hy@setpdfhighlight
10101      \ifx\@urlbordercolor\relax
10102      \else
10103      /C[\@urlbordercolor]%
10104      \fi
10105      /A<<%
10106      /S/URI%
10107      /URI(\Hy@pstringURI)%
10108      \ifHy@href@ismap
10109      /IsMap true%
10110      \fi
10111      \Hy@href@nextactionraw
10112      >>%
10113      >>%
10114      }%
10115      \Hy@colorlink\@urlcolor
10116      }%
10117      #1\Hy@xspace@end
10118      \Hy@EndAnnot
10119      }
10120      \def\Acrobatmenu#1#2{%
10121      \Hy@Acrobatmenu{#1}{#2}{%
10122      \Hy@BeginAnnot{%
10123      \EdefEscapeName\Hy@temp@menu{#1}%
10124      \@pdfm@mark{%
10125      bann<<%
10126      /Type/Annot%
10127      /Subtype/Link%
10128      \ifHy@pdfa /F 4\fi

```



```

10129      \Hy@setpdfborder
10130      \Hy@setpdfhighlight
10131      \ifx\@menubordercolor\relax
10132      \else
10133      /C[\@menubordercolor]%
10134      \fi
10135      /A<<%
10136      /S/Named%
10137      /N/\Hy@temp@menu
10138      \Hy@href@nextactionraw
10139      >>%
10140      >>%
10141      }%
10142      \Hy@colorlink\@menucolor
10143      }%
10144      #2\Hy@xspace@end
10145      \Hy@endannot
10146      }%
10147      }
10148
10149      \def\PDF@FinishDoc{%
10150      \Hy@UseMaketitleInfos
10151      \Hy@Info@GenerateAddons
10152      \@pdfm@mark{%
10153      docinfo<<%
10154      /Title(\@pdftitle)%
10155      /Subject(\@pdfsubject)%
10156      /Creator(\@pdfcreator)%
10157      \ifx\@pdfcreationdate\@empty
10158      \else
10159      /CreationDate(\@pdfcreationdate)%
10160      \fi
10161      \ifx\@pdfmoddate\@empty
10162      \else
10163      /ModDate(\@pdfmoddate)%
10164      \fi
10165      /Author(\@pdfauthor)%
10166      \ifx\@pdfproducer\relax
10167      \else
10168      /Producer(\@pdfproducer)%
10169      \fi
10170      /Keywords(\@pdfkeywords)%
10171      \ifx\@pdftrapped\@empty
10172      \else
10173      /Trapped/\@pdftrapped
10174      \fi
10175      \Hy@Info@Addons
10176      >>%
10177      }%
10178      \Hy@DisableOption{pdfauthor}%
10179      \Hy@DisableOption{pdftitle}%
10180      \Hy@DisableOption{pdfsubject}%
10181      \Hy@DisableOption{pdfcreator}%
10182      \Hy@DisableOption{addtopdfcreator}%

```

```

10183 \Hy@DisableOption{pdfcreationdate}%
10184 \Hy@DisableOption{pdfcreationdate}%
10185 \Hy@DisableOption{pdfmoddate}%
10186 \Hy@DisableOption{pdfproducer}%
10187 \Hy@DisableOption{pdfkeywords}%
10188 \Hy@DisableOption{pdftrapped}%
10189 \Hy@DisableOption{pdfinfo}%
10190 }

10191 \def\PDF@SetupDoc{%
10192 \edef\Hy@temp{%
10193 \ifHy@pdftoolbar\else /HideToolbar true\fi
10194 \ifHy@pdfmenubar\else /HideMenubar true\fi
10195 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10196 \ifHy@pdfwindow /FitWindow true\fi
10197 \ifHy@pdfcenterwindow /CenterWindow true\fi
10198 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10199 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10200 \Hy@UseNameKey{Direction}\@pdfdirection
10201 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10202 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10203 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10204 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10205 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10206 \Hy@UseNameKey{Duplex}\@pdfduplex
10207 \ifx\@pdfpicktraybypdfsize\@empty
10208 \else
10209 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10210 \fi
10211 \ifx\@pdfprintpagerange\@empty
10212 \else
10213 /PrintPageRange[\@pdfprintpagerange]%
10214 \fi
10215 \ifx\@pdfnumcopies\@empty
10216 \else
10217 /NumCopies \@pdfnumcopies
10218 \fi
10219 }%
10220 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10221 \@pdfm@mark{%
10222 docview<<%
10223 \ifx\@pdfstartpage\@empty
10224 \else
10225 \ifx\@pdfstartview\@empty
10226 \else
10227 /OpenAction[\@page\@pdfstartpage\@pdfstartview]%
10228 \fi
10229 \fi
10230 \ifx\@baseurl\@empty
10231 \else
10232 /URI<</Base(\Hy@pstringB)>>%
10233 \fi
10234 /PageMode/\@pdfpagemode
10235 \ifx\Hy@temp\@empty
10236 \else

```

```

10237     /ViewerPreferences<<\Hy@temp>>%
10238     \fi
10239     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10240     \ifx\@pdflang\relax
10241     \else
10242     /Lang(\@pdflang)%
10243     \fi
10244     >>%
10245     }%
10246     \ifx\@pdfpagescrop\@empty
10247     \else
10248     \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10249     \fi
10250   }
10251   </dvipdfm | xetex>
10252   < *dvipdfm | xetex>

```

\hyper@pagetransition

```

10253 \def\hyper@pagetransition{%
10254   \ifx\@pdfpagetransition\relax
10255   \else
10256   \ifx\@pdfpagetransition\@empty
10257   \else
10258   \special{pdf:put @thispage %
10259     <</Trans<</S/\@pdfpagetransition>>>>%
10260   }%
10261   \fi
10262   \fi
10263 }

```

\hyper@pageduration

```

10264 \def\hyper@pageduration{%
10265   \ifx\@pdfpageduration\relax
10266   \else
10267   \ifx\@pdfpageduration\@empty
10268   \else
10269   \special{pdf:put @thispage %
10270     <</Dur \@pdfpageduration>>>%
10271   }%
10272   \fi
10273   \fi
10274 }

```

```

10275 \g@addto@macro\Hy@EveryPageBoxHook{%
10276   \hyper@pagetransition
10277   \hyper@pageduration
10278 }
10279 </dvipdfm | xetex>

```

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

```

10280 < *dvipdfm>
10281 \AtBeginShipoutFirst{%

```

```

10282 \ifHy@setpagesize
10283 \begingroup
10284 \ifundefined{stockwidth}{\%
10285 \ifdim\paperwidth>\z@
10286 \ifdim\paperheight>\z@
10287 \special{papersize=\the\paperwidth,\the\paperheight}%
10288 \fi
10289 \fi
10290 }{\%
10291 \ifdim\stockwidth>\z@
10292 \ifdim\stockheight>\z@
10293 \special{papersize=\the\stockwidth,\the\stockheight}%
10294 \fi
10295 \fi
10296 }%
10297 \endgroup
10298 \fi
10299 \Hy@DisableOption{setpagesize}%
10300 }
10301 </dvipdfm>

```

43.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

10302 <*vtexhtml>
10303 \providecommand*{\XR@ext}{htm}
10304 \RequirePackage{vtexhtml}
10305 \newif\if@Localurl
10306 \let\PDF@FinishDoc\ltx@empty
10307 \def\PDF@SetupDoc{%
10308 \ifx\@baseurl\@empty
10309 \else
10310 \special{!direct <base href="\@baseurl">}%
10311 \fi
10312 }
10313 \def\@urltype{url}
10314 \def\hyper@link#1#2#3{%
10315 \Hy@VerboseLinkStart{#1}{#2}%
10316 \leavevmode
10317 \special{!direct <a href=%
10318 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10319 #3\Hy@xspace@end
10320 \special{!direct </a>}%
10321 }
10322 \def\hyper@linkurl#1#2{%
10323 \begingroup
10324 \hyper@chars
10325 \leavevmode
10326 \MathBSuppress=1\relax
10327 \special{!direct <a href=%
10328 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10329 #1\Hy@xspace@end
10330 \MathBSuppress=0\relax

```

```

10331 \special{!direct </a>}%
10332 \endgroup
10333 }
10334 \def\hyper@linkfile#1#2#3{%
10335 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10336 }
10337 \def\hyper@linkstart#1#2{%
10338 \Hy@VerboseLinkStart{#1}{#2}%
10339 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
10340 \@Localurltrue
10341 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10342 \else
10343 \@Localurlfalse
10344 \begingroup
10345 \hyper@chars
10346 \special{!aref \HyperDestNameFilter{#2}}%
10347 \endgroup
10348 \fi
10349 }
10350 \def\hyper@linkend{%
10351 \if@Localurl
10352 \special{!endaref}%
10353 \else
10354 \special{!direct </a>}%
10355 \fi
10356 }
10357 \Hy@WrapperDef\hyper@anchorstart#1{%
10358 \Hy@SaveLastskip
10359 \Hy@VerboseAnchor{#1}%
10360 \begingroup
10361 \hyper@chars
10362 \special{!aname #1}%
10363 \special{!direct <a name=%
10364 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10365 \endgroup
10366 \Hy@activeanchortrue
10367 }
10368 \def\hyper@anchorend{%
10369 \special{!direct </a>}%
10370 \Hy@activeanchorfalse
10371 \Hy@RestoreLastskip
10372 }
10373 \Hy@WrapperDef\hyper@anchor#1{%
10374 \Hy@SaveLastskip
10375 \Hy@VerboseAnchor{#1}%
10376 \begingroup
10377 \let\protect=\string
10378 \hyper@chars
10379 \leavevmode
10380 \special{!aname #1}%
10381 \special{!direct <a name=%
10382 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10383 \endgroup
10384 \Hy@activeanchortrue

```

```

10385 \bgroup\anchor@spot\egroup
10386 \special{!direct </a>}%
10387 \Hy@activeanchorfalse
10388 \Hy@RestoreLastskip
10389 }
10390 \def\@Form[#1]{%
10391 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10392 }
10393 \let\@endForm\ltx@empty
10394 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10395 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10396 }
10397 \def\@TextField[#1]#2{% parameters, label
10398 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10399 }
10400 \def\@CheckBox[#1]#2{% parameters, label
10401 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10402 }
10403 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10404 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10405 }
10406 \def\@PushButton[#1]#2{% parameters, label
10407 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10408 }
10409 \def\@Reset[#1]#2{%
10410 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10411 }
10412 \def\@Submit[#1]#2{%
10413 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10414 }
10415 </vtexhtml>
10416 <*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.

```

10417 \ifx\mediaheight\@undefined
10418 \else
10419 \ifx\mediaheight\relax
10420 \else
10421 \ifHy@setpagesize
10422 \providecommand*\VTeXInitMediaSize{%
10423 \ltx@ifundefined{stockwidth}{%
10424 \ifdim\paperheight>0pt %
10425 \setlength\mediaheight\paperheight
10426 \fi
10427 \ifdim\paperheight>0pt %
10428 \setlength\mediawidth\paperwidth
10429 \fi
10430 }{%
10431 \ifdim\stockheight>0pt %
10432 \setlength\mediaheight\stockheight
10433 \fi
10434 \ifdim\stockwidth>0pt %

```

```

10435         \setlength\mediawidth\stockwidth
10436         \fi
10437     }%
10438 }%
10439 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10440 \fi
10441 \Hy@DisableOption{setpagesize}%
10442 \fi
10443 \fi

Older versions of VTeX require xyz in lower case.
10444 \providecommand*\@pdfview{xyz}
10445 \providecommand*\@pdfborder{0 0 1}
10446 \providecommand*\@pdfborderstyle{}
10447 \let\CurrentBorderColor\@linkbordercolor
10448 \Hy@WrapperDef\hyper@anchor#1{%
10449 \Hy@SaveLastskip
10450 \Hy@VerboseAnchor{#1}%
10451 \begingroup
10452 \let\protect=\string
10453 \hyper@chars
10454 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10455 \endgroup
10456 \Hy@activeanchortrue
10457 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10458 \Hy@activeanchorfalse
10459 \Hy@RestoreLastskip
10460 }
10461 \Hy@WrapperDef\hyper@anchorstart#1{%
10462 \Hy@SaveLastskip
10463 \Hy@VerboseAnchor{#1}%
10464 \begingroup
10465 \hyper@chars
10466 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10467 \endgroup
10468 \Hy@activeanchortrue
10469 }
10470 \def\hyper@anchorend{%
10471 \Hy@activeanchorfalse
10472 \Hy@RestoreLastskip
10473 }
10474 \def\@urltype{url}
10475 \def\Hy@undefinedname{UNDEFINED}
10476 \def\hyper@linkstart#1#2{%
10477 \Hy@VerboseLinkStart{#1}{#2}%
10478 \Hy@pstringdef\Hy@pstringURI{#2}%
10479 \expandafter\Hy@colorlink\csname @#1color\endcsname
10480 \ltx@ifundefined{#1bordercolor}{%
10481 \let\CurrentBorderColor\relax
10482 }{%
10483 \edef\CurrentBorderColor{%
10484 \csname @#1bordercolor\endcsname
10485 }%
10486 }%
10487 \def\Hy@tempa{#1}%

```

```

10488 \ifx\Hy@tempa \@urltype
10489 \special{!%
10490   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10491   \ifHy@href@ismap
10492     /IsMap true%
10493   \fi
10494   \Hy@href@nextactionraw
10495   >,%
10496   a=<%
10497   \ifHy@pdfa /F 4\fi
10498   \Hy@setpdfborder
10499   \ifx\CurrentBorderColor\relax
10500   \else
10501     /C [\CurrentBorderColor]%
10502   \fi
10503   >%
10504   }%
10505 \else
10506   \protected@edef\Hy@testname{#2}%
10507   \ifx\Hy@testname\@empty
10508     \Hy@Warning{%
10509       Empty destination name,\MessageBreak
10510       using ``\Hy@undefinedname'%
10511     }%
10512   \let\Hy@testname\Hy@undefinedname
10513   \fi
10514   \special{!%
10515     aref \expandafter\HyperDestNameFilter
10516     \expandafter{\Hy@testname};%
10517     a=<%
10518     \ifHy@pdfa /F 4\fi
10519     \Hy@setpdfborder
10520     \ifx\CurrentBorderColor\relax
10521     \else
10522       /C [\CurrentBorderColor]%
10523     \fi
10524     >%
10525     }%
10526   \fi
10527 }
10528 \def\hyper@linkend{%
10529   \special{!endaref}%
10530   \Hy@endcolorlink
10531 }
10532 \def\hyper@linkfile#1#2#3{%
10533   \leavevmode
10534   \def\Hy@pstringF{#2}%
10535   \Hy@CleanupFile\Hy@pstringF
10536   \special{!%
10537     aref <%
10538     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10539     f=\Hy@pstringF>#3;%
10540     a=<%
10541     \ifHy@pdfa /F 4\fi

```



```

10542 \Hy@setpdfborder
10543 \ifx\@filebordercolor\relax
10544 \else
10545 /C [\@filebordercolor]%
10546 \fi
10547 >%
10548 }%
10549 \Hy@colorlink\@filecolor
10550 #1\Hy@xspace@end
10551 \Hy@endcolorlink
10552 \special{!endaref}%
10553 }
10554 \def\hyper@linkurl#1#2{%
10555 \begingroup
10556 \Hy@pstringdef\Hy@pstringURI{#2}%
10557 \hyper@chars
10558 \leavevmode
10559 \special{!%
10560 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10561 \ifHy@href@ismap
10562 /IsMap true%
10563 \fi
10564 \Hy@href@nextactionraw
10565 >,%
10566 a=<%
10567 \ifHy@pdfa /F 4\fi
10568 \Hy@setpdfborder
10569 \ifx\@urlbordercolor\relax
10570 \else
10571 /C [\@urlbordercolor]%
10572 \fi
10573 >%
10574 }%
10575 \Hy@colorlink\@urlcolor
10576 #1\Hy@xspace@end
10577 \Hy@endcolorlink
10578 \special{!endaref}%
10579 \endgroup
10580 }
10581 \def\hyper@link#1#2#3{%
10582 \Hy@VerboseLinkStart{#1}{#2}%
10583 \ltx@ifundefined{@#1bordercolor}{%
10584 \let\CurrentBorderColor\relax
10585 }{%
10586 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10587 }%
10588 \leavevmode
10589 \protected@edef\Hy@testname{#2}%
10590 \ifx\Hy@testname\@empty
10591 \Hy@Warning{%
10592 Empty destination name,\MessageBreak
10593 using ``\Hy@undefinedname'%
10594 }%
10595 \let\Hy@testname\Hy@undefinedname

```

```

10596 \fi
10597 \special{!%
10598   aref \expandafter\HyperDestNameFilter
10599     \expandafter{\Hy@testname};%
10600   a=<%
10601     \ifHy@pdfa /F 4\fi
10602     \Hy@setpdfborder
10603     \ifx\CurrentBorderColor\relax
10604     \else
10605     /C [\CurrentBorderColor]%
10606     \fi
10607   >%
10608 }%
10609 \expandafter
10610 \Hy@colorlink\csmame @#1color\endcsname
10611   #3\Hy@xspace@end
10612 \Hy@endcolorlink
10613 \special{!endaref}%
10614 }
10615 \def\hyper@image#1#2{%
10616 \hyper@linkurl{#2}{#1}%
10617 }
10618 \def\@hyper@launch run:#1\#2#3{%
10619 \Hy@pstringdef\Hy@pstringF{#1}%
10620 \Hy@pstringdef\Hy@pstringP{#3}%
10621 \leavevmode
10622 \special{!aref %
10623   <u=%
10624     /Type/Action%
10625     /S/Launch%
10626     /F(\Hy@pstringF)%
10627     \Hy@SetNewWindow
10628     \ifx\#3\%
10629     \else
10630     /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10631     \fi
10632     \Hy@href@nextactionraw
10633   >:%
10634   a=<%
10635     \ifHy@pdfa /F 4\fi
10636     \Hy@setpdfborder
10637     \ifx\@runbordercolor\relax
10638     \else
10639     /C[\@runbordercolor]%
10640     \fi
10641   >%
10642 }%
10643 \Hy@colorlink\@runcolor
10644   #2\Hy@xspace@end
10645 \Hy@endcolorlink
10646 \special{!endaref}%
10647 }
10648 \def\Acrobatmenu#1#2{%
10649 \EdefEscapeName\Hy@temp@menu{#1}%

```

```

10650 \Hy@Acrobatmenu{#1}{#2}{%
10651 \special{!%
10652   aref <u=/S /Named /N /\Hy@temp@menu>;%
10653   a=<%
10654     \ifHy@pdfa /F 4\fi
10655     \Hy@setpdfborder
10656     \ifx\@menubordercolor\relax
10657     \else
10658       /C[\@menubordercolor]%
10659     \fi
10660   >%
10661 }%
10662 \Hy@colorlink\@menucolor
10663 #2\Hy@xspace@end
10664 \Hy@endcolorlink
10665 \special{!endaref}%
10666 }%
10667 }

```

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*.

```

10668 \ifnum\Hy@VTeXversion<702 %
10669 \else
10670 \def\hyper@pagetransition{%
10671 \ifx\@pdfpagetransition\relax
10672 \else
10673 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

10674 \else
10675 \hvtex@parse@trans\@pdfpagetransition
10676 \fi
10677 \fi
10678 }%

```

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:

```

10679 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10680 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10681 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10682 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10683 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10684 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10685 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10686 \def\hvtex@par@dimension{/Dm}%
10687 \def\hvtex@par@direction{/Di}%
10688 \def\hvtex@par@duration{/D}%
10689 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10690 \def\hvtex@gettoken{%
10691   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10692 }%

```

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

```

10693 \def\hvtex@gettoken@#1 #2\@nil{%
10694   \edef\hvtex@token{#1}%
10695   \edef\hvtex@buffer{#2}%
10696 }%
10697 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10698 \let\hvtex@trans@code\@empty
10699 \let\hvtex@param@dimension\@empty
10700 \let\hvtex@param@direction\@empty
10701 \let\hvtex@param@duration\@empty
10702 \let\hvtex@param@motion\@empty
10703 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10704 \hvtex@gettoken
10705 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10706 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10707   \else
10708     \hvtex@gettoken
10709   \fi
10710 \fi
10711 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

10712 \hvtex@trans@params
10713 }%

```

Reentrant macro to parse optional parameters.

```

10714 \def\hvtex@trans@params{%
10715   \ifx\hvtex@buffer\@empty
10716   \else

```

```

10717 \hvtex@gettoken
10718 \let\hvtex@trans@par\hvtex@token
10719 \ifx\hvtex@buffer\@empty
10720 \else
10721 \hvtex@gettoken
10722 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. \TeX special takes it in milliseconds.

```

10723 \let\hvtex@param@duration\hvtex@token
10724 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

10725 \expandafter\edef\expandafter\hvtex@param@motion
10726 \expandafter{\expandafter\@gobble\hvtex@token}%
10727 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

10728 \expandafter\edef\expandafter\hvtex@param@dimension
10729 \expandafter{\expandafter\@gobble\hvtex@token}%
10730 \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).

```

10731 \let\hvtex@param@direction\hvtex@token
10732 \fi\fi\fi\fi
10733 \fi
10734 \fi
10735 \ifx\hvtex@buffer\@empty
10736 \let\next\hvtex@produce@trans
10737 \else
10738 \let\next\hvtex@trans@params
10739 \fi
10740 \next
10741 }%

```

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

```

10742 \def\hvtex@produce@trans{%
10743 \let\vtex@trans@special\@empty
10744 \if S\hvtex@trans@code
10745 \edef\vtex@trans@special{\hvtex@trans@code
10746 \hvtex@param@dimension\hvtex@param@motion}%
10747 \else\if B\hvtex@trans@code
10748 \edef\vtex@trans@special{%
10749 \hvtex@trans@code\hvtex@param@dimension
10750 }%
10751 \else\if X\hvtex@trans@code
10752 \edef\vtex@trans@special{%
10753 \hvtex@trans@code\hvtex@param@motion
10754 }%
10755 \else\if W\hvtex@trans@code
10756 \edef\vtex@trans@special{%
10757 \hvtex@trans@code\hvtex@param@direction
10758 }%
10759 \else\if D\hvtex@trans@code
10760 \let\vtex@trans@special\hvtex@trans@code

```

```

10761 \else\if R\hvtex@trans@code
10762 \let\vtex@trans@special\hvtex@trans@code
10763 \else\if G\hvtex@trans@code
10764 \edef\vtex@trans@special{%
10765 \hvtex@trans@code\hvtex@param@direction
10766 }%
10767 \fi\fi\fi\fi\fi\fi
10768 \ifx\vtex@trans@special\@empty
10769 \else
10770 \ifx\hvtex@param@duration\@empty
10771 \else
10772 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10773 \multiply\dimen@\@m
10774 \edef\vtex@trans@special{%
10775 \vtex@trans@special,\strip@pt\dimen@
10776 }%
10777 \fi

```

And all the mess is just for this.

```

10778 \special{!trans \vtex@trans@special}%
10779 \fi
10780 }%

10781 \def\hyper@pageduration{%
10782 \ifx\@pdfpageduration\relax
10783 \else
10784 \ifx\@pdfpageduration\@empty
10785 \special{!duration-}%
10786 \else
10787 \special{!duration \@pdfpageduration}%
10788 \fi
10789 \fi
10790 }%
10791 \g@addto@macro\Hy@EveryPageBoxHook{%
10792 \hyper@pagetransition
10793 \hyper@pageduration
10794 }%
10795 \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

```

10796 \ifx\@pdfproducer\relax
10797 \def\@pdfproducer{VTeX}%
10798 \ifnum\Hy@VTeXversion>\z@
10799 \count@\VTeXversion

```

```

10800 \divide\count@ 100 %
10801 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10802 \multiply\count@ -100 %
10803 \advance\count@\VTeXversion
10804 \edef\@pdfproducer{%
10805 \@pdfproducer
10806 .\ifnum\count@<10 0\fi\the\count@
10807 \ifx\VTeXOS\@undefined\else
10808 \ifnum\VTeXOS>0 %
10809 \ifnum\VTeXOS<6 %
10810 \space(
10811 \ifcase\VTeXOS
10812 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10813 \fi
10814 )%
10815 \fi
10816 \fi
10817 \fi
10818 ,\space
10819 \ifnum\OpMode=\@one PDF\else PS\fi
10820 \space backend%
10821 \ifx\gexmode\@undefined\else
10822 \ifnum\gexmode>\z@\space with GeX\fi
10823 \fi
10824 }%
10825 \fi
10826 \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).

```

10827 \def\PDF@SetupDoc{%
10828 \ifx\@pdfpagescrop\@empty
10829 \else
10830 \special{!pdfinfo b=<\@pdfpagescrop>}%
10831 \fi
10832 \ifx\@pdfstartpage\@empty
10833 \else
10834 \ifx\@pdfstartview\@empty
10835 \else
10836 \special{!onopen Page\@pdfstartpage}%
10837 \fi

```

```

10838 \fi
10839 \special{!pdfinfo p=</\@pdfpagemode>}%
10840 \ifx\@baseurl\@empty
10841 \else
10842 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10843 \fi
10844 \special{!pdfinfo v=<<<%
10845 \ifHy@pdftoolbar\else /HideToolbar true\fi
10846 \ifHy@pdfmenubar\else /HideMenubar true\fi
10847 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10848 \ifHy@pdfwindow /FitWindow true\fi
10849 \ifHy@pdfcenterwindow /CenterWindow true\fi
10850 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10851 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10852 \Hy@UseNameKey{Direction}\@pdfdirection
10853 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10854 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10855 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10856 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10857 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10858 \Hy@UseNameKey{Duplex}\@pdfduplex
10859 \ifx\@pdfpicktraybypdfsize\@empty
10860 \else
10861 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10862 \fi
10863 \ifx\@pdfprintpagerange\@empty
10864 \else
10865 /PrintPageRange[\@pdfprintpagerange]%
10866 \fi
10867 \ifx\@pdfnumcopies\@empty
10868 \else
10869 /NumCopies \@pdfnumcopies
10870 \fi
10871 >>>}%
10872 \ifx\@pdfpagelayout\@empty
10873 \else
10874 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10875 \fi
10876 }%
10877 \HyInfo@AddonUnsupportedtrue
10878 \define@key{Hyp}{pdfcreationdate}{%
10879 \Hy@Warning{%
10880 VTeX does not support pdfcreationdate.\MessageBreak
10881 Therefore its setting is ignored%
10882 }%
10883 }
10884 \define@key{Hyp}{pdfmoddate}{%
10885 \Hy@Warning{%
10886 VTeX does not support pdfmoddate.\MessageBreak
10887 Therefore its setting is ignored%
10888 }%
10889 }
10890 \def\PDF@FinishDoc{%
10891 \Hy@UseMaketitleInfos

```



```

10892 \HyInfo@TrappedUnsupported
10893 \special{!pdfinfo a=<\@pdfauthor>}%
10894 \special{!pdfinfo t=<\@pdftitle>}%
10895 \special{!pdfinfo s=<\@pdfsubject>}%
10896 \special{!pdfinfo c=<\@pdfcreator>}%
10897 \ifx\@pdfproducer\relax
10898 \else
10899 \special{!pdfinfo r=<\@pdfproducer>}%
10900 \fi
10901 \special{!pdfinfo k=<\@pdfkeywords>}%
10902 \Hy@DisableOption{pdfauthor}%
10903 \Hy@DisableOption{pdftitle}%
10904 \Hy@DisableOption{pdfsubject}%
10905 \Hy@DisableOption{pdfcreator}%
10906 \Hy@DisableOption{addtopdfcreator}%
10907 \Hy@DisableOption{pdfcreationdate}%
10908 \Hy@DisableOption{pdfcreationdate}%
10909 \Hy@DisableOption{pdfmoddate}%
10910 \Hy@DisableOption{pdfproducer}%
10911 \Hy@DisableOption{pdfkeywords}%
10912 \Hy@DisableOption{pdftrapped}%
10913 \Hy@DisableOption{pdfinfo}%
10914 }
10915 </vtx>

```

43.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

10916 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10917 <packageEnd>\providecommand*{\Hy@DistillerDestFix}{-}
10918 <*pdfmark | dviwindo>
10919 \def\Hy@DistillerDestFix{%
10920 \begingroup
10921 \let\x\literalps@out

```

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

```

10922 \ifnum \@ifundefined{OpMode}{0}{%
10923 \ifundefined{gexmode}{0}{%
10924 \ifnum\gexmode>0 \OpMode\else 0\fi
10925 }}>1 %
10926 \def\x##1{%
10927 \immediate\special{!##1}%
10928 }%
10929 \fi

```

```

10930 \x{%
10931 /product where{%
10932   pop %
10933   product(Distiller)search{%
10934     pop pop pop %
10935     version(.)search{%
10936       exch pop exch pop%
10937       (3011)eq{%
10938         gsave %
10939         newpath 0 0 moveto closepath clip%
10940         /Courier findfont 10 scalefont setfont %
10941         72 72 moveto(.)show %
10942         grestore%
10943       }if%
10944     }{pop}ifelse%
10945   }{pop}ifelse%
10946 }if%
10947 }%
10948 \endgroup
10949 }
10950 </pdfmark | dviwindo>

```

43.8 Direct pdfmark support

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

```

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

```

and the correct definitions of the following PostScript procedures:

```

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

```

```

10951 <*pdfmark>
10952 \Hy@breaklinks@unsupported
10953 \def\HyPat@ObjRef{%
10954   \{[~{}]+\}%
10955 }
10956 \Hy@WrapperDef\hyper@anchor#1{%
10957   \Hy@SaveLastskip
10958   \Hy@VerboseAnchor{#1}%
10959   \begingroup
10960     \pdfmark[\anchor@spot]{%
10961       pdfmark=/DEST,%
10962       linktype=anchor,%
10963       View=/\@pdfview \@pdfviewparams,%
10964       DestAnchor={#1}%
10965     }%
10966   \endgroup
10967   \Hy@RestoreLastskip

```

```

10968 }
10969 \ltx@ifundefined{hyper@anchorstart}{\endinput}
10970 \Hy@WrapperDef\hyper@anchorstart#1{%
10971   \Hy@SaveLastskip
10972   \Hy@VerboseAnchor{#1}%
10973   \literalps@out{H.S}%
10974   \Hy@AllowHyphens
10975   \xdef\hyper@currentanchor{#1}%
10976   \Hy@activeanchortrue
10977 }
10978 \def\hyper@anchorend{%
10979   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10980   \pdfmark{%
10981     pdfmark=/DEST,%
10982     linktype=anchor,%
10983     View=/\@pdfview \@pdfviewparams,%
10984     DestAnchor=\hyper@currentanchor,%
10985   }%
10986   \Hy@activeanchorfalse
10987   \Hy@RestoreLastskip
10988 }
10989 \def\hyper@linkstart#1#2{%
10990   \Hy@VerboseLinkStart{#1}{#2}%
10991   \ifHy@breaklinks
10992   \else
10993     \leavevmode
10994     \ifmmode
10995       \def\Hy@LinkMath{$}%
10996     \else
10997       \let\Hy@LinkMath\ltx@empty
10998     \fi
10999     \Hy@SaveSpaceFactor
11000     \hbox\bgroup
11001     \Hy@RestoreSpaceFactor
11002     \Hy@LinkMath
11003   \fi
11004   \expandafter\Hy@colorlink\csname @#1color\endcsname
11005   \literalps@out{H.S}%
11006   \Hy@AllowHyphens
11007   \xdef\hyper@currentanchor{#2}%
11008   \gdef\hyper@currentlinktype{#1}%
11009 }
11010 \def\hyper@linkend{%
11011   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11012   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11013     \let\Hy@tempcolor\relax
11014   }{%
11015     \edef\Hy@tempcolor{%
11016       \csname @\hyper@currentlinktype bordercolor\endcsname
11017     }%
11018   }%
11019   \pdfmark{%
11020     pdfmark=/ANN,%
11021     linktype=link,%

```

```

11022 Subtype=/Link,%
11023 PDFAFlags=4,%
11024 Dest=\hyper@currentanchor,%
11025 AcroHighlight=\@pdfhighlight,%
11026 Border=\@pdfborder,%
11027 BorderStyle=\@pdfborderstyle,%
11028 Color=\Hy@tempcolor,%
11029 Raw=H.B%
11030 }%
11031 \Hy@endcolorlink
11032 \ifHy@breaklinks
11033 \else
11034 \Hy@LinkMath
11035 \Hy@SaveSpaceFactor
11036 \egroup
11037 \Hy@RestoreSpaceFactor
11038 \fi
11039 }

```

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.

```

11040 \begingroup
11041 \catcode`P=12 %
11042 \catcode`T=12 %
11043 \lowercase{\endgroup
11044 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11045 }
11046 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11047 \def\hyper@pagetransition{%
11048 \ifx\@pdfpagetransition\relax
11049 \else
11050 \ifx\@pdfpagetransition\@empty
11051 % 1. Does an old entry have to be deleted?
11052 % 2. If 1=yes, how to delete?
11053 \else
11054 \pdfmark{%
11055 pdfmark=/PUT,%
11056 Raw={%
11057 \string{ThisPage\string}%
11058 <</Trans << /S /\@pdfpagetransition\space >> >>%
11059 }%
11060 }%
11061 \fi
11062 \fi
11063 }

```

`\hyper@pageduration`

```

11064 \def\hyper@pageduration{%
11065 \ifx\@pdfpageduration\relax
11066 \else
11067 \ifx\@pdfpageduration\@empty

```

```

11068      % 1. Does an old entry have to be deleted?
11069      % 2. If 1=yes, how to delete?
11070      \else
11071      \pdfmark{%
11072      pdfmark=/PUT,%
11073      Raw={%
11074      \string{ThisPage\string}%
11075      <</Dur \@pdfpageduration>>%
11076      }%
11077      }%
11078      \fi
11079      \fi
11080      }

11081      \g@addto@macro\Hy@EveryPageBoxHook{%
11082      \hyper@pagetransition
11083      \hyper@pageduration
11084      }

11085      \def\hyper@image#1#2{%
11086      \hyper@linkurl{#2}{#1}%
11087      }
11088      \def\Hy@undefinedname{UNDEFINED}
11089      \def\hyper@link#1#2#3{%
11090      \Hy@VerboseLinkStart{#1}{#2}%
11091      \ltx@ifundefined{@#1bordercolor}{%
11092      \let\Hy@tempcolor\relax
11093      }{%
11094      \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11095      }%
11096      \begingroup
11097      \protected@edef\Hy@testname{#2}%
11098      \ifx\Hy@testname\@empty
11099      \Hy@Warning{%
11100      Empty destination name,\MessageBreak
11101      using ``\Hy@undefinedname'%
11102      }%
11103      \let\Hy@testname\Hy@undefinedname
11104      \fi
11105      \pdfmark[{#3}]{%
11106      Color=\Hy@tempcolor,%
11107      linktype={#1},%
11108      AcroHighlight=\@pdfhighlight,%
11109      Border=\@pdfborder,%
11110      BorderStyle=\@pdfborderstyle,%
11111      pdfmark=/ANN,%
11112      Subtype=/Link,%
11113      PDFAMark=4,%
11114      Dest=\Hy@testname
11115      }%
11116      \endgroup
11117      }
11118      \newtoks\pdf@docset
11119      \def\PDF@FinishDoc{%
11120      \Hy@UseMaketitleInfos

```

```

11121 \HyInfo@GenerateAddons
11122 \let\Hy@temp\@empty
11123 \ifx\@pdfcreationdate\@empty
11124 \else
11125   \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11126 \fi
11127 \ifx\@pdfmoddate\@empty
11128 \else
11129   \expandafter\def\expandafter\Hy@temp\expandafter{%
11130     \Hy@temp
11131     ModDate=\@pdfmoddate,%
11132   }%
11133 \fi
11134 \ifx\@pdfproducer\relax
11135 \else
11136   \expandafter\def\expandafter\Hy@temp\expandafter{%
11137     \Hy@temp
11138     Producer=\@pdfproducer,%
11139   }%
11140 \fi
11141 \expandafter
11142 \pdfmark\expandafter{%
11143   \Hy@temp
11144   pdfmark=/DOCINFO,%
11145   Title=\@pdftitle,%
11146   Subject=\@pdfsubject,%
11147   Creator=\@pdfcreator,%
11148   Author=\@pdfauthor,%
11149   Keywords=\@pdfkeywords,%
11150   Trapped=\@pdftrapped
11151 }%
11152 \ifx\HyInfo@Addons\@empty
11153 \else
11154   \pdfmark{%
11155     pdfmark=/DOCINFO,%
11156     Raw={\HyInfo@Addons}%
11157   }%
11158 \fi
11159 \Hy@DisableOption{pdfauthor}%
11160 \Hy@DisableOption{pdftitle}%
11161 \Hy@DisableOption{pdfsubject}%
11162 \Hy@DisableOption{pdfcreator}%
11163 \Hy@DisableOption{addtopdfcreator}%
11164 \Hy@DisableOption{pdfcreationdate}%
11165 \Hy@DisableOption{pdfcreationdate}%
11166 \Hy@DisableOption{pdfmoddate}%
11167 \Hy@DisableOption{pdfproducer}%
11168 \Hy@DisableOption{pdfkeywords}%
11169 \Hy@DisableOption{pdftrapped}%
11170 \Hy@DisableOption{pdfinfo}%
11171 }
11172 \def\PDF@SetupDoc{%
11173   \def\Hy@temp{}%
11174   \ifx\@pdfstartpage\@empty

```

```

11175 \else
11176 \ifx\@pdfstartview\@empty
11177 \else
11178 \edef\Hy@temp{%
11179 ,Page=\@pdfstartpage
11180 ,View=\@pdfstartview
11181 }%
11182 \fi
11183 \fi
11184 \edef\Hy@temp{%
11185 \noexpand\pdfmark{%
11186 pdfmark=/DOCVIEW,%
11187 PageMode=/\@pdfpagemode
11188 \Hy@temp
11189 }%
11190 }%
11191 \Hy@temp
11192 \ifx\@pdfpagescrop\@empty
11193 \else
11194 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11195 \fi
11196 \edef\Hy@temp{%
11197 \ifHy@pdftoolbar\else /HideToolbar true\fi
11198 \ifHy@pdfmenubar\else /HideMenubar true\fi
11199 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11200 \ifHy@pdfwindow /FitWindow true\fi
11201 \ifHy@pdfcenterwindow /CenterWindow true\fi
11202 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11203 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11204 \Hy@UseNameKey{Direction}\@pdfdirection
11205 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11206 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11207 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11208 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11209 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11210 \Hy@UseNameKey{Duplex}\@pdfduplex
11211 \ifx\@pdfpicktraybypdfsize\@empty
11212 \else
11213 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11214 \fi
11215 \ifx\@pdfprintpagerange\@empty
11216 \else
11217 /PrintPageRange[\@pdfprintpagerange]%
11218 \fi
11219 \ifx\@pdfnumcopies\@empty
11220 \else
11221 /NumCopies \@pdfnumcopies
11222 \fi
11223 }%
11224 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11225 \pdfmark{%
11226 pdfmark=/PUT,%
11227 Raw={%
11228 \string{Catalog\string}<<%

```

```

11229 \ifx\Hy@temp\@empty
11230 \else
11231 /ViewerPreferences<<\Hy@temp>>%
11232 \fi
11233 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11234 \ifx\@pdflang\relax
11235 \else
11236 /Lang(\@pdflang)%
11237 \fi
11238 \ifx\@baseurl\@empty
11239 \else
11240 /URI<</Base(\Hy@pstringB)>>%
11241 \fi
11242 >>%
11243 }%
11244 }%
11245 }
11246 </pdfmark>
11247 <*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.

```

11248 \newif\ifHy@pdfmarkerror
11249 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
11250 \def\pdfmark@[#1]#2{%
11251 \Hy@pdfmarkerrorfalse
11252 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11253 \@processme
11254 \let\pdf@type\relax
11255 \let\pdf@objdef\ltx@empty
11256 \kvsetkeys{PDF}{#2}%
11257 \ifHy@pdfmarkerror
11258 \else
11259 \ifx\pdf@type\relax
11260 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11261 \ifx\#1\%
11262 \else
11263 \pdf@rect{#1}%
11264 \fi
11265 \else
11266 \ifx\#1\%
11267 \literalps@out{%
11268 [%
11269 \ifx\pdf@objdef\ltx@empty
11270 \else
11271 /_objdef\string{\pdf@objdef\string}%
11272 \fi
11273 \the\pdf@toks\space\pdf@type\space pdfmark%
11274 }%
11275 \else

```



```

11276 \ltx@ifundefined{@\pdf@linktype color}{%
11277   \Hy@colorlink\@linkcolor
11278 }{%
11279   \expandafter\Hy@colorlink
11280     \csname @\pdf@linktype color\endcsname
11281 }%
11282 \pdf@rect{#1}%
11283 \literalps@out{%
11284   [%
11285     \ifx\pdf@objdef\ltx@empty
11286     \else
11287       /_objdef\string{\pdf@objdef\string}%
11288     \fi
11289     \the\pdf@toks\space\pdf@type\space pdfmark%
11290   ]%
11291   \Hy@endcolorlink
11292 \fi
11293 \fi
11294 \fi
11295 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case `breaklinks` is enabled, I have added two hooks, the first one for package `setouterhbox`, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

11296 \newsavebox{\pdf@box}
11297 \providecommand*{\Hy@setouterhbox}{\sbox}
11298 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11299 \def\Hy@DEST{/DEST}
11300 \def\pdf@rect#1{%
11301   \begingroup
11302     \chardef\x=1 %
11303     \def\Hy@temp{#1}%
11304     \ifx\Hy@temp\ltx@empty
11305       \chardef\x=0 %
11306     \else
11307       \def\y{\anchor@spot}%
11308       \ifx\Hy@temp\y
11309         \def\y{\relax}%
11310       \ifx\anchor@spot\y
11311         \chardef\x=0 %
11312       \fi
11313     \fi
11314   \fi
11315   \expandafter\endgroup

```

```

11316 \ifcase\x
11317 \literalps@out{H.S}%
11318 \literalps@out{H.R}%
11319 \else
11320 \leavevmode
11321 \Hy@SaveSpaceFactor
11322 \ifmmode
11323 \def\Hy@LinkMath{$}%
11324 \else
11325 \let\Hy@LinkMath\ltx@empty
11326 \fi
11327 \ifHy@breaklinks
11328 \Hy@setouterhbox\pdf@box{%
11329 \Hy@RestoreSpaceFactor
11330 \Hy@LinkMath
11331 \Hy@AllowHyphens#1\Hy@xspace@end
11332 \Hy@LinkMath
11333 \Hy@SaveSpaceFactor
11334 }%
11335 \else
11336 \sbox\pdf@box{%
11337 \Hy@RestoreSpaceFactor
11338 \Hy@LinkMath
11339 #1\Hy@xspace@end
11340 \Hy@LinkMath
11341 \Hy@SaveSpaceFactor
11342 }%
11343 \fi
11344 \dimen@ \ht\pdf@box
11345 \ifdim\dp\pdf@box=\z@
11346 \literalps@out{H.S}%
11347 \else
11348 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11349 \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...).

```

11350 \ifHy@breaklinks
11351 \ifhmode
11352 \Hy@breaklinksunhbox\pdf@box
11353 \else
11354 \box\pdf@box
11355 \fi
11356 \else
11357 \expandafter\box\pdf@box
11358 \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

11359 \ifdim\dimen@=\z@
11360 \literalps@out{H.R}%

```

```

11361 \else
11362 \raise\dimen@\hbox{\literalps@out{H.R.}}%
11363 \fi
11364 \Hy@RestoreSpaceFactor
11365 \fi
11366 \ifx\pdf@type\Hy@DEST
11367 \else
11368 \pdf@addtoksx{H.B}%
11369 \fi
11370 }

```

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.

```

11371 \newtoks\pdf@toks
11372 \newtoks\pdf@defaulttoks
11373 \pdf@defaulttoks={}%
11374 \def\pdf@addtoks#1#2{%
11375 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11376 \@processme
11377 }
11378 \def\pdf@addtoksx#1{%
11379 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11380 \@processme
11381 }
11382 \def\PDFdefaults#1{%
11383 \pdf@defaulttoks={#1}%
11384 }

```

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

```

11385 % what is the type of pdfmark?
11386 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11387 % what is the link type?
11388 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11389 \def\pdf@linktype{link}
11390 % named object?
11391 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11392 \let\pdf@objdef\ltx@empty
11393 % parameter is a stream of PDF
11394 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11395 % parameter is a name
11396 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11397 % parameter is a array
11398 \define@key{PDF}{Border}{%
11399 \edef\Hy@temp{#1}%
11400 \ifx\Hy@temp\@empty
11401 \else
11402 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11403 \fi
11404 }
11405 \let\Hy@BorderArrayPatch\@empty
11406 % parameter is a dictionary
11407 \define@key{PDF}{BorderStyle}{%
11408 \edef\Hy@temp{#1}%
11409 \ifx\Hy@temp\@empty

```

```

11410 \else
11411 \pdf@addtoks{<<#1>>}{BS}%
11412 \fi
11413 }
11414 % parameter is a array
11415 \define@key{PDF}{Color}{%
11416 \ifx\relax#1\relax
11417 \else
11418 \pdf@addtoks{[#1]}{Color}% hash-ok
11419 \fi
11420 }
11421 % parameter is a string
11422 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11423 % parameter is a integer
11424 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11425 % parameter is a array
11426 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11427 % parameter is a string
11428 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11429 % parameter is a string or file
11430 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11431 % parameter is a destination
11432 \define@key{PDF}{Dest}{%
11433 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11434 \ifx\Hy@pstringDest\@empty
11435 \Hy@pdfmarkerrortrue
11436 \Hy@Warning{Destination with empty name ignored}%
11437 \else
11438 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11439 \fi
11440 }
11441 \define@key{PDF}{DestAnchor}{%
11442 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11443 \ifx\Hy@pstringDest\@empty
11444 \Hy@pdfmarkerrortrue
11445 \Hy@Warning{Destination with empty name ignored}%
11446 \else
11447 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11448 \fi
11449 }
11450 % parameter is a string
11451 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11452 % parameter is a string
11453 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11454 % parameter is a int
11455 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11456 \define@key{PDF}{PDFAFlags}{%
11457 \ifHy@pdfa
11458 \pdf@addtoks{#1}{F}%
11459 \fi
11460 }
11461 % parameter is a name
11462 \define@key{PDF}{AcroHighlight}{%
11463 \begingroup

```

```

11464 \edef\x{#1}%
11465 \expandafter\endgroup\ifx\x\@empty
11466 \else
11467 \pdf@addtoks{#1}{H}%
11468 \fi
11469 }
11470 % parameter is a string
11471 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11472 % parameter is a string
11473 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11474 % parameter is a string
11475 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11476 % parameter is a string
11477 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11478 % parameter is a Boolean
11479 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11480 % parameter is a integer or name
11481 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11482 % parameter is a name
11483 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11484 % parameter is a string
11485 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11486 % parameter is a array
11487 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11488 % parameter is a integer
11489 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11490 % parameter is a name
11491 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11492 % parameter is a string
11493 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11494 % parameter is a string
11495 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11496 % parameter is a string
11497 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11498 % parameter is an array
11499 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11500 % parameter is a string
11501 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11502 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11503 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11504 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11505 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11506 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11507 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11508 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11509 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11510 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11511 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11512 \define@key{PDF}{Trapped}{%
11513 \edef\Hy@temp{#1}%
11514 \ifx\Hy@temp\@empty
11515 \else
11516 \pdf@addtoks{/#1}{Trapped}%

```

```

11517 \fi
11518 }
11519
11520 </pdfmarkbase>
11521 <*pdfmark>
11522 \def\Acrobatmenu#1#2{%
11523 \EdefEscapeName\Hy@temp@menu{#1}%
11524 \Hy@Acrobatmenu{#1}{#2}{%
11525 \pdfmark[{#2}]{%
11526 linktype=menu,%
11527 pdfmark=/ANN,%
11528 AcroHighlight=\@pdfhighlight,%
11529 Border=\@pdfborder,%
11530 BorderStyle=\@pdfborderstyle,%
11531 Color=\@menubordercolor,%
11532 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11533 Subtype=/Link,%
11534 PDFAFlags=4%
11535 }%
11536 }%
11537 }

```

And now for some useful examples:

```

11538 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11539 \def\PDFNextPage@[#1]#2{%
11540 \pdfmark[{#2}]{%
11541 #1,%
11542 Border=\@pdfborder,%
11543 BorderStyle=\@pdfborderstyle,%
11544 Color=.2 .1 .5,%
11545 pdfmark=/ANN,%
11546 Subtype=/Link,%
11547 PDFAFlags=4,%
11548 Page=/Next%
11549 }%
11550 }
11551 \def\PDFPreviousPage{%
11552 \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11553 }
11554 \def\PDFPreviousPage@[#1]#2{%
11555 \pdfmark[{#2}]{%
11556 #1,%
11557 Border=\@pdfborder,%
11558 BorderStyle=\@pdfborderstyle,%
11559 Color=.4 .4 .1,%
11560 pdfmark=/ANN,%
11561 Subtype=/Link,%
11562 PDFAFlags=4,%
11563 Page=/Prev%
11564 }%
11565 }
11566 \def\PDFOpen#1{%
11567 \pdfmark{#1,pdfmark=/DOCVIEW}%
11568 }

```

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

```

11569 \def\hyper@linkurl#1#2{%
11570   \begingroup
11571     \Hy@pstringdef\Hy@pstringURI{#2}%
11572     \hyper@chars
11573     \leavevmode
11574     \pdfmark[{#1}]{%
11575       pdfmark=/ANN,%
11576       linktype=url,%
11577       AcroHighlight=\@pdfhighlight,%
11578       Border=\@pdfborder,%
11579       BorderStyle=\@pdfborderstyle,%
11580       Color=\@urlbordercolor,%
11581       Action={<<%
11582         /Subtype/URI%
11583         /URI(\Hy@pstringURI)%
11584         \ifHy@href@ismap
11585           /IsMap true%
11586         \fi
11587       >>},%
11588       Subtype=/Link,%
11589       PDFAFlags=4%
11590     }%
11591   \endgroup
11592 }
11593 \def\hyper@linkfile#1#2#3{%
11594   \begingroup
11595     \def\Hy@pstringF{#2}%
11596     \Hy@CleanupFile\Hy@pstringF
11597     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11598     \Hy@pstringdef\Hy@pstringD{#3}%
11599     \Hy@MakeRemoteAction
11600     \leavevmode
11601     \pdfmark[{#1}]{%
11602       pdfmark=/ANN,%
11603       Subtype=/Link,%
11604       PDFAFlags=4,%
11605       AcroHighlight=\@pdfhighlight,%
11606       Border=\@pdfborder,%
11607       BorderStyle=\@pdfborderstyle,%
11608       linktype=file,%
11609       Color=\@filebordercolor,%
11610       Action={%
11611         <<%
11612         /S/GoToR%
11613         \Hy@SetNewWindow
11614         /F(\Hy@pstringF)%
11615         /D%
11616         \ifx\#3\%
11617           [\Hy@href@page\@pdfremotestartview]%
11618         \else
11619           (\Hy@pstringD)cvn%
11620         \fi
11621         \Hy@href@nextactionraw

```

```

11622     >>%
11623   }%
11624 }%
11625 \endgroup
11626 }
11627 \def\@hyper@launch run:#1\|#2#3{%
11628   \begingroup
11629   \Hy@pstringdef\Hy@pstringF{#1}%
11630   \Hy@pstringdef\Hy@pstringP{#3}%
11631   \leavevmode
11632   \pdfmark[{#2}]{%
11633     pdfmark=/ANN,%
11634     Subtype=/Link,%
11635     PDFAFlags=4,%
11636     AcroHighlight=\@pdfhighlight,%
11637     Border=\@pdfborder,%
11638     BorderStyle=\@pdfborderstyle,%
11639     linktype=run,%
11640     Color=\@runbordercolor,%
11641     Action={%
11642       <<%
11643         /S/Launch%
11644         \Hy@SetNewWindow
11645         /F(\Hy@pstringF)%
11646         \ifx\|#3\|%
11647           \else
11648             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11649           \fi
11650           \Hy@href@nextactionraw
11651       >>%
11652     }%
11653   }%
11654 \endgroup
11655 }
11656 \pdfmark>

```

Unfortunately, some parts of the `pdfmark` PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

43.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its y axis starts at the top of the page. Other drivers can and will be different!

The work is done in `SDict`, because we add in some header definitions in a moment.

```

11657 < *dvips>
11658 \providecommand*\XR@ext}{pdf}
11659 \let\Hy@raisedlink\ltx@empty
11660 \def\literals@out#1{\special{ps:SDict begin #1 end}}}%
11661 \def\headerps@out#1{\special{! #1}}}%
11662 \input{pdfmark.def}%
11663 \ifx\@pdfproducer\relax
11664   \def\@pdfproducer{dvips + Distiller}%
11665 \fi

```



```

11666 \providecommand*\@pdfborder{0 0 1}
11667 \providecommand*\@pdfborderstyle{}
11668 \providecommand*\@pdfview{XYZ}
11669 \providecommand*\@pdfviewparams{ H.V}
11670 \def\Hy@BorderArrayPatch{BorderArrayPatch}

11671 \g@addto@macro\Hy@FirstPageHook{%
11672   \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.

```

11673   /DvipsToPDF{72.27 mul Resolution div} def%
11674   /PDFToDvips{72.27 div Resolution mul} def%
11675   /BPToDvips{72 div Resolution mul}def

```

The values inside the /Border array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

Note GhostScript changed its behaviour here and later versions do not need this scaling, so test the PostScript interpreter is GhostScript and if so check its version.

If using gs and release > 9.27 no-op, otherwise patch.

```

11676   product (Ghostscript) search {pop pop pop revision 927 gt}%
11677   {pop false} ifelse%
11678   {%
11679     /BorderArrayPatch{} def%
11680   }%
11681   {%
11682     /BorderArrayPatch{%
11683       [exch{%
11684         dup dup type/integertype eq exch type/realtype eq or%
11685         {BPToDvips}if%
11686       }forall]%
11687     }def%
11688   } ifelse

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

11689   /HyperBorder {1 PDFToDvips} def%
11690   /H.V {pdf@hoff pdf@voff null} def%
11691   /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

```

11692 /H.S {%
11693   currentpoint %
11694   HyperBorder add /pdf@lly exch def %
11695   dup DvipsToPDF 72 add /pdf@hoff exch def %
11696   HyperBorder sub /pdf@llx exch def%
11697 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ 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

```

11698 /H.L {%
11699   2 sub dup%
11700   /HyperBasePt exch def %
11701   PDFToDvips /HyperBaseDvips exch def %
11702   currentpoint %
11703   HyperBaseDvips sub /pdf@ury exch def%
11704   /pdf@urx exch def%
11705 } def%
11706 /H.A {%
11707   H.L %
11708 % | /pdf@voff| = the distance from the top of the page to a point
11709 % | \baselineskip| above the current point in PDF coordinates
11710   currentpoint exch pop %
11711   vsize 72 sub exch DvipsToPDF %
11712   HyperBasePt sub % baseline skip
11713   sub /pdf@voff exch def%
11714 } def%
11715 /H.R {%
11716   currentpoint %
11717   HyperBorder sub /pdf@ury exch def %
11718   HyperBorder add /pdf@urx exch def %
11719 % | /pdf@voff| = the distance from the top of the page to the current point, in
11720 % PDF coordinates
11721   currentpoint exch pop vsize 72 sub %
11722   exch DvipsToPDF sub /pdf@voff exch def%
11723 } def%
11724 }%
11725 }
11726 \AtBeginShipoutFirst{%
11727   \ifHy@setpagesize
11728     \begin{group}
11729       \@ifundefined{stockwidth}{%
11730         \ifdim\paperwidth>\z@
11731           \ifdim\paperheight>\z@
11732             \special{papersize=\the\paperwidth,\the\paperheight}%
11733           \fi
11734         \fi
11735       }{%
11736         \ifdim\stockwidth>\z@
11737         \ifdim\stockheight>\z@

```

```

11738     \special{papersize=\the\stockwidth,\the\stockheight}%
11739     \fi
11740     \fi
11741   }%
11742 \endgroup
11743 \fi
11744 \Hy@DisableOption{setpagesize}%
11745 }

11746 \def\setpdfinkmargin#1{%
11747   \begingroup
11748     \setlength{\dimen@}{#1}%
11749     \literalps@out{%
11750       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11751     }%
11752   \endgroup
11753 }

11754 </dvips>

```

43.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

11755 <*vtexpdfmark>
11756 \providecommand*\XR@ext>{pdf}
11757 \let\Hy@raisedlink\ltx@empty
11758 \def\literalps@out#1{\special{pS:#1}}%
11759 \def\headerps@out#1{\immediate\special{pS:#1}}%
11760 \input{pdfmark.def}%
11761 \ifx\@pdfproducer\relax
11762   \ifnum\OpMode=\@ne
11763     \def\@pdfproducer{VTeX}%
11764   \else
11765     \def\@pdfproducer{VTeX + Distiller}%
11766   \fi
11767 \fi
11768 \providecommand*\@pdfborder{0 0 1}
11769 \providecommand*\@pdfborderstyle{}
11770 \providecommand*\@pdfview{XYZ}
11771 \providecommand*\@pdfviewparams{ H.V}

11772 \g@addto@macro\Hy@FirstPageHook{%
11773   \headerps@out{%
11774     /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.

```

11775   /HyperBorder {1} def%
11776   /H.V {pdf@hoff pdf@voff null} def%
11777   /H.B {\Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

11778 /H.S {%
11779   currentpoint %
11780   HyperBorder sub%
11781   /pdf@lly exch def %
11782   dup 72 add /pdf@hoff exch def %
11783   HyperBorder sub%
11784   /pdf@llx exch def%
11785 } def%

```

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

```

11786 /H.L {%
11787   2 sub%
11788   /HyperBasePt exch def %
11789   currentpoint %
11790   HyperBasePt add HyperBorder add%
11791   /pdf@ury exch def %
11792   HyperBorder add%
11793   /pdf@urx exch def%
11794 } def%
11795 /H.A {%
11796   H.L %
11797   currentpoint exch pop %
11798   vsize 72 sub exch %
11799   HyperBasePt add add%
11800   /pdf@voff exch def%
11801 } def%

```

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

```

11802 /H.R {%
11803   currentpoint %
11804   HyperBorder add%
11805   /pdf@ury exch def %
11806   HyperBorder add%
11807   /pdf@urx exch def %
11808   currentpoint exch pop vsize 72 sub add%
11809   /pdf@voff exch def%
11810 } def%
11811 }%
11812 }

```

```

11813 \def\setpdfinkmargin#1{%
11814   \begingroup
11815     \setlength{\dimen@}{#1}%
11816     \literalps@out{%
11817       /HyperBorder{\strip@pt\dimen@}def%
11818     }%
11819   \endgroup
11820 }
11821 </vtexpdfmark>

```

43.11 Textures

```
11822 <*textures>
11823 \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.

```
11824 \begingroup
11825 \obeylines %
11826 \gdef\Hy@ps@CR{\noexpand
11827 }%
11828 \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`.

```
11829 \def\literalps@out#1{%
11830 \special{postscript 0 0 transform}%
11831 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11832 }%
11833 %
```

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.

```
11834 \def\headerps@out#1{%
11835 \special{%
11836 prepostscript TeXdict begin\Hy@ps@CR
11837 #1\Hy@ps@CR
11838 end%
11839 }%
11840 }%
11841 %
```

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.

```
11842 \g@addto@macro\Hy@FirstPageHook{%
11843 \headerps@out{%
11844 /betterpdfmark {%
```

```

11845    systemdict begin %
11846      dup /BP eq%
11847      {cleartomark gsave nulldevice []}%
11848      {dup /EP eq%
11849        {cleartomark cleartomark grestore}%
11850        {cleartomark}%
11851        ifelse%
11852      }ifelse %
11853    end%
11854  }def\Hy@ps@CR
11855  ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
11856 }% end of \headerps@out
11857 }% end of \AtBeginShipoutFirst
11858 %
11859 \input{pdfmark.def}%
11860 %
11861 \ifx\@pdfproducer\relax
11862   \def\@pdfproducer{Textures + Distiller}%
11863 \fi
11864 \providecommand*\@pdfborder{0 0 1}
11865 \providecommand*\@pdfborderstyle{}
11866 \providecommand*\@pdfview{XYZ}
11867 \providecommand*\@pdfviewparams{ H.V}
11868 %

```

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 .

```

11869 \Hy@AtBeginDocument{%
11870   \headerps@out{%

```

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

```

11871   /vsize {\Hy@pageheight} def%
11872   /DvipsToPDF {} def%
11873   /PDFToDvips {} def%
11874   /BPToDvips {} def%
11875   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11876   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11877   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11878   /H.S {%
11879     currentpoint %
11880     HyperBorder add /pdf@lly exch def %
11881     dup DvipsToPDF 72 add /pdf@hoff exch def %
11882     HyperBorder sub /pdf@llx exch def%
11883   } def\Hy@ps@CR
11884   /H.L {%
11885     2 sub %
11886     PDFToDvips /HyperBase exch def %
11887     currentpoint %
11888     HyperBase sub /pdf@ury exch def%
11889     /pdf@urx exch def%

```

```

11890 } def\Hy@ps@CR
11891 /H.A {%
11892   H.L %
11893   currentpoint exch pop %
11894   vsize 72 sub exch DvipsToPDF %
11895   HyperBase sub % baseline skip
11896   sub /pdf@voff exch def%
11897 } def\Hy@ps@CR
11898 /H.R {%
11899   currentpoint %
11900   HyperBorder sub /pdf@ury exch def %
11901   HyperBorder add /pdf@urx exch def %
11902   currentpoint exch pop vsize 72 sub %
11903   exch DvipsToPDF sub /pdf@voff exch def%
11904 } def\Hy@ps@CR
11905 }%
11906 }

11907 \def\setpdfinkmargin#1{%
11908   \begingroup
11909   \setlength{\dimen@}{#1}%
11910   \literalps@out{%
11911     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11912   }%
11913   \endgroup
11914 }

11915 \Hy@AtBeginDocument{%
11916   \ifHy@colorlinks
11917     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11918   \fi
11919 }

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.

11920 \expandafter\let\expandafter\keepPDF@SetupDoc
11921   \csname PDF@SetupDoc\endcsname
11922 \def\PDF@SetupDoc{%
11923   \ifx\@baseurl\@empty
11924   \else
11925     \special{html:<base href="\@baseurl">}%
11926   \fi
11927   \keepPDF@SetupDoc
11928 }
11929 \Hy@WrapperDef\hyper@anchor#1{%
11930   \Hy@SaveLastskip
11931   \Hy@VerboseAnchor{#1}%
11932   \begingroup
11933     \let\protect=\string
11934     \special{html:<a name=%
11935       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11936   \endgroup
11937   \Hy@activeanchortrue
11938   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink

```

```

11939 \special{html:</a>}%
11940 \Hy@activeanchorfalse
11941 \Hy@RestoreLastskip
11942 }
11943 \Hy@WrapperDef\hyper@anchorstart#1{%
11944 \Hy@SaveLastskip
11945 \Hy@VerboseAnchor{#1}%
11946 \begingroup
11947 \hyper@chars
11948 \special{html:<a name=%
11949 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11950 \endgroup
11951 \Hy@activeanchortrue
11952 }
11953 \def\hyper@anchorend{%
11954 \special{html:</a>}%
11955 \Hy@activeanchorfalse
11956 \Hy@RestoreLastskip
11957 }
11958 \def\@urltype{url}
11959 \def\hyper@linkstart#1#2{%
11960 \Hy@VerboseLinkStart{#1}{#2}%
11961 \expandafter\Hy@colorlink\csname @#1color\endcsname
11962 \def\Hy@tempa{#1}%
11963 \ifx\Hy@tempa\@urltype
11964 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11965 \else
11966 \begingroup
11967 \hyper@chars
11968 \special{%
11969 html:<a href=%
11970 \hyper@quote#\Hy@HyperDestNameFilter{#2}\hyper@quote>%
11971 }%
11972 \endgroup
11973 \fi
11974 }
11975 \def\hyper@linkend{%
11976 \special{html:</a>}%
11977 \Hy@endcolorlink
11978 }
11979 \def\hyper@linkfile#1#2#3{%
11980 \hyper@linkurl{#1}{%
11981 \Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi
11982 }%
11983 }
11984 \def\hyper@linkurl#1#2{%
11985 \leavevmode
11986 \ifHy@raiselinks
11987 \Hy@SaveSpaceFactor
11988 \Hy@SaveSavedSpaceFactor
11989 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11990 \Hy@RestoreSavedSpaceFactor
11991 \@linkdim\dp\@tempboxa
11992 \lower\@linkdim\hbox{%

```



```

11993 \hyper@chars
11994 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11995 }%
11996 \Hy@colorlink\@urlcolor
11997 \Hy@RestoreSpaceFactor
11998 #1\Hy@xspace@end
11999 \Hy@SaveSpaceFactor
12000 \@linkdim\ht\@tempboxa
12001 \advance\@linkdim by -6.5\p@
12002 \raise\@linkdim\hbox{\special{html:</a>}}%
12003 \Hy@endcolorlink
12004 \Hy@RestoreSpaceFactor
12005 \else
12006 \begingroup
12007 \hyper@chars
12008 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12009 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12010 \special{html:</a>}%
12011 \Hy@endcolorlink
12012 \endgroup
12013 \fi
12014 }

```

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

```

12015 \def\hyper@link#1#2#3{%
12016 \Hy@VerboseLinkStart{#1}{#2}%
12017 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12018 }
12019 \def\hyper@image#1#2{%
12020 \begingroup
12021 \hyper@chars
12022 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12023 \endgroup
12024 }
12025 </textures>

```

43.12 dvipsone

```

12026 % \subsection{dvipsone driver}
12027 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12028 % |\special| commands.
12029 (*dvipsone)
12030 \providecommand*\XR@ext}{pdf}
12031 \let\Hy@raisedlink\ltx@empty
12032 \providecommand*\@pdfborder{0 0 1}
12033 \providecommand*\@pdfborderstyle{}
12034 \def\literalps@out#1{\special{ps:#1}}%
12035 \def\headerps@out#1{\special{headertext=#1}}%
12036 \input{pdfmark.def}%
12037 \HyInfo@AddonUnsupportedtrue
12038 \def\PDF@FinishDoc{%
12039 \Hy@UseMaketitleInfos
12040 \HyInfo@TrappedUnsupported
12041 \special{PDF: Keywords \@pdfkeywords}%

```

```

12042 \special{PDF: Title \@pdftitle}%
12043 \special{PDF: Creator \@pdfcreator}%
12044 \ifx\@pdfcreationdate\@empty
12045 \else
12046 \special{PDF: CreationDate \@pdfcreationdate}%
12047 \fi
12048 \ifx\@pdfmoddate\@empty
12049 \else
12050 \special{PDF: ModDate \@pdfmoddate}%
12051 \fi
12052 \special{PDF: Author \@pdfauthor}%
12053 \ifx\@pdfproducer\relax
12054 \else
12055 \special{PDF: Producer \@pdfproducer}%
12056 \fi
12057 \special{PDF: Subject \@pdfsubject}%
12058 \Hy@DisableOption{pdfauthor}%
12059 \Hy@DisableOption{pdftitle}%
12060 \Hy@DisableOption{pdfsubject}%
12061 \Hy@DisableOption{pdfcreator}%
12062 \Hy@DisableOption{addtopdfcreator}%
12063 \Hy@DisableOption{pdfcreationdate}%
12064 \Hy@DisableOption{pdfcreationdate}%
12065 \Hy@DisableOption{pdfmoddate}%
12066 \Hy@DisableOption{pdfproducer}%
12067 \Hy@DisableOption{pdfkeywords}%
12068 \Hy@DisableOption{pdftrapped}%
12069 \Hy@DisableOption{pdfinfo}%
12070 }
12071 \def\PDF@SetupDoc{%
12072 \def\Hy@temp{}%
12073 \ifx\@pdfstartpage\@empty
12074 \else
12075 \ifx\@pdfstartview\@empty
12076 \else
12077 \edef\Hy@temp{%
12078 ,Page=\@pdfstartpage
12079 ,View=\@pdfstartview
12080 }%
12081 \fi
12082 \fi
12083 \edef\Hy@temp{%
12084 \noexpand\pdfmark{%
12085 pdfmark=/DOCVIEW,%
12086 PageMode=/\@pdfpagemode
12087 \Hy@temp
12088 }%
12089 }%
12090 \Hy@temp
12091 \ifx\@pdfpagescrop\@empty
12092 \else
12093 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12094 \fi
12095 \edef\Hy@temp{%

```

```

12096 \ifHy@pdftoolbar\else /HideToolbar true\fi
12097 \ifHy@pdfmenubar\else /HideMenubar true\fi
12098 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12099 \ifHy@pdfitwindow /FitWindow true\fi
12100 \ifHy@pdfcenterwindow /CenterWindow true\fi
12101 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12102 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12103 \Hy@UseNameKey{Direction}\@pdfdirection
12104 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12105 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12106 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12107 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12108 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12109 \Hy@UseNameKey{Duplex}\@pdfduplex
12110 \ifx\@pdfpicktraybypdfsize\@empty
12111 \else
12112 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12113 \fi
12114 \ifx\@pdfprintpagerange\@empty
12115 \else
12116 /PrintPageRange[\@pdfprintpagerange]%
12117 \fi
12118 \ifx\@pdfnumcopies\@empty
12119 \else
12120 /NumCopies \@pdfnumcopies
12121 \fi
12122 }%
12123 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12124 \pdfmark{%
12125 pdfmark=/PUT,%
12126 Raw={%
12127 \string{Catalog\string}<<%
12128 \ifx\Hy@temp\@empty
12129 \else
12130 /ViewerPreferences<<\Hy@temp>>%
12131 \fi
12132 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12133 \ifx\@pdflang\relax
12134 \else
12135 /Lang(\@pdflang)%
12136 \fi
12137 \ifx\@baseurl\@empty
12138 \else
12139 /URI<</Base(\Hy@pstringB)>>%
12140 \fi
12141 >>%
12142 }%
12143 }%
12144 }
12145 \providecommand*\@pdfview{XYZ}
12146 \providecommand*\@pdfviewparams{ %
12147 gsave revscl currentpoint grestore %
12148 72 add exch pop null exch null%
12149 }

```

```
12150 \def\Hy@BorderArrayPatch{BorderArrayPatch}
```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The `Rect` pair are called at the LL and UR corners of a box known to \TeX .

```
12151 \g@addto@macro\Hy@FirstPageHook{%
```

```
12152 \headerps@out{%
```

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

```
12153 /DvipsToPDF { 65781 div } def%
```

```
12154 /PDFToDvips { 65781 mul } def%
```

```
12155 /BPToDvips{65781 mul}def%
```

```
12156 /HyperBorder { 1 PDFToDvips } def%
```

```
12157 /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.

```
12158 /BorderArrayPatch{%
```

```
12159 [exch{%
```

```
12160 dup dup type/integertype eq exch type/realttype eq or%
```

```
12161 {BPToDvips}if%
```

```
12162 }forall]%
```

```
12163 }def%
```

```
12164 /H.S {%
```

```
12165 currentpoint %
```

```
12166 HyperBorder add /pdf@lly exch def %
```

```
12167 dup DvipsToPDF 72 add /pdf@hoff exch def %
```

```
12168 HyperBorder sub /pdf@llx exch def%
```

```
12169 } def%
```

```
12170 /H.L {%
```

```
12171 2 sub %
```

```
12172 PDFToDvips /HyperBase exch def %
```

```
12173 currentpoint %
```

```
12174 HyperBase sub /pdf@ury exch def%
```

```
12175 /pdf@urx exch def%
```

```
12176 } def%
```

```
12177 /H.A {%
```

```
12178 H.L %
```

```
12179 currentpoint exch pop %
```

```
12180 HyperBase sub % baseline skip
```

```
12181 DvipsToPDF /pdf@voff exch def%
```

```
12182 } def%
```

```
12183 /H.R {%
```

```
12184 currentpoint %
```

```
12185 HyperBorder sub /pdf@ury exch def %
```

```
12186 HyperBorder add /pdf@urx exch def %
```

```
12187 currentpoint exch pop DvipsToPDF /pdf@voff exch def%
```

```
12188 } def%
```

```
12189 }%
```

```
12190 }
```

```
12191 \def\setpdfinkmargin#1{%
```

```
12192 \begingroup
```

```

12193 \setlength{\dimen@}{#1}%
12194 \literalps@out{%
12195 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12196 }%
12197 \endgroup
12198 }
12199 </dvipsone>

```

43.13 TeX4ht

```

12200 (*tex4ht)
12201 \providecommand*\XR@ext>{html}
12202 \let\Hy@raisedlink\ltx@empty
12203 \@ifpackageloaded{tex4ht}{%
12204 \Hy@InfoNoLine{tex4ht is already loaded}%
12205 }{%
12206 \RequirePackage[hTeX4ht]{tex4ht}%
12207 }
12208 \hyperlinkfileprefix{}
12209 \let\PDF@FinishDoc\ltx@empty
12210 \def\PDF@SetupDoc{%
12211 \ifx\@baseurl\@empty
12212 \else
12213 \special{t4ht=<base href="\@baseurl">}%
12214 \fi
12215 }
12216 \Hy@WrapperDef\hyper@anchor#1{%
12217 \Hy@SaveLastskip
12218 \Hy@VerboseAnchor{#1}%
12219 \begingroup
12220 \let\protect=\string
12221 \special{t4ht=<a name=%
12222 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12223 \endgroup
12224 \Hy@activeanchortrue
12225 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12226 \special{t4ht=</a>}%
12227 \Hy@activeanchorfalse
12228 \Hy@RestoreLastskip
12229 }
12230 \Hy@WrapperDef\hyper@anchorstart#1{%
12231 \Hy@SaveLastskip
12232 \Hy@VerboseAnchor{#1}%
12233 \begingroup
12234 \hyper@chars\special{t4ht=<a name=%
12235 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12236 \endgroup
12237 \Hy@activeanchortrue
12238 }
12239 \def\hyper@anchorend{%
12240 \special{t4ht=</a>}%
12241 \Hy@activeanchorfalse
12242 \Hy@RestoreLastskip
12243 }
12244 \def\@urlltype{url}

```

```

12245 \def\hyper@linkstart#1#2{%
12246   \Hy@VerboseLinkStart{#1}{#2}%
12247   \expandafter\Hy@colorlink\csname @#1color\endcsname
12248   \def\Hy@tempa{#1}%
12249   \ifx\Hy@tempa\@urlltype
12250     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12251   \else
12252     \begingroup
12253     \hyper@chars
12254     \special{t4ht=<a href=%
12255       \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
12256     \endgroup
12257   \fi
12258 }
12259 \def\hyper@linkend{%
12260   \special{t4ht=</a>}%
12261   \Hy@endcolorlink
12262 }
12263 \def\hyper@linkfile#1#2#3{%
12264   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12265 }
12266 \def\hyper@linkurl#1#2{%
12267   \leavevmode
12268   \ifHy@raiselinks
12269     \Hy@SaveSpaceFactor
12270     \Hy@SaveSavedSpaceFactor
12271     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12272     \Hy@RestoreSavedSpaceFactor
12273     \@linkdim\dp\@tempboxa
12274     \lower\@linkdim\hbox{%
12275       \begingroup
12276       \hyper@chars
12277       \special{%
12278         t4ht=<a href=\hyper@quote#2\hyper@quote>%
12279       }%
12280       \endgroup
12281     }%
12282     \Hy@colorlink\@urlcolor
12283     \Hy@RestoreSpaceFactor
12284     #1\Hy@xspace@end
12285     \Hy@SaveSpaceFactor
12286     \Hy@endcolorlink
12287     \@linkdim\ht\@tempboxa
12288     \advance\@linkdim by -6.5\p@
12289     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12290     \Hy@RestoreSpaceFactor
12291   \else
12292     \begingroup
12293     \hyper@chars
12294     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12295     \Hy@colorlink\@urlcolor
12296     #1\Hy@xspace@end
12297     \Hy@endcolorlink
12298     \special{t4ht=</a>}%

```

```

12299 \endgroup
12300 \fi
12301 }

Poor implementation of \hyper@link without considering #1.
12302 \def\hyper@link#1#2#3{%
12303   \Hy@VerboseLinkStart{#1}{#2}%
12304   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
12305 }
12306 \def\hyper@image#1#2{%
12307   \begingroup
12308     \hyper@chars
12309     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12310   \endgroup
12311 }
12312 \let\autoref\ref
12313 \ifx \rEFLiNK \UnDef
12314   \def\rEFLiNK #1#2{#2}%
12315 \fi
12316 \let\backref\ltx@gobble

Fix for tex4ht.
12317 \AtBeginDocument{%
12318   \expandafter
12319   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12320   \expandafter\def\csname Make:Label\endcsname#1#2{%
12321     \ifhmode
12322       \Hy@SaveSpaceFactor
12323     \else
12324       \global\Hy@SavedSpaceFactor=1000 %
12325     \fi
12326     \Hy@OrgMakeLabel{#1}{%
12327       \Hy@RestoreSpaceFactor
12328       #2\Hy@xspace@end%
12329     \Hy@SaveSpaceFactor
12330   }%
12331   \Hy@RestoreSpaceFactor
12332 }%
12333 }
12334 </tex4ht>
12335 < *tex4htcfg>
12336 \IfFileExists{\jobname.cfg}{\endinput}{ }
12337 \Preamble{html}
12338   \begin{document}%
12339 \EndPreamble
12340 \def\TeX{TeX}
12341 \def\OMEGA{\Omega}
12342 \def\LaTeX{LaTeX}
12343 \def\LaTeXe{\LaTeX2e}
12344 \def\eTeX{e-TeX}
12345 \def\MF{Metafont}
12346 \def\MP{MetaPost}
12347 </tex4htcfg>

```

44 Driver-specific form support

44.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```
12348 (*pdfmark)
12349 \long\def\@Form[#1]{%
12350 \g@addto@macro\Hy@FirstPageHook{%
12351 \headerps@out{%
12352 [%
12353 /_objdef{pdfDocEncoding}%
12354 /type/dict%
12355 /OBJ pdfmark%
12356 [%
12357 {pdfDocEncoding}%
12358 <<%
12359 /Type/Encoding%
12360 /Differences[%
12361 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12362 /tilde %
12363 39/quotesingle %
12364 96/grave %
12365 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12366 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12367 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12368 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12369 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12370 160/Euro %
12371 164/currency %
12372 166/brokenbar %
12373 168/dieresis/copyright/ordfeminine %
12374 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12375 /twosuperior/threesuperior/acute/mu %
12376 183/periodcentered/cedilla/onesuperior/ordmasculine %
12377 188/onequarter/onehalf/threequarters %
12378 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12379 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12380 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12381 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12382 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12383 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12384 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12385 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12386 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12387 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12388 ]%
12389 >>%
12390 /PUT pdfmark%
12391 [%
12392 /_objdef{ZaDb}%
12393 /type/dict%
12394 /OBJ pdfmark%
12395 [%
12396 {ZaDb}%
```



```

12397 <<%
12398   /Type/Font%
12399   /Subtype/Type1%
12400   /Name/ZaDb%
12401   /BaseFont/ZapfDingbats%
12402 >>%
12403 /PUT pdfmark%
12404 [%
12405   /_objdef{Helv}%
12406   /type/dict%
12407 /OBJ pdfmark%
12408 [%
12409   {Helv}%
12410 <<%
12411   /Type/Font%
12412   /Subtype/Type1%
12413   /Name/Helv%
12414   /BaseFont/Helvetica%
12415   /Encoding{pdfDocEncoding}%
12416 >>%
12417 /PUT pdfmark%
12418 [%
12419   /_objdef{aform}%
12420   /type/dict%
12421 /OBJ pdfmark%
12422 [%
12423   /_objdef{afields}%
12424   /type/array%
12425 /OBJ pdfmark%
12426 [%
12427   /_objdef{corder}%
12428   /type/array%
12429 /OBJ pdfmark%
12430 {%
12431   [%
12432     /BBox[0 0 100 100]%
12433     /_objdef{Check}%
12434     /BP pdfmark %
12435     1 0 0 setrgbcolor%
12436     /ZapfDingbats 80 selectfont %
12437     20 20 moveto%
12438     (4)show%
12439     [/EP pdfmark%
12440     [%
12441       /BBox[0 0 100 100]%
12442       /_objdef{Cross}%
12443       /BP pdfmark %
12444       1 0 0 setrgbcolor%
12445       /ZapfDingbats 80 selectfont %
12446       20 20 moveto%
12447       (8)show%
12448       [/EP pdfmark%
12449       [%
12450       /BBox[0 0 250 100]%

```

```

12451  /_objdef{Submit}%
12452  /BP pdfmark %
12453  0.6 setgray %
12454  0 0 250 100 rectfill %
12455  1 setgray %
12456  2 2 moveto %
12457  2 98 lineto %
12458  248 98 lineto %
12459  246 96 lineto %
12460  4 96 lineto %
12461  4 4 lineto %
12462  fill %
12463  0.34 setgray %
12464  248 98 moveto %
12465  248 2 lineto %
12466  2 2 lineto %
12467  4 4 lineto %
12468  246 4 lineto %
12469  246 96 lineto %
12470  fill%
12471  /Helvetica 76 selectfont %
12472  0 setgray %
12473  8 22.5 moveto%
12474  (Submit)show%
12475  [/EP pdfmark%
12476  [%
12477  /BBox[0 0 250 100]%
12478  /_objdef{SubmitP}%
12479  /BP pdfmark %
12480  0.6 setgray %
12481  0 0 250 100 rectfill %
12482  0.34 setgray %
12483  2 2 moveto %
12484  2 98 lineto %
12485  248 98 lineto %
12486  246 96 lineto %
12487  4 96 lineto %
12488  4 4 lineto %
12489  fill %
12490  1 setgray %
12491  248 98 moveto %
12492  248 2 lineto %
12493  2 2 lineto %
12494  4 4 lineto %
12495  246 4 lineto %
12496  246 96 lineto %
12497  fill%
12498  /Helvetica 76 selectfont %
12499  0 setgray %
12500  10 20.5 moveto%
12501  (Submit)show%
12502  [/EP pdfmark%
12503  } ?pdfmark%
12504  [%

```

```

12505 {aform}%
12506 <<%
12507 /Fields{afields}%
12508 /DR.<<%
12509 /Font.<<%
12510 /ZaDb{ZaDb}%
12511 /Helv{Helv}%
12512 >>%
12513 >>%
12514 /DA(/Helv 10 Tf 0 g)%
12515 /CO{corder}%
12516 \ifHy@pdfa
12517 \else
12518 \ifHyField@NeedAppearances
12519 /NeedAppearances true%
12520 \fi
12521 \fi
12522 >>%
12523 /PUT pdfmark%
12524 [%
12525 {Catalog}%
12526 <<%
12527 /AcroForm{aform}%
12528 >>%
12529 /PUT pdfmark%
12530 }}%
12531 \kvsetkeys{Form}{#1}%
12532 }
12533 \let\@endForm\ltx@empty
12534 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12535 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12536 }

12537 \newcount\HyField@AnnotCount
12538 \HyField@AnnotCount=\z@
12539 \def\HyField@AdvanceAnnotCount{%
12540 \global\advance\HyField@AnnotCount\@ne
12541 }
12542 \def\HyField@TheAnnotCount{%
12543 \the\HyField@AnnotCount
12544 }

12545 \edef\Fld@pageobjref{/P\string{ThisPage\string}}

12546 \def\HyField@AddToFields#1{%
12547 \pdfmark{%
12548 pdfmark=/APPEND,%
12549 Raw={%
12550 \string{afields\string}%
12551 \string{#1\HyField@TheAnnotCount\string}%
12552 }%
12553 }%
12554 \ifx\Fld@calculate@code\ltx@empty
12555 \else
12556 \pdfmark{%
12557 pdfmark=/APPEND,%

```

```

12558     Raw={%
12559         \string{corder\string}%
12560         \string{#1\HyField@TheAnnotCount\string}%
12561     }%
12562 }%
12563 \fi
12564 }

12565 \def\@TextField[#1]#2{% parameters, label
12566     \def\Fld@name{#2}%
12567     \let\Fld@default\ltx@empty
12568     \let\Fld@value\@empty
12569     \def\Fld@width{\DefaultWidthofText}%
12570     \def\Fld@height{%
12571         \ifFld@multiline
12572             \DefaultHeightofTextMultiline
12573         \else
12574             \DefaultHeightofText
12575         \fi
12576     }%
12577     \begingroup
12578         \expandafter\HyField@SetKeys\expandafter{%
12579             \DefaultOptionsofText,#1%
12580         }%
12581         \HyField@FlagsText
12582         \ifFld@hidden\def\Fld@width{1sp}\fi
12583         \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12584         \HyField@AdvanceAnnotCount
12585         \LayoutTextField{#2}{%
12586             \leavevmode
12587             \Hy@escapeform\PDFForm@Text
12588             \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
12589                 pdfmark=/ANN,%
12590                 objdef=text\HyField@TheAnnotCount,%
12591                 Raw={\PDFForm@Text}%
12592             }%
12593         }%
12594         \HyField@AddToFields{text}%
12595     \endgroup
12596 }

12597 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12598     \def\Fld@name{#2}%
12599     \let\Fld@default\relax
12600     \let\Fld@value\relax
12601     \def\Fld@width{\DefaultWidthofChoiceMenu}%
12602     \def\Fld@height{\DefaultHeightofChoiceMenu}%
12603     \begingroup
12604         \Fld@menulength=0 %
12605         \@tempdima\z@
12606         \@for\@curropt:=#3\do{%
12607             \expandafter\Fld@checkequals\@curropt==\%
12608             \Hy@StepCount\Fld@menulength
12609             \settowidth{\@tempdimb}{\@currDisplay}%
12610             \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12611         }%

```

```

12612 \advance\@tempdima by 15\p@
12613 \begingroup
12614 \HyField@SetKeys{#1}%
12615 \edef\x{\endgroup
12616 \noexpand\expandafter
12617 \noexpand\HyField@SetKeys
12618 \noexpand\expandafter{%
12619 \expandafter\noexpand\cname DefaultOptionsof%
12620 \ifFld@radio
12621 Radio%
12622 \else
12623 \ifFld@combo
12624 \ifFld@popdown
12625 PopdownBox%
12626 \else
12627 ComboBox%
12628 \fi
12629 \else
12630 ListBox%
12631 \fi
12632 \fi
12633 \endcname
12634 }%
12635 }\x
12636 \HyField@SetKeys{#1}%
12637 \ifFld@hidden\def\Fld@width{1sp}\fi
12638 \ifx\Fld@value\relax
12639 \let\Fld@value\Fld@default
12640 \fi
12641 \LayoutChoiceField{#2}{%
12642 \ifFld@radio
12643 \HyField@FlagsRadioButton
12644 \@@Radio{#3}%
12645 \else
12646 \begingroup
12647 \HyField@FlagsChoice
12648 \ifdim\Fld@width<\@tempdima
12649 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12650 \edef\Fld@width{\the\@tempdima}%
12651 \fi
12652 \ifFld@combo
12653 \else
12654 \@tempdima=\the\Fld@menulength\Fld@charsize
12655 \advance\@tempdima by \Fld@borderwidth bp %
12656 \advance\@tempdima by \Fld@borderwidth bp %
12657 \edef\Fld@height{\the\@tempdima}%
12658 \fi
12659 \@@Listbox{#3}%
12660 \endgroup
12661 \fi
12662 }%
12663 \endgroup
12664 }
12665 \def\@@Radio#1{%

```

```

12666 \Fld@listcount=0 %
12667 \EdefEscapeName\Fld@default{\Fld@default}%
12668 \@for\@curropt:=#1\do{%
12669   \expandafter\Fld@checkequals\@curropt==\%
12670   \EdefEscapeName\@currValue{\@currValue}%
12671   \Hy@StepCount\Fld@listcount
12672   \@currDisplay\space
12673   \Hy@escapeform\PDFForm@Radio
12674   \ifnum\Fld@listcount=1 %
12675     \HyField@AdvanceAnnotCount
12676     \fi
12677     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12678       pdfmark=/ANN,%
12679       objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12680       Raw={%
12681         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12682       }%
12683     } % deliberate space between radio buttons
12684     \ifnum\Fld@listcount=1 %
12685       \HyField@AddToFields{radio}%
12686     \fi
12687   }%
12688 }
12689 \newcount\Fld@listcount
12690 \def\@@Listbox#1{%
12691   \HyField@PDFChoices{#1}%
12692   \Hy@escapeform\PDFForm@List
12693   \HyField@AdvanceAnnotCount
12694   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12695     pdfmark=/ANN,%
12696     objdef=list\HyField@TheAnnotCount,%
12697     Raw={\PDFForm@List}%
12698   }%
12699   \HyField@AddToFields{list}%
12700 }
12701 \def\@PushButton[#1]#2{% parameters, label
12702   \def\Fld@name{#2}%
12703   \begingroup
12704     \expandafter\HyField@SetKeys\expandafter{%
12705       \DefaultOptionsofPushButton,#1%
12706     }%
12707     \ifHy@pdfa
12708       \Hy@Error{%
12709         PDF/A: Push button with JavaScript is prohibited%
12710       }\@ehc
12711       \LayoutPushButtonField{%
12712         \leavevmode
12713         \MakeButtonField{#2}%
12714       }%
12715     \else
12716       \HyField@FlagsPushButton
12717       \ifFld@hidden\def\Fld@width{1sp}\fi
12718       \HyField@AdvanceAnnotCount
12719       \LayoutPushButtonField{%

```

```

12720     \leavevmode
12721     \Hy@escapeform\PDFForm@Push
12722     \pdfmark[\MakeButtonField{#2}]{%
12723         pdfmark=/ANN,%
12724         objdef=push\HyField@TheAnnotCount,%
12725         Raw={\PDFForm@Push}%
12726     }%
12727 }%
12728 \HyField@AddToFields{push}%
12729 \fi
12730 \endgroup
12731 }
12732 \def\@Submit[#1]#2{%
12733     \def\Fld@width{\DefaultWidthofSubmit}%
12734     \def\Fld@height{\DefaultHeightofSubmit}%
12735     \begingroup
12736     \expandafter\HyField@SetKeys\expandafter{%
12737         \DefaultOptionsofSubmit,#1%
12738     }%
12739     \HyField@FlagsPushButton
12740     \HyField@FlagsSubmit
12741     \ifFld@hidden\def\Fld@width{1sp}\fi
12742     \Hy@escapeform\PDFForm@Submit
12743     \HyField@AdvanceAnnotCount
12744     \pdfmark[\MakeButtonField{#2}]{%
12745         pdfmark=/ANN,%
12746         objdef=submit\HyField@TheAnnotCount,%
12747         Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
12748     }%
12749     \HyField@AddToFields{submit}%
12750 \endgroup
12751 }
12752 \def\@Reset[#1]#2{%
12753     \def\Fld@width{\DefaultWidthofReset}%
12754     \def\Fld@height{\DefaultHeightofReset}%
12755     \begingroup
12756     \expandafter\HyField@SetKeys\expandafter{%
12757         \DefaultOptionsofReset,#1%
12758     }%
12759     \leavevmode
12760     \ifHy@pdfa
12761         \Hy@Error{%
12762             PDF/A: Reset action is prohibited%
12763         }\@ehc
12764         \MakeButtonField{#2}%
12765     \else
12766         \HyField@FlagsPushButton
12767         \ifFld@hidden\def\Fld@width{1sp}\fi
12768         \Hy@escapeform\PDFForm@Reset
12769         \HyField@AdvanceAnnotCount
12770         \pdfmark[\MakeButtonField{#2}]{%
12771             pdfmark=/ANN,%
12772             objdef=reset\HyField@TheAnnotCount,%
12773             Raw={\PDFForm@Reset}%

```

```

12774 }%
12775 \HyField@AddToFields{reset}%
12776 \fi
12777 \endgroup
12778 }%
12779 \def\@CheckBox[#1]#2{% parameters, label
12780 \def\Fld@name{#2}%
12781 \def\Fld@default{0}%
12782 \begingroup
12783 \def\Fld@width{\DefaultWidthofCheckBox}%
12784 \def\Fld@height{\DefaultHeightofCheckBox}%
12785 \expandafter\HyField@SetKeys\expandafter{%
12786 \DefaultOptionsofCheckBox,#1%
12787 }%
12788 \HyField@FlagsCheckBox
12789 \ifFld@hidden\def\Fld@width{1sp}\fi
12790 \HyField@AdvanceAnnotCount
12791 \LayoutCheckField{#2}{%
12792 \leavevmode
12793 \Hy@escapeform\PDFForm@Check
12794 \pdfmark{\MakeCheckField{\Fld@width}{\Fld@height}}{%
12795 pdfmark=/ANN,%
12796 objdef=check\HyField@TheAnnotCount,%
12797 Raw={\PDFForm@Check}%
12798 }%
12799 }%
12800 \HyField@AddToFields{check}%
12801 \endgroup
12802 }
12803 \pdfmark>

```

44.2 HyperTeX

```

12804 \*hypertex>
12805 \def\@Form[#1]{%
12806 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12807 }
12808 \let\@endForm\ltx@empty
12809 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12810 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12811 }
12812 \def\@TextField[#1]#2{% parameters, label
12813 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12814 }
12815 \def\@CheckBox[#1]#2{% parameters, label
12816 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12817 }
12818 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12819 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12820 }
12821 \def\@PushButton[#1]#2{% parameters, label
12822 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12823 }
12824 \def\@Reset[#1]#2{%

```



```

12825 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12826 }
12827 \def\@Submit[#1]#2{%
12828 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12829 }
12830 \</hypertex>

```

44.3 TeX4ht

```

12831 \*tex4ht
12832 \def\@Form[#1]{%
12833 \kvsetkeys{Form}{#1}%
12834 \HCode{<form action="\Form@action" method="\Form@method">}%
12835 }
12836 \def\@endForm{\HCode{</form>}}
12837 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12838 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12839 }
12840 \def\@TextField[#1]#2{% parameters, label
12841 \let\Hy@reserved@a\@empty
12842 \def\Fld@name{#2}%
12843 \let\Fld@default\ltx@empty
12844 \bgroup
12845 \Field@toks={ }%
12846 \kvsetkeys{Field}{#1}%
12847 \HCode{<label for="\Fld@name">#2</label>}%
12848 \ifFld@password
12849 \@@PasswordField
12850 \else
12851 \@@TextField
12852 \fi
12853 \egroup
12854 }
12855 \def\@@PasswordField{%
12856 \HCode{%
12857 <input type="password" %
12858 id="\Fld@name" %
12859 name="\Fld@name" %
12860 \ifFld@hidden type="hidden" \fi
12861 value="\Fld@default" %
12862 \the\Field@toks
12863 >%
12864 }%
12865 }
12866 \def\@@TextField{%
12867 \ifFld@multiline
12868 \HCode{<textarea %
12869 \ifFld@readonly readonly \fi
12870 id="\Fld@name" %
12871 name="\Fld@name" %
12872 \ifFld@hidden type="hidden" \fi
12873 \the\Field@toks>%
12874 }%
12875 \Fld@default
12876 \HCode{</textarea>}%

```

```

12877 \else
12878 \HCode{<input type="textbox" %
12879 \ifFld@readonly readonly \fi
12880 id="\Fld@name" %
12881 name="\Fld@name" %
12882 \ifFld@hidden type="hidden" \fi
12883 value="\Fld@default" %
12884 \the\Field@toks>%
12885 }%
12886 \fi
12887 }
12888 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12889 \def\Fld@name{#2}%
12890 \let\Fld@default\ltx@empty
12891 \let\Hy@reserved@a\relax
12892 \begingroup
12893 \expandafter\Fld@findlength#3\\%
12894 \Field@toks={ }%
12895 \kvsetkeys{Field}{#1}%
12896 #2%
12897 \ifFld@radio
12898 \expandafter\@@Radio#3\\%
12899 \else
12900 \expandafter\@@Menu#3\\%
12901 \fi
12902 \endgroup
12903 }
12904 \def\Fld@findlength#1\\{%
12905 \Fld@menulength=0 %
12906 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12907 }
12908 \def\@@Menu#1\\{%
12909 \HCode{<select size="\the\Fld@menulength" %
12910 name="\Fld@name" %
12911 \the\Field@toks>%
12912 }%
12913 \@for\@curropt:=#1\do{%
12914 \expandafter\Fld@checkequals\@curropt==\\%
12915 \HCode{<option %
12916 \ifx\@curropt\Fld@default selected \fi
12917 value="\@currValue">\@currDisplay</option>%
12918 }%
12919 }%
12920 \HCode{</select>}%
12921 }
12922 \def\@@Radio#1\\{%
12923 \@for\@curropt:=#1\do{%
12924 \expandafter\Fld@checkequals\@curropt==\\%
12925 \HCode{<input type="radio" %
12926 \ifx\@curropt\Fld@default checked \fi
12927 name="\Fld@name" %
12928 value="\@currValue" %
12929 \the\Field@toks>%
12930 }%

```

```

12931 \currDisplay
12932 }%
12933 }
12934 \def\@PushButton[#1]#2{% parameters, label
12935 \def\Fld@name{#2}%
12936 \bgroup
12937 \Field@toks={ }%
12938 \kvsetkeys{Field}{#1}%
12939 \HCode{<input type="button" %
12940 name="\Fld@name" %
12941 value="#2" %
12942 \the\Fld@toks>%
12943 }%
12944 \HCode{</button>}%
12945 \egroup
12946 }
12947 \def\@Submit[#1]#2{%
12948 \HCode{<button type="submit">#2</button>}%
12949 }
12950 \def\@Reset[#1]#2{%
12951 \HCode{<button type="reset">#2</button>}%
12952 }
12953 \def\@CheckBox[#1]#2{% parameters, label
12954 \let\Hy@reserved@a\@empty
12955 \def\Fld@name{#2}%
12956 \def\Fld@default{0}%
12957 \bgroup
12958 \Field@toks={ }%
12959 \kvsetkeys{Field}{#1}%
12960 \HCode{<input type="checkbox" %
12961 \ifFld@checked checked \fi
12962 \ifFld@disabled disabled \fi
12963 \ifFld@readonly readonly \fi
12964 name="\Fld@name" %
12965 \ifFld@hidden type="hidden" \fi
12966 value="\Fld@default" %
12967 \the\Fld@toks>%
12968 #2%
12969 }%
12970 \egroup
12971 }
12972 </tex4ht>

```

44.4 pdfTeX

```

12973 (*pdfTeX)
12974 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12975 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12976 }
12977 \def\MakeFieldObject#1#2{\sbox0{#1}%
12978 \immediate\pdfxform0 %
12979 \expandafter\edef\csname #2Object\endcsname{%
12980 \the\pdflastxform\space 0 R%
12981 }%
12982 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%

```

```

12983 }%
12984 \let\HyField@afields\ltx@empty
12985 \let\HyField@cofields\ltx@empty
12986 \@ifundefined{pdflastlink}
12987 {%
12988   \let\HyField@AddToFields\relax
12989   \PackageInfo{hyperref}{%
12990     You need pdfTeX 1.40.0 for setting the /Fields entry.%
12991     \MessageBreak
12992     Adobe Reader/Acrobat accepts an empty /Field array,%
12993     \MessageBreak
12994     but other PDF viewers might complain%
12995   }}%
12996 {%
12997   \let\HyField@AuxAddToFields\ltx@gobble
12998   \let\HyField@AuxAddToCoFields\ltx@gobbletwo
12999   \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.

```

13000 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13001   \begingroup
13002     \Hy@safe@activetrue
13003     \let\ltx@secondoftwo\relax
13004     \ifx\HyField@cofields\ltx@empty
13005       \xdef\HyField@cofields{%
13006         \ltx@secondoftwo{#1}{ #2 0 R}%
13007       }%
13008     \else
13009       \let\ltx@secondoftwo\relax
13010       \def\HyField@AddCoField##1##2##3{%
13011         \ifx##1\ltx@empty
13012           \ltx@secondoftwo{#1}{ #2 0 R}%
13013           \expandafter\ltx@gobble
13014         \else
13015           \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13016             \ltx@secondoftwo{#1}{ #2 0 R}%
13017             \ltx@secondoftwo{##2}{##3}%
13018             \expandafter\expandafter\expandafter\ltx@gobble
13019           \else
13020             \ltx@secondoftwo{##2}{##3}%
13021           \fi
13022         \fi
13023         \HyField@AddCoField
13024       }%
13025       \xdef\HyField@cofields{%
13026         \expandafter\HyField@AddCoField
13027         \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13028       }%
13029     \fi
13030   \endgroup
13031 }%
13032 \Hy@AtBeginDocument{%
13033   \if@filesw
13034     \immediate\write\@mainaux{%

```

```

13035     \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13036 }%
13037 \immediate\write\@mainaux{%
13038     \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13039 }%
13040 \fi
13041 \let\HyField@AfterAuxOpen\@firstofone
13042 \def\HyField@AuxAddToFields#1{%
13043     \xdef\HyField@afields{%
13044         \ifx\HyField@afields\@empty
13045             \else
13046                 \HyField@afields
13047                 \space
13048             \fi
13049         #1 0 R%
13050     }%
13051 }%
13052 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13053 }%
13054 \def\HyField@AddToFields{%
13055     \expandafter\HyField@@AddToFields\expandafter{%
13056         \the\pdfastlink
13057     }%
13058     \ifx\Fld@calculate@code\ltx@empty
13059     \else
13060         \begingroup
13061         \Hy@safe@activetrue
13062         \edef\Hy@temp{%
13063             \endgroup
13064             \if@filesw
13065                 \write\@mainaux{%
13066                     \string\HyField@AuxAddToCoFields{%
13067                         \Fld@calculate@sortkey
13068                     }{%
13069                         \the\pdfastlink
13070                     }%
13071                 }%
13072             \fi
13073         }%
13074         \Hy@temp
13075     \fi
13076 }%
13077 \def\HyField@@AddToFields#1{%
13078     \HyField@AfterAuxOpen{%
13079         \if@filesw
13080             \write\@mainaux{%
13081                 \string\HyField@AuxAddToFields{#1}%
13082             }%
13083         \fi
13084     }%
13085 }%
13086 }
13087 \def\@Form[#1]{%
13088     \ifundefined{textcolor}{\let\textcolor\@gobble}{}%

```

```

13089 \kvsetkeys{Form}{#1}%
13090 \pdf@ifdraftmode{}{%
13091   \Hy@FormObjects
13092   \ifnum\pdfTeXversion>13 %
13093     \pdfrefobj\OBJ@pdfdocencoding
13094     \pdfrefobj\OBJ@ZaDb
13095     \pdfrefobj\OBJ@Helv
13096   \fi
13097   \AtVeryEndDocument{%
13098     \immediate\pdfobj{%
13099       <<%
13100       /Fields[\HyField@afields]%
13101       \ifx\HyField@cofields\ltx@empty
13102       \else
13103         /CO[\romannumeral-`\Q\HyField@cofields]%
13104       \fi
13105       /DR<<%
13106       /Font<<%
13107         /ZaDb \OBJ@ZaDb\space 0 R%
13108         /Helv \OBJ@Helv\space 0 R%
13109       >>%
13110       >>%
13111       /DA(/Helv 10 Tf 0 g)%
13112       \ifHy@pdfa
13113       \else
13114         \ifHyField@NeedAppearances
13115         /NeedAppearances true%
13116       \fi
13117       \fi
13118       >>%
13119     }%
13120     \edef\OBJ@acroform{\the\pdflastobj}%
13121     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13122   }%
13123 }%
13124 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13125   \begingroup
13126   \fontfamily{pzd}%
13127   \fontencoding{U}%
13128   \fontseries{m}%
13129   \fontshape{n}%
13130   \selectfont
13131   \char123 %
13132   \endgroup
13133 }{Ding}%
13134 \MakeFieldObject{%
13135   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13136 }{Submit}%
13137 \MakeFieldObject{%
13138   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13139 }{SubmitP}%
13140 }
13141 \let\@endForm\ltx@empty

```

```

13142 \let\HyAnn@AbsPageLabel\ltx@empty
13143 \let\Fld@pageobjref\ltx@empty
13144 \ltx@ifundefined{pdfpageref}{%
13145 }{%
13146 \ltx@ifpackageloaded{zref-abspage}{%
13147 \newcount\HyAnn@Count
13148 \HyAnn@Count=\ltx@zero
13149 \def\HyAnn@AbsPageLabel{%
13150 \global\advance\HyAnn@Count by\ltx@one
13151 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13152 \zref@refused{HyAnn@\the\HyAnn@Count}%
13153 }%
13154 \def\Fld@pageobjref{%
13155 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13156 }{%
13157 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13158 /P \pdfpageref
13159 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13160 \space 0 R%
13161 }{%
13162 }%
13163 }%
13164 }%
13165 }{%
13166 }%
13167 }

13168 \def\@TextField[#1]#2{% parameters, label
13169 \def\Fld@name{#2}%
13170 \let\Fld@default\ltx@empty
13171 \let\Fld@value\@empty
13172 \def\Fld@width{\DefaultWidthofText}%
13173 \def\Fld@height{%
13174 \ifFld@multiline
13175 \DefaultHeightofTextMultiline
13176 \else
13177 \DefaultHeightofText
13178 \fi
13179 }%
13180 \begingroup
13181 \expandafter\HyField@SetKeys\expandafter{%
13182 \DefaultOptionsofText,#1%
13183 }%
13184 \PDFForm@Name
13185 \HyField@FlagsText
13186 \ifFld@hidden\def\Fld@width{1sp}\fi
13187 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13188 \LayoutTextField{#2}{%
13189 \leavevmode
13190 \HyAnn@AbsPageLabel
13191 \Hy@escapeform\PDFForm@Text
13192 \pdfstartlink user {\PDFForm@Text}\relax
13193 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13194 \HyField@AddToFields
13195 }%

```

```

13196 \endgroup
13197 }
13198 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13199 \def\Fld@name{#2}%
13200 \let\Fld@default\relax
13201 \let\Fld@value\relax
13202 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13203 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13204 \begingroup
13205 \Fld@menulength=0 %
13206 \@tempdima\z@
13207 \@for\@curropt:=#3\do{%
13208 \expandafter\Fld@checkequals\@curropt==\\%
13209 \Hy@StepCount\Fld@menulength
13210 \settowidth{\@tempdimb}{\@currDisplay}%
13211 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13212 }%
13213 \advance\@tempdima by 15\p@
13214 \begingroup
13215 \HyField@SetKeys{#1}%
13216 \edef\x{\endgroup
13217 \noexpand\expandafter
13218 \noexpand\HyField@SetKeys
13219 \noexpand\expandafter{%
13220 \expandafter\noexpand\csname DefaultOptionsof%
13221 \ifFld@radio
13222 Radio%
13223 \else
13224 \ifFld@combo
13225 \ifFld@popdown
13226 PopdownBox%
13227 \else
13228 ComboBox%
13229 \fi
13230 \else
13231 ListBox%
13232 \fi
13233 \fi
13234 \endcsname
13235 }%
13236 }\x
13237 \HyField@SetKeys{#1}%
13238 \PDFForm@Name
13239 \ifFld@hidden\def\Fld@width{1sp}\fi
13240 \ifx\Fld@value\relax
13241 \let\Fld@value\Fld@default
13242 \fi
13243 \LayoutChoiceField{#2}{%
13244 \ifFld@radio
13245 \HyField@FlagsRadioButton
13246 \@@Radio{#3}%
13247 \else
13248 \begingroup
13249 \HyField@FlagsChoice

```



```

13250 \ifdim\Fld@width<\@tempdima
13251 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13252 \edef\Fld@width{\the\@tempdima}%
13253 \fi
13254 \ifFld@combo
13255 \else
13256 \@tempdima=\the\Fld@menulength\Fld@charsize
13257 \advance\@tempdima by \Fld@borderwidth bp %
13258 \advance\@tempdima by \Fld@borderwidth bp %
13259 \edef\Fld@height{\the\@tempdima}%
13260 \fi
13261 \@@ListBox{#3}%
13262 \endgroup
13263 \fi
13264 }%
13265 \endgroup
13266 }
13267 \def\@@Radio#1{%
13268 \Fld@listcount=0 %
13269 \EdefEscapeName\Fld@default{\Fld@default}%
13270 \@for\@curropt:=#1\do{%
13271 \expandafter\Fld@checkequals\@curropt==\%
13272 \EdefEscapeName\@currValue{\@currValue}%
13273 \Hy@StepCount\Fld@listcount
13274 \@currDisplay\space
13275 \leavevmode
13276 \HyAnn@AbsPageLabel
13277 \Hy@escapeform\PDFForm@Radio
13278 \pdfstartlink user {%
13279 \PDFForm@Radio
13280 /AP<<%
13281 /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.

```

13282 /\@currValue\space \DingObject
13283 >>%
13284 >>%
13285 }%
13286 \relax
13287 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13288 \ifnum\Fld@listcount=1 %
13289 \HyField@AddToFields
13290 \fi
13291 \space % deliberate space between radio buttons
13292 }%
13293 }
13294 \newcount\Fld@listcount
13295 \def\@@ListBox#1{%
13296 \HyField@PDFChoices{#1}%
13297 \leavevmode
13298 \HyAnn@AbsPageLabel
13299 \Hy@escapeform\PDFForm@List

```

```

13300 \pdfstartlink user {\PDFForm@List}\relax
13301 \MakeChoiceField{\Fld@width}{\Fld@height}%
13302 \pdfendlink
13303 \HyField@AddToFields
13304 }
13305 \def\@PushButton[#1]#2{% parameters, label
13306 \def\Fld@name{#2}%
13307 \begingroup
13308 \expandafter\HyField@SetKeys\expandafter{%
13309 \DefaultOptionsofPushButton,#1%
13310 }%
13311 \PDFForm@Name
13312 \ifHy@pdfa
13313 \Hy@Error{%
13314 PDF/A: Push button with JavaScript is prohibited%
13315 } \@ehc
13316 \LayoutPushButtonField{%
13317 \leavevmode
13318 \MakeButtonField{#2}%
13319 }%
13320 \else
13321 \HyField@FlagsPushButton
13322 \ifFld@hidden\def\Fld@width{1sp}\fi
13323 \LayoutPushButtonField{%
13324 \leavevmode
13325 \HyAnn@AbsPageLabel
13326 \Hy@escapeform\PDFForm@Push
13327 \pdfstartlink user {\PDFForm@Push}\relax
13328 \MakeButtonField{#2}%
13329 \pdfendlink
13330 \HyField@AddToFields
13331 }%
13332 \fi
13333 \endgroup
13334 }
13335 \def\@Submit[#1]#2{%
13336 \def\Fld@width{\DefaultWidthofSubmit}%
13337 \def\Fld@height{\DefaultHeightofSubmit}%
13338 \begingroup
13339 \expandafter\HyField@SetKeys\expandafter{%
13340 \DefaultOptionsofSubmit,#1%
13341 }%
13342 \HyField@FlagsPushButton
13343 \HyField@FlagsSubmit
13344 \ifFld@hidden\def\Fld@width{1sp}\fi
13345 \leavevmode
13346 \HyAnn@AbsPageLabel
13347 \Hy@escapeform\PDFForm@Submit
13348 \pdfstartlink user {%
13349 \PDFForm@Submit
13350 /AP<</N \SubmitObject/D \SubmitPObject>>%
13351 }%
13352 \relax
13353 \MakeButtonField{#2}%

```

```

13354 \pdfendlink
13355 \HyField@AddToFields
13356 \endgroup
13357 }
13358 \def\@Reset[#1]#2{%
13359 \def\Fld@width{\DefaultWidthofReset}%
13360 \def\Fld@height{\DefaultHeightofReset}%
13361 \begingroup
13362 \expandafter\HyField@SetKeys\expandafter{%
13363 \DefaultOptionsofReset,#1%
13364 }%
13365 \leavevmode
13366 \ifHy@pdfa
13367 \Hy@Error{%
13368 PDF/A: Reset action is prohibited%
13369 }\@ehc
13370 \MakeButtonField{#2}%
13371 \else
13372 \HyField@FlagsPushButton
13373 \ifFld@hidden\def\Fld@width{1sp}\fi
13374 \HyAnn@AbsPageLabel
13375 \Hy@escapeform\PDFForm@Reset
13376 \pdfstartlink user {\PDFForm@Reset}\relax
13377 \MakeButtonField{#2}%
13378 \pdfendlink
13379 \HyField@AddToFields
13380 \fi
13381 \endgroup
13382 }
13383 \def\@CheckBox[#1]#2{% parameters, label
13384 \def\Fld@name{#2}%
13385 \def\Fld@default{0}%
13386 \begingroup
13387 \def\Fld@width{\DefaultWidthofCheckBox}%
13388 \def\Fld@height{\DefaultHeightofCheckBox}%
13389 \expandafter\HyField@SetKeys\expandafter{%
13390 \DefaultOptionsofCheckBox,#1%
13391 }%
13392 \PDFForm@Name
13393 \HyField@FlagsCheckBox
13394 \ifFld@hidden\def\Fld@width{1sp}\fi
13395 \LayoutCheckField{#2}{%
13396 \leavevmode
13397 \HyAnn@AbsPageLabel
13398 \Hy@escapeform\PDFForm@Check
13399 \pdfstartlink user {\PDFForm@Check}\relax
13400 \MakeCheckField{\Fld@width}{\Fld@height}%
13401 \pdfendlink
13402 \HyField@AddToFields
13403 }%
13404 \endgroup
13405 }
13406 \def\Hy@FormObjects{%
13407 \pdfobj {%

```

```

13408 <<%
13409 /Type/Encoding%
13410 /Differences[%
13411 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13412 /ring/tilde %
13413 39/quotesingle %
13414 96/grave %
13415 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13416 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13417 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13418 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13419 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13420 160/Euro %
13421 164/currency %
13422 166/brokenbar %
13423 168/dieresis/copyright/ordfeminine %
13424 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13425 /twosuperior/threesuperior/acute/mu %
13426 183/periodcentered/cedilla/onesuperior/ordmasculine %
13427 188/onequarter/onehalf/threequarters %
13428 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13429 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13430 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13431 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13432 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13433 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13434 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13435 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13436 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13437 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13438 ]%
13439 >>%
13440 }%
13441 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13442 \pdfobj{%
13443 <<%
13444 /Type/Font%
13445 /Subtype/Type1%
13446 /Name/ZaDb%
13447 /BaseFont/ZapfDingbats%
13448 >>%
13449 }%
13450 \xdef\OBJ@ZaDb{\the\pdfastobj}%
13451 \pdfobj{%
13452 <<%
13453 /Type/Font%
13454 /Subtype/Type1%
13455 /Name/Helv%
13456 /BaseFont/Helvetica%
13457 /Encoding \OBJ@pdfdocencoding\space 0 R%
13458 >>%
13459 }%
13460 \xdef\OBJ@Helv{\the\pdfastobj}%
13461 \global\let\Hy@FormObjects\relax

```

```

13462 }
13463 </pdfTeX>

```

44.5 dvipdfm, xetex

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

```

13464 <*dvipdfm | xetex>

```

\@Gauge

```

13465 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13466   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13467 }

```

\@Form

```

13468 \def\@Form[#1]{%
13469   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13470   \kvsetkeys{Form}{#1}%
13471   \Hy@FormObjects
13472   \@pdfm@mark{obj @afields []}%
13473   \@pdfm@mark{obj @corder []}%
13474   \@pdfm@mark{%
13475     obj @aform <<%
13476     /Fields @afields%
13477     /DR<<%
13478     /Font<<%
13479     /ZaDb @OBJZaDb%
13480     /Helv @OBJHelv%
13481     >>%
13482     >>%
13483     /DA(/Helv 10 Tf 0 g)%
13484     /CO @corder%
13485     \ifHy@pdfa
13486     \else
13487       \ifHyField@NeedAppearances
13488       /NeedAppearances true%
13489       \fi
13490     \fi
13491     >>%
13492   }%
13493   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13494 }

```

\@endForm

```

13495 \let\@endForm\ltx@empty

```

\dvipdfm@setdim \\\expandafter \cmd@to@cs \string \dvipdfm @setdim sets dimensions for ann using \\\expandafter \cmd@to@cs \string \pdfm @box.

```

13496 \def\dvipdfm@setdim{%
13497   height \the\ht\pdfm@box\space
13498   width \the\wd\pdfm@box\space
13499   depth \the\dp\pdfm@box\space
13500 }

```

\HyField@AnnotCount

```
13501 \newcount\HyField@AnnotCount
13502 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
13503 \def\HyField@AdvanceAnnotCount{%
13504   \global\advance\HyField@AnnotCount\@ne
13505 }
```

\HyField@TheAnnotCount

```
13506 \def\HyField@TheAnnotCount{%
13507   \the\HyField@AnnotCount
13508 }
```

\Fld@pageobjref

```
13509 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
13510 \def\HyField@AddToFields#1{%
13511   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
13512   \ifx\Fld@calculate@code\ltx@empty
13513   \else
13514     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13515   \fi
13516 }
```

\@TextField

```
13517 \def\@TextField[#1]#2{% parameters, label
13518   \def\Fld@name{#2}%
13519   \let\Fld@default\ltx@empty
13520   \let\Fld@value\@empty
13521   \def\Fld@width{\DefaultWidthofText}%
13522   \def\Fld@height{%
13523     \ifFld@multiline
13524       \DefaultHeightofTextMultiline
13525     \else
13526       \DefaultHeightofText
13527     \fi
13528   }%
13529   \begingroup
13530   \expandafter\HyField@SetKeys\expandafter{%
13531     \DefaultOptionsofText,#1%
13532   }%
13533   \PDFForm@Name
13534   \HyField@FlagsText
13535   \ifFld@hidden\def\Fld@width{1sp}\fi
13536   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13537   \setbox\pdfm@box=\hbox{%
13538     \MakeTextField{\Fld@width}{\Fld@height}%
13539   }%
13540   \HyField@AdvanceAnnotCount
13541   \LayoutTextField{#2}{%
13542     \leavevmode
```

```

13543 \Hy@escapeform\PDFForm@Text
13544 \@pdfm@mark{%
13545   ann @text\HyField@TheAnnotCount\space
13546   \dvipdfm@setdim << \PDFForm@Text >>%
13547 }%
13548 }%
13549 \unhbox\pdfm@box
13550 \HyField@AddToFields{text}%
13551 % record in @afields array
13552 \endgroup
13553 }

```

\@ChoiceMenu

```

13554 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13555 \def\Fld@name{#2}%
13556 \let\Fld@default\relax
13557 \let\Fld@value\relax
13558 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13559 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13560 \begingroup
13561 \Fld@menulength=0 %
13562 \@tempdima\z@
13563 \@for\@curropt:=#3\do{%
13564 \expandafter\Fld@checkequals\@curropt==\%
13565 \Hy@StepCount\Fld@menulength
13566 \settowidth{\@tempdimb}{\@currDisplay}%
13567 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13568 }%
13569 \advance\@tempdima by 15\p@
13570 \begingroup
13571 \HyField@SetKeys{#1}%
13572 \edef\x{\endgroup
13573 \noexpand\expandafter
13574 \noexpand\HyField@SetKeys
13575 \noexpand\expandafter{%
13576 \expandafter\noexpand\cname DefaultOptionsof%
13577 \ifFld@radio
13578 Radio%
13579 \else
13580 \ifFld@combo
13581 \ifFld@popdown
13582 PopdownBox%
13583 \else
13584 ComboBox%
13585 \fi
13586 \else
13587 ListBox%
13588 \fi
13589 \fi
13590 \endcsname
13591 }%
13592 }\x
13593 \HyField@SetKeys{#1}%
13594 \PDFForm@Name

```

```

13595 \ifFld@hidden\def\Fld@width{1sp}\fi
13596 \ifx\Fld@value\relax
13597 \let\Fld@value\Fld@default
13598 \fi
13599 \LayoutChoiceField{#2}{%
13600 \ifFld@radio
13601 \HyField@FlagsRadioButton
13602 \@@Radio{#3}%
13603 \else
13604 \begingroup
13605 \HyField@FlagsChoice
13606 \ifdim\Fld@width<\@tempdima
13607 \ifdim\Fld@width<1cm\@tempdima1cm\fi
13608 \edef\Fld@width{\the\Fld@width}%
13609 \fi
13610 \ifFld@combo
13611 \else
13612 \@tempdima=\the\Fld@menulength\Fld@charsize
13613 \advance\Fld@width by \Fld@borderwidth bp %
13614 \advance\Fld@width by \Fld@borderwidth bp %
13615 \edef\Fld@height{\the\Fld@height}%
13616 \fi
13617 \@@ListBox{#3}%
13618 \endgroup
13619 \fi
13620 }%
13621 \endgroup
13622 }

```

\@@Radio

```

13623 \def\@@Radio#1{%
13624 \Fld@listcount=0 %
13625 \EdefEscapeName\Fld@default{\Fld@default}%
13626 \setbox\pdfm@box=\hbox{%
13627 \MakeRadioField{\Fld@width}{\Fld@height}%
13628 }%
13629 \@for\@curropt:=#1\do{%
13630 \expandafter\Fld@checkequals\@curropt==\%
13631 \EdefEscapeName\@currValue{\@currValue}%
13632 \Hy@StepCount\Fld@listcount
13633 \@currDisplay\space
13634 \leavevmode
13635 \Hy@escapeform\PDFForm@Radio
13636 \ifnum\Fld@listcount=1 %
13637 \HyField@AdvanceAnnotCount
13638 \fi
13639 \@pdfm@mark{%
13640 ann %
13641 \ifnum\Fld@listcount=1 %
13642 @radio\HyField@TheAnnotCount%
13643 \space
13644 \fi
13645 \dvipdfm@setdim
13646 <<%

```



```

13647     \PDFForm@Radio
13648     /AP<</N<</\@currValue /null>>>>%
13649     >>%
13650 }%
13651 \unhcopy\pdfm@box\space% deliberate space between radio buttons
13652 \ifnum\Fld@listcount=1 %
13653     \HyField@AddToFields{radio}%
13654 \fi
13655 }%
13656 }

\Fld@listcount

13657 \newcount\Fld@listcount

\@@ListBox
13658 \def\@@ListBox#1{%
13659     \HyField@PDFChoices{#1}%
13660     \setbox\pdfm@box=\hbox{%
13661         \MakeChoiceField{\Fld@width}{\Fld@height}%
13662     }%
13663     \leavevmode
13664     \Hy@escapeform\PDFForm@List
13665     \HyField@AdvanceAnnotCount
13666     \@pdfm@mark{%
13667         ann @list\HyField@TheAnnotCount\space
13668         \dvipdfm@setdim
13669         <<\PDFForm@List>>%
13670     }%
13671     \unhbox\pdfm@box
13672     \HyField@AddToFields{list}%
13673 }

\@PushButton
13674 \def\@PushButton[#1]#2{% parameters, label
13675     \def\Fld@name{#2}%
13676     \begingroup
13677         \expandafter\HyField@SetKeys\expandafter{%
13678             \DefaultOptionsofPushButton,#1%
13679         }%
13680     \PDFForm@Name
13681     \ifHy@pdfa
13682         \Hy@Error{%
13683             PDF/A: Push button with JavaScript is prohibited%
13684         }\@ehc
13685     \LayoutPushButtonField{%
13686         \leavevmode
13687         \MakeButtonField{#2}%
13688     }%
13689     \else
13690     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13691     \HyField@FlagsPushButton
13692     \ifFld@hidden\def\Fld@width{1sp}\fi
13693     \HyField@AdvanceAnnotCount
13694     \LayoutPushButtonField{%

```

```

13695     \leavevmode
13696     \Hy@escapeform\PDFForm@Push
13697     \@pdfm@mark{%
13698         ann @push\HyField@TheAnnotCount\space
13699         \dvipdfm@setdim
13700         <<\PDFForm@Push>>%
13701     }%
13702 }%
13703 \unhbox\pdfm@box
13704 \HyField@AddToFields{push}%
13705 \fi
13706 \endgroup
13707 }

\@Submit
13708 \def\@Submit[#1]#2{%
13709     \def\Fld@width{\DefaultWidthofSubmit}%
13710     \def\Fld@height{\DefaultHeightofSubmit}%
13711     \begingroup
13712     \expandafter\HyField@SetKeys\expandafter{%
13713         \DefaultOptionsofSubmit,#1%
13714     }%
13715     \HyField@FlagsPushButton
13716     \HyField@FlagsSubmit
13717     \ifFld@hidden\def\Fld@width{1sp}\fi
13718     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13719     \leavevmode
13720     \Hy@escapeform\PDFForm@Submit
13721     \HyField@AdvanceAnnotCount
13722     \@pdfm@mark{%
13723         ann @submit\HyField@TheAnnotCount\space
13724         \dvipdfm@setdim
13725         <<\PDFForm@Submit>>%
13726     }%
13727     \unhbox\pdfm@box%
13728     \HyField@AddToFields{submit}%
13729 \endgroup
13730 }

\@Reset
13731 \def\@Reset[#1]#2{%
13732     \def\Fld@width{\DefaultWidthofReset}%
13733     \def\Fld@height{\DefaultHeightofReset}%
13734     \begingroup
13735     \expandafter\HyField@SetKeys\expandafter{%
13736         \DefaultOptionsofReset,#1%
13737     }%
13738     \leavevmode
13739     \ifHy@pdfa
13740         \Hy@Error{%
13741             PDF/A: Reset action is prohibited%
13742         }\@ehc
13743         \MakeButtonField{#2}%
13744     \else

```

```

13745 \HyField@FlagsPushButton
13746 \ifFld@hidden\def\Fld@width{1sp}\fi
13747 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13748 \Hy@escapeform\PDFForm@Reset
13749 \HyField@AdvanceAnnotCount
13750 \@pdfm@mark{%
13751   ann @reset\HyField@TheAnnotCount\space
13752   \dvi pdfm@setdim
13753   <<\PDFForm@Reset>>%
13754 }%
13755 \unhbox\pdfm@box
13756 \HyField@AddToFields{reset}%
13757 \fi
13758 \endgroup
13759 }

```

\@CheckBox

```

13760 \def\@CheckBox[#1]#2{% parameters, label
13761   \def\Fld@name{#2}%
13762   \def\Fld@default{0}%
13763   \begingroup
13764     \def\Fld@width{\DefaultWidthofCheckBox}%
13765     \def\Fld@height{\DefaultHeightofCheckBox}%
13766     \expandafter\HyField@SetKeys\expandafter{%
13767       \DefaultOptionsofCheckBox,#1%
13768     }%
13769     \PDFForm@Name
13770     \HyField@FlagsCheckBox
13771     \ifFld@hidden\def\Fld@width{1sp}\fi
13772     \setbox\pdfm@box=\hbox{%
13773       \MakeCheckField{\Fld@width}{\Fld@height}%
13774     }%
13775     \HyField@AdvanceAnnotCount
13776     \LayoutCheckField{#2}{%
13777       \leavevmode
13778       \Hy@escapeform\PDFForm@Check
13779       \@pdfm@mark{%
13780         ann @check\HyField@TheAnnotCount\space
13781         \dvi pdfm@setdim
13782         <<\PDFForm@Check>>%
13783       }%
13784       \unhbox\pdfm@box
13785       \HyField@AddToFields{check}%
13786     }%
13787   \endgroup
13788 }

13789 \def\Hy@FormObjects{%
13790   \@pdfm@mark{obj @OBJpdfdocencoding%
13791     <<%
13792       /Type/Encoding%
13793       /Differences[
13794         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13795         39/quotesingle %

```

13796 96/grave %
 13797 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
 13798 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
 13799 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
 13800 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
 13801 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
 13802 160/Euro %
 13803 164/currency %
 13804 166/brokenbar %
 13805 168/dieresis/copyright/ordfeminine %
 13806 172/logicalnot/.notdef/registered/macron/degree/plusminus%
 13807 /twosuperior/threesuperior/acute/mu %
 13808 183/periodcentered/cedilla/onesuperior/ordmasculine %
 13809 188/onequarter/onehalf/threequarters %
 13810 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
 13811 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
 13812 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
 13813 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
 13814 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
 13815 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
 13816 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
 13817 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
 13818 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
 13819 /thorn/ydieresis%
 13820]%
 13821 >>%
 13822 }%
 13823 \@pdfm@mark{obj @OBJZaDb%
 13824 <<%
 13825 /Type/Font%
 13826 /Subtype/Type1%
 13827 /Name/ZaDb%
 13828 /BaseFont/ZapfDingbats%
 13829 >>%
 13830 }%
 13831 \@pdfm@mark{obj @OBJHelv%
 13832 <<%
 13833 /Type/Font%
 13834 /Subtype/Type1%
 13835 /Name/Helv%
 13836 /BaseFont/Helvetica%
 13837 /Encoding @OBJpdfdocencoding%
 13838 >>%
 13839 }%
 13840 \global\let\Hy@FormObjects\relax
 13841 }
 13842 </dvipdfm | xetex>

44.6 Common forms part

13843 (*pdfmform)
 \Fld@pageobjref
 13844 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

```
13845 \ifundefined{pdf@escapestring}
13846 {%
13847 \let\Hy@escapestring\@firstofone
13848 \def\Hy@escapeform#1{%
13849 \ifHy@pdfescapeform
13850 \def\Hy@escapestring##1{%
13851 \noexpand\Hy@escapestring{\noexpand##1}%
13852 }%
13853 \edef\Hy@temp{#1}%
13854 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13855 \def\Hy@escapestring##1{%
13856 \ifundefined{Hy@esc@\string##1}{%
13857 ##1%
13858 \ThisShouldNotHappen
13859 }{%
13860 \csname Hy@esc@\string##1\endcsname
13861 }%
13862 }%
13863 \else
13864 \let\Hy@escapestring\@firstofone
13865 \fi
13866 }%
13867 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
13868 \ifx\#3\%
13869 \else
13870 \expandafter
13871 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13872 \ltx@ReturnAfterFi{%
13873 \Hy@@@escapeform#3\@nil
13874 }%
13875 \fi
13876 }%
13877 }{%
13878 \def\Hy@escapeform#1{%
13879 \ifHy@pdfescapeform
13880 \let\Hy@escapestring\pdfescapestring
13881 \else
13882 \let\Hy@escapestring\@firstofone
13883 \fi
13884 }%
13885 \Hy@escapeform{}%
13886 }
```

\PDFForm@Name

```
13887 \def\PDFForm@Name{%
13888 \PDFForm@@Name\Fld@name
13889 \ifx\Fld@altname\relax
13890 \else
13891 \PDFForm@@Name\Fld@altname
13892 \fi
13893 \ifx\Fld@mappingname\relax
13894 \else
13895 \PDFForm@@Name\Fld@mappingname
```

```
13896 \fi
13897 }
```

\PDFForm@@Name

```
13898 \def\PDFForm@@Name#1{%
13899 \begingroup
13900 \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13901 \ifHy@unicode
13902 \Hy@unicodedefalse
13903 \fi
13904 \fi
13905 \pdfstringdef\Hy@gtemp#1%
13906 \endgroup
13907 \let#1\Hy@gtemp
13908 }
```

\Fld@additionalactions

```
13909 \def\Fld@@@additionalactions{%
K input (keystroke) format
13910 \ifx\Fld@keystroke@code\@empty
13911 \else
13912 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13913 \fi
F display format
13914 \ifx\Fld@format@code\@empty
13915 \else
13916 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13917 \fi
V validation
13918 \ifx\Fld@validate@code\@empty
13919 \else
13920 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13921 \fi
C calculation
13922 \ifx\Fld@calculate@code\@empty
13923 \else
13924 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13925 \fi
Fo receiving the input focus
13926 \ifx\Fld@onfocus@code\@empty
13927 \else
13928 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13929 \fi
Bl loosing the input focus (blurred)
13930 \ifx\Fld@onblur@code\@empty
13931 \else
13932 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13933 \fi
```

D pressing the mouse button (down)

```
13934 \ifx\Fld@onmousedown@code\@empty
13935 \else
13936 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13937 \fi
```

U releasing the mouse button (up)

```
13938 \ifx\Fld@onmouseup@code\@empty
13939 \else
13940 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13941 \fi
```

E cursor enters the annotation's active area.

```
13942 \ifx\Fld@onenter@code\@empty
13943 \else
13944 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13945 \fi
```

X cursor exits the annotation's active area.

```
13946 \ifx\Fld@onexit@code\@empty
13947 \else
13948 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13949 \fi
```

```
13950 }
13951 \def\Fld@additionalactions{%
13952 \if\Fld@@additionalactions-%
13953 \else
13954 \ifHy@pdfa
13955 \else
13956 /AA<<\Fld@@additionalactions>>%
13957 \fi
13958 \fi
13959 }
```

\Fld@annotnames

```
13960 \def\Fld@annotnames{%
13961 /T(\Fld@name)%
13962 \ifx\Fld@altname\relax
13963 \else
13964 /TU(\Fld@altname)%
13965 \fi
13966 \ifx\Fld@mappingname\relax
13967 \else
13968 /TM(\Fld@mappingname)%
13969 \fi
13970 }
```

\PDFForm@Check

```
13971 \def\PDFForm@Check{%
13972 /Subtype/Widget%
13973 \Fld@annotflags
13974 \Fld@pageobjref
13975 \Fld@annotnames
13976 /FT/Btn%
13977 \Fld@flags
```

```

13978 /Q \Fld@align
13979 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13980 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13981 /MK<<%
13982 \ifnum\Fld@rotation=\z@
13983 \else
13984 /R \Fld@rotation
13985 \fi
13986 \ifx\Fld@bordercolor\relax
13987 \else
13988 /BC[\Fld@bordercolor]%
13989 \fi
13990 \ifx\Fld@bcolor\relax
13991 \else
13992 /BG[\Fld@bcolor]%
13993 \fi
13994 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13995 >>%
13996 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13997 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13998 /H/P%
13999 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14000 \Fld@additionalactions
14001 }

```

\PDFForm@Push

```

14002 \ifHy@pdfa
14003 \else
14004 \def\PDFForm@Push{%
14005 /Subtype/Widget%
14006 \Fld@annotflags
14007 \Fld@pageobjref
14008 \Fld@annotnames
14009 /FT/Btn%
14010 \Fld@flags
14011 /H/P%
14012 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14013 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14014 \ifx\Fld@bordercolor\relax\else 1\fi
14015 \space
14016 \else
14017 /MK<<%
14018 \ifnum\Fld@rotation=\z@
14019 \else
14020 /R \Fld@rotation
14021 \fi
14022 \ifx\Fld@bordercolor\relax
14023 \else
14024 /BC[\Fld@bordercolor]%
14025 \fi
14026 >>%
14027 \fi
14028 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14029 \Fld@additionalactions

```


14030 }%
14031 \fi

\PDFForm@List

14032 \def\PDFForm@List{%
14033 /Subtype/Widget%
14034 \Fld@annotflags
14035 \Fld@pageobjref
14036 \Fld@annotnames
14037 /FT/Ch%
14038 \Fld@flags
14039 /Q \Fld@align
14040 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14041 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14042 \ifx\Fld@bordercolor\relax\else 1\fi
14043 \ifx\Fld@bcolor\relax \else 1\fi
14044 \space
14045 \else
14046 /MK<<%
14047 \ifnum\Fld@rotation=\z@
14048 \else
14049 /R \Fld@rotation
14050 \fi
14051 \ifx\Fld@bordercolor\relax
14052 \else
14053 /BC[\Fld@bordercolor]%
14054 \fi
14055 \ifx\Fld@bcolor\relax
14056 \else
14057 /BG[\Fld@bcolor]%
14058 \fi
14059 >>%
14060 \fi
14061 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14062 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14063 \Fld@choices
14064 \Fld@additionalactions
14065 }

\PDFForm@Radio

14066 \def\PDFForm@Radio{%
14067 /Subtype/Widget%
14068 \Fld@annotflags
14069 \Fld@pageobjref
14070 \Fld@annotnames
14071 /FT/Btn%
14072 \Fld@flags
14073 /H/P%
14074 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14075 /MK<<%
14076 \ifnum\Fld@rotation=\z@
14077 \else
14078 /R \Fld@rotation
14079 \fi

```

14080 \ifx\Fld@bordercolor\relax
14081 \else
14082 /BC[\Fld@bordercolor]%
14083 \fi
14084 \ifx\Fld@bcolor\relax
14085 \else
14086 /BG[\Fld@bcolor]%
14087 \fi
14088 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14089 >>%
14090 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14091 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14092 \ifx\Fld@default\@empty
14093 /V/Off%
14094 /DV/Off%
14095 \else
14096 /V/\Fld@default
14097 /DV/\Fld@default
14098 \fi
14099 \Fld@additionalactions
14100 }

```

\PDFForm@Text

```

14101 \def\PDFForm@Text{%
14102 /Subtype/Widget%
14103 \Fld@annotflags
14104 \Fld@pageobjref
14105 \Fld@annotnames
14106 /FT/Tx%
14107 \Fld@flags
14108 /Q \Fld@align
14109 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14110 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14111 \ifx\Fld@bordercolor\relax\else 1\fi
14112 \ifx\Fld@bcolor\relax \else 1\fi
14113 \space
14114 \else
14115 /MK<<%
14116 \ifnum\Fld@rotation=\z@
14117 \else
14118 /R \Fld@rotation
14119 \fi
14120 \ifx\Fld@bordercolor\relax
14121 \else
14122 /BC[\Fld@bordercolor]%
14123 \fi
14124 \ifx\Fld@bcolor\relax
14125 \else
14126 /BG[\Fld@bcolor]%
14127 \fi
14128 >>%
14129 \fi

```

```

14130 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14131 \ifx\Fld@color\@empty\else\space\Fld@ccolor\fi)%
14132 /DV(\Hy@escapestring{\Fld@default})%
14133 /V(\Hy@escapestring{\Fld@value})%
14134 \Fld@additionalactions
14135 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14136 }

```

\PDFForm@Submit

```

14137 \def\PDFForm@Submit{%
14138 /Subtype/Widget%
14139 \Fld@annotflags
14140 \Fld@pageobjref
14141 \Fld@annotnames
14142 /FT/Btn%
14143 \Fld@flags
14144 /H/P%
14145 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14146 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14147 \ifx\Fld@bordercolor\relax\else 1\fi
14148 \space
14149 \else
14150 /MK<<%
14151 \ifnum\Fld@rotation=\z@
14152 \else
14153 /R \Fld@rotation
14154 \fi
14155 \ifx\Fld@bordercolor\relax
14156 \else
14157 /BC[\Fld@bordercolor]%
14158 \fi
14159 >>%
14160 \fi
14161 /A<<%
14162 /S/SubmitForm%
14163 /F<<%
14164 /FS/URL%
14165 /F(\Hy@escapestring{\Form@action})%
14166 >>%
14167 \Fld@submitflags
14168 >>%
14169 \Fld@additionalactions
14170 }

```

\PDFForm@Reset

```

14171 \ifHy@pdfa
14172 \else
14173 \def\PDFForm@Reset{%
14174 /Subtype/Widget%
14175 \Fld@annotflags
14176 \Fld@pageobjref
14177 \Fld@annotnames
14178 /FT/Btn%
14179 \Fld@flags

```

```

14180 /H/P%
14181 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14182 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14183 \ifx\Fld@bordercolor\relax\else 1\fi
14184 \space
14185 \else
14186 /MK<<%
14187 \ifnum\Fld@rotation=\z@
14188 \else
14189 /R \Fld@rotation
14190 \fi
14191 \ifx\Fld@bordercolor\relax
14192 \else
14193 /BC[\Fld@bordercolor]%
14194 \fi
14195 % /CA (Clear)
14196 % /AC (Done)
14197 >>%
14198 \fi
14199 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14200 /A<</S/ResetForm>>%
14201 \Fld@additionalactions
14202 }%
14203 \fi

14204 </pdfform>
14205 <*packageEnd>

```

45 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `reper.sty`); it needed the `reper` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

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

```

14206 \def\phantomsection{%
14207 \Hy@MakeCurrentHrefAuto{section*}%
14208 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14209 }
14210 </packageEnd>

```

45.1 Bookmarks

```
14211 <*outlines>
```

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

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the

EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

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

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

```

14212 \def\Hy@writebookmark#1#2#3#4#5{%
14213   % section number, text, label, level, file
14214   \ifx\WriteBookmarks\relax%
14215   \else
14216     \ifnum#4>\Hy@bookmarksdepth\relax
14217     \else
14218       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14219     \fi
14220   \fi
14221 }
14222 \def\Hy@currentbookmarklevel{0}
14223 \def\Hy@numberline#1{#1 }
14224 \def\@@writetorep#1#2#3#4#5{%
14225   \begingroup
14226     \edef\Hy@tempa{#5}%
14227     \ifx\Hy@tempa\Hy@bookmarkstype
14228       \edef\Hy@level{#4}%
14229       \ifx\Hy@levelcheck Y%
14230         \@tempcnta\Hy@level\relax
14231         \advance\@tempcnta by -1 %
14232         \ifnum\Hy@currentbookmarklevel<\@tempcnta
14233           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14234           \advance\@tempcnta by 1 %
14235           \Hy@Warning{%
14236             Difference (\the\@tempcnta) between bookmark levels is %
14237             greater \MessageBreak than one, level fixed%
14238           }%
14239           \@tempcnta\Hy@currentbookmarklevel
14240           \advance\@tempcnta by 1 %
14241           \edef\Hy@level{\the\@tempcnta}%
14242         \fi
14243       \else
14244         \global\let\Hy@levelcheck Y%
14245       \fi
14246       \global\let\Hy@currentbookmarklevel\Hy@level
14247       \@tempcnta\Hy@level\relax
14248       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14249       \advance\@tempcnta by -1 %
14250       \edef\Hy@tempa{#3}%
14251       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14252       \ifx\Hy@tempa\Hy@tempb

```

```

14253 \Hy@Warning{%
14254     The anchor of a bookmark and its parent's must not%
14255     \MessageBreak be the same. Added a new anchor%
14256 }%
14257 \phantomsection
14258 \fi
14259 \ifHy@bookmarksnumbered
14260 \let\numberline\Hy@numberline
14261 \let\booknumberline\Hy@numberline
14262 \let\partnumberline\Hy@numberline
14263 \let\chapternumberline\Hy@numberline
14264 \else
14265 \let\numberline\@gobble
14266 \let\booknumberline\@gobble
14267 \let\partnumberline\@gobble
14268 \let\chapternumberline\@gobble
14269 \fi
14270 \pdfstringdef\Hy@tempa{#2}%
14271 \HyPsd@SanitizeForOutFile\Hy@tempa
14272 \if@filesw
14273 \stepcounter{bookmark@seq@number}%
14274 \@ifundefined{@outlinefile}{%
14275 }{%
14276 \protected@write\@outlinefile}{%
14277 \protect\BOOKMARK
14278 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14279 {\Hy@tempa}{\Hy@tempb}%
14280 \@percentchar\space\thebookmark@seq@number
14281 }%
14282 }%
14283 \fi
14284 \fi
14285 \endgroup
14286 }
14287 \newcounter{bookmark@seq@number}
14288 \begingroup
14289 \lccode`=(`{`%
14290 \lccode`=)`}%
14291 \lccode`1=\z@
14292 \lccode`2=\z@
14293 \lccode`3=\z@
14294 \lccode`5=\z@
14295 \lccode`7=\z@
14296 \lccode`\#=\z@
14297 \lccode``=\z@
14298 \lccode`\{=\z@
14299 \lccode`\}= \z@
14300 \lowercase{%
14301 \endgroup
14302 \def\HyPsd@SanitizeForOutFile#1{%
14303 \@onelevel@sanitize\Hy@tempa
14304 \escapechar`\\%
14305 \edef\Hy@tempa{%
14306 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil

```

```

14307 }%
14308 \edef\Hy@tempa{%
14309   \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14310 }%
14311 }%
14312 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14313   #1%
14314   \ifx\#2\%
14315     \expandafter\ltx@gobble
14316   \else
14317     \expandafter\ltx@firstofone
14318   \fi
14319   {%
14320     \string\173%
14321     \HyPsd@SanitizeOut@BraceLeft#2\@nil
14322   }%
14323 }%
14324 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14325   #1%
14326   \ifx\#2\%
14327     \expandafter\ltx@gobble
14328   \else
14329     \expandafter\ltx@firstofone
14330   \fi
14331   {%
14332     \string\175%
14333     \HyPsd@SanitizeOut@BraceRight#2\@nil
14334   }%
14335 }%
14336 }

```

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

```

14337 \newcommand{\currentpdfbookmark}{%
14338   \pdfbookmark[\Hy@currentbookmarklevel]%
14339 }
14340 \newcommand{\subpdfbookmark}{%
14341   \@tempcnta\Hy@currentbookmarklevel
14342   \Hy@StepCount\@tempcnta
14343   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14344 }
14345 \newcommand{\belowpdfbookmark}[2]{%
14346   \@tempcnta\Hy@currentbookmarklevel
14347   \Hy@StepCount\@tempcnta
14348   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14349   \advance\@tempcnta by -1 %
14350   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14351 }

```

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.

```

14352 \renewcommand\pdfbookmark[3][0]{%
14353   \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%

```

```

14354 \hyper@anchorstart{#3.#1}\hyper@anchorend
14355 }
14356 \def\BOOKMARK{%
14357 \ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14358 }
14359 \def\@BOOKMARK[#1]{%
14360 \@ifnextchar{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
14361 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo.pdf macros.

45.1.1 Rerun warning

\Hy@OutlineRerunCheck

```

14362 \RequirePackage{rerunfilecheck}[2009/12/10]
14363 \def\Hy@OutlineRerunCheck{%
14364 \RerunFileCheck{\jobname.out}{%
14365 \immediate\closeout\@outlinefile
14366 }{%
14367 Rerun to get outlines right\MessageBreak
14368 or use package `bookmark'%
14369 }%
14370 }

```

45.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

```

14371 (*vtex)
14372 \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.

```

14373 \begingroup
14374 \catcode`\'=12 %
14375 \ifnum\Hy@VTeXversion<650 %
14376 \catcode`\=12 %
14377 \gdef\hv@pdf@char#1#2#3{%
14378 \char
14379 \ifcase'#1#2#3 %
14380 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14381 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14382 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14383 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14384 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14385 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14386 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14387 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14388 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14389 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

```



```

14390 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14391 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14392 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14393 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14394 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14395 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14396 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14397 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14398 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14399 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14400 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14401 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14402 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14403 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14404 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14405 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14406 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14407 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14408 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14409 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14410 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14411 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14412 \fi
14413 }%
14414 \else
14415 \gdef\hv@pdf@char{\char'}%
14416 \fi
14417 \endgroup

```

\@@BOOKMARK

```

14418 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14419 \expandafter\edef\csname @count@#3\endcsname{%
14420 \the\@serial@counter
14421 }%
14422 \edef\@mycount{\the\@serial@counter}%
14423 \Hy@StepCount\@serial@counter
14424 \edef\@parcount{%
14425 \expandafter\ifx\csname @count@#5\endcsname\relax
14426 0%
14427 \else
14428 \csname @count@#5\endcsname
14429 \fi
14430 }%
14431 \immediate\special{%
14432 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14433 s=\ifx#2-c\else o\fi,t=#4%
14434 }%
14435 }%

```

\ReadBookmarks

```

14436 \def\ReadBookmarks{%
14437 \begingroup
14438 \def\0{\hv@pdf@char 0}%
14439 \def\1{\hv@pdf@char 1}%

```

```

14440 \def\2{\hv@pdf@char 2}%
14441 \def\3{\hv@pdf@char 3}%
14442 \def\{(){}%
14443 \def\)}{)%
14444 \def\do##1{%
14445 \ifnum\catcode`##1=\active
14446 \@makeother##1%
14447 \else
14448 \ifnum\catcode`##1=6 %
14449 \@makeother##1%
14450 \fi
14451 \fi
14452 }%
14453 \dospecials
14454 \Hy@safe@activetrue
14455 \InputIfFileExists{\jobname.out}{-}{-}%
14456 \endgroup
14457 \ifx\WriteBookmarks\relax
14458 \else
14459 \if@filesw
14460 \newwrite\@outlinefile
14461 \Hy@OutlineRerunCheck
14462 \immediate\openout\@outlinefile=\jobname.out\relax
14463 \fi
14464 \fi
14465 }

14466 </vtex>

14467 <!*vtex>
14468 \def\ReadBookmarks{%
14469 \pdf@ifdraftmode{-}{-}%
14470 \begingroup
14471 \def\do##1{%
14472 \ifnum\catcode`##1=\active
14473 \@makeother##1%
14474 \else
14475 \ifnum\catcode`##1=6 %
14476 \@makeother##1%
14477 \fi
14478 \fi
14479 }%
14480 \dospecials
14481 \Hy@safe@activetrue
14482 \escapechar=`\%
14483 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14484 \calc@bm@number{##5}%
14485 }%
14486 \InputIfFileExists{\jobname.out}{-}{-}%
14487 \ifx\WriteBookmarks\relax
14488 \global\let\WriteBookmarks\relax
14489 \fi
14490 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14491 \def\Hy@temp{##4}%
14492 <*pdftex>

```

```

14493 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{###3}}%
14494 \Hy@OutlineName{}\Hy@pstringName{%
14495   ##2\check@bm@number{###3}%
14496 }{%
14497   \expandafter\strip@prefix\meaning\Hy@temp
14498 }%
14499 \pdfetex)
14500 (*pdfmark)
14501 \pdfmark{%
14502   pdfmark=/OUT,%
14503   Count={##2\check@bm@number{###3}},%
14504   Dest={###3},%
14505   Title=\expandafter\strip@prefix\meaning\Hy@temp
14506 }%
14507 \pdfmark)
14508 (*dvipdfm|xetex)
14509 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{###3}}%
14510 \@pdfm@mark{%
14511   outline \ifHy@DvipdfmxOutlineOpen
14512     [%
14513     \ifnum##21>\z@
14514     \else
14515     -%
14516     \fi
14517     ] %
14518     \fi
14519     ##1<<%
14520     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14521     /A<<%
14522     /S/GoTo%
14523     /D(\Hy@pstringName)%
14524     >>%
14525     >>%
14526   }%
14527 \dvipdfm|xetex)
14528 }%
14529 \begingroup
14530 \def\WriteBookmarks{0}%
14531 \InputIfFileExists{jobname.out}{-}{-}%
14532 \endgroup
14533 %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
14534 \endgroup
14535 }%
14536 \ifx\WriteBookmarks\relax
14537 \else
14538 \if@filesw
14539 \newwrite\@outlinefile
14540 \Hy@OutlineRerunCheck
14541 \immediate\openout\@outlinefile=jobname.out\relax
14542 \fi
14543 \fi
14544 }
14545 (*pdfetex)
14546 \def\Hy@OutlineName#1#2#3#4{%

```

```

14547 \pdfoutline goto name{#2}count#3{#4}%
14548 }
14549 \pdfTeX
14550 \def\check@bm@number#1{%
14551 \expandafter\ifx\csname B_#1\endcsname\relax
14552 0%
14553 \else
14554 \csname B_#1\endcsname
14555 \fi
14556 }
14557 \def\calc@bm@number#1{%
14558 \@tempcnta=\check@bm@number{#1}\relax
14559 \advance\@tempcnta by 1 %
14560 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14561 }
14562 \!vtex

14563 \ifHy@implicit
14564 \else
14565 \expandafter\endinput
14566 \fi

14567 \outlines
14568 (*outlines | hypertex)

14569 \newlength\Hy@SectionHShift
14570 \def\Hy@SectionAnchorHref#1{%
14571 \ifx\protect\@typeset@protect
14572 \Hy@@@SectionAnchor{#1}%
14573 \fi
14574 }
14575 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
14576 \leavevmode
14577 \hbox to 0pt{%
14578 \kern-\Hy@SectionHShift
14579 \Hy@raisedlink{%
14580 \hyper@anchorstart{#1}\hyper@anchorend
14581 }%
14582 \hss
14583 }%
14584 }
14585 \ifundefined{hyper@nopatch@sectioning}
14586 {
14587 \let\H@old@ssect\@ssect
14588 \def\@ssect#1#2#3#4#5{%
14589 \Hy@MakeCurrentHrefAuto{section*}%
14590 \setlength{\Hy@SectionHShift}{#1}%
14591 \begingroup
14592 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14593 \toks\tw@\expandafter{%
14594 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14595 #5%
14596 }%
14597 \edef\x{\endgroup
14598 \the\toks@{\the\toks\tw@}}%
14599 }\x

```

```

14600 }
14601 \let\H@old@schapter\@schapter
14602 \def\@schapter#1{%
14603   \begingroup
14604     \let\@mkboth\@gobbletwo
14605     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14606     \Hy@raisedlink{%
14607       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14608     }%
14609   \endgroup
14610   \H@old@schapter{#1}%
14611 }

```

If there is no chapter number (`\expandafter \cmd@to@cs \string \frontmatter` or `\expandafter \cmd@to@cs \string \backmatter`) then the counting by `\refstepcounter{chapter}` is not executed, so there will be no destination for `\expandafter \cmd@to@cs \string addcontentsline`. So `\expandafter \cmd@to@cs \string \@chapter` is overloaded to avoid this:

```

14612 \ltx@ifundefined{@chapter}{-}{%
14613   \let\Hy@org@chapter\@chapter
14614   \def\@chapter{%
14615     \def\Hy@next{%
14616       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14617       \Hy@raisedlink{%
14618         \hyper@anchorstart{\@currentHref}\hyper@anchorend
14619       }%
14620     }%
14621     \ifnum\c@secnumdepth>\m@ne
14622       \ltx@ifundefined{if@mainmatter}%
14623       \iftrue{\csname if@mainmatter\endcsname}%
14624       \let\Hy@next\relax
14625     \fi
14626     \fi
14627     \Hy@next
14628     \Hy@org@chapter
14629   }%
14630 }

14631 \let\H@old@part\@part
14632 \@ifundefined{chapter}
14633   {\let\Hy@secnum@part\z@}
14634   {\let\Hy@secnum@part\m@ne}
14635 \def\@part{%
14636   \ifnum\Hy@secnum@part>\c@secnumdepth
14637     \phantomsection
14638   \fi
14639   \H@old@part
14640 }

14641 \let\H@old@spart\@spart
14642 \def\@spart#1{%
14643   \Hy@MakeCurrentHrefAuto{part*}%
14644   \Hy@raisedlink{%
14645     \hyper@anchorstart{\@currentHref}\hyper@anchorend
14646   }%

```

```

14647 \H@old@spart{#1}%
14648 }
14649 \let\H@old@sect\@sect
14650 \def\@sect#1#2#3#4#5#6[#7]#8{%
14651 \ifnum #2>\c@secnumdepth
14652 \expandafter\@firstoftwo
14653 \else
14654 \expandafter\@secondoftwo
14655 \fi
14656 {%
14657 \Hy@MakeCurrentHrefAuto{section*}%
14658 \setlength{\Hy@SectionHShift}{#3}%
14659 \begingroup
14660 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[{#7}]}%
14661 \toks\tw@\expandafter{%
14662 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14663 #8%
14664 }%
14665 \edef\x{\endgroup
14666 \the\toks@{\the\toks\tw@}%
14667 }\x
14668 }{%
14669 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[{#7}]{#8}%
14670 }%
14671 }
14672 }{}

14673 </outlines | hypertex>
14674 <*outlines>

14675 \expandafter\def\csname Parent-4\endcsname{}
14676 \expandafter\def\csname Parent-3\endcsname{}
14677 \expandafter\def\csname Parent-2\endcsname{}
14678 \expandafter\def\csname Parent-1\endcsname{}
14679 \expandafter\def\csname Parent0\endcsname{}
14680 \expandafter\def\csname Parent1\endcsname{}
14681 \expandafter\def\csname Parent2\endcsname{}
14682 \expandafter\def\csname Parent3\endcsname{}
14683 \expandafter\def\csname Parent4\endcsname{}
14684 </outlines>

```

46 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

46.1 PD1 encoding

```

14685 <*pd1enc>
14686 \DeclareFontEncoding{PD1}{}{}

Accents
14687 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14688 \DeclareTextAccent{\'}{PD1}{\textacute}

```

```

14689 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
14690 \DeclareTextAccent{\-}{PD1}{\texttilde}
14691 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
14692 \DeclareTextAccent{\r}{PD1}{\textring}
14693 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14694 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14695 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14696 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14697 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14698 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14699 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14700 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14701 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
14702 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14703 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
14704 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14705 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14706 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14707 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14708 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
14709 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14710 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14711 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14712 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14713 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
14714 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14715 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
14716 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14717 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14718 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14719 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14720 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14721 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14722 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14723 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}}{#1}
14724 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}}{#1}
14725 \DeclareTextCommand{\newtie}{PD1}[1]{%
14726 \TextSymbolUnavailable{\newtie{#1}}}{#1}%
14727 }

```

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

```

14728 % U+0009 (CHARACTER TABULATION)
14729 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14730 % U+000A (LINE FEED)
14731 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14732 % U+000D (CARRIAGE RETURN)
14733 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14734 % U+02D8 BREVE; breve
14735 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14736 % U+02C7 CARON; caron
14737 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14738 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex

```

14739 \DeclareTextCommand{\textcirc{}}{PD1}{\032}% U+02C6
 14740 % U+02D9 DOT ABOVE; dotaccent
 14741 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 14742 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14743 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 14744 % U+02DB OGONEK; ogonek
 14745 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 14746 % U+02DA RING ABOVE; ring
 14747 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 14748 % U+02DC SMALL TILDE; ilde, *tilde
 14749 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 14750 % U+0022 QUOTATION MARK; quotedbl
 14751 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 14752 % U+0023 NUMBER SIGN; numbersign
 14753 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 14754 % U+0024 DOLLAR SIGN; dollar
 14755 \DeclareTextCommand{\textdollar}{PD1}{\\$}% U+0024
 14756 % U+0025 PERCENT SIGN; percent
 14757 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 14758 % U+0026 AMPERSAND; ampersand
 14759 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 14760 % U+0028 LEFT PARENTHESIS; parenleft
 14761 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 14762 % U+0029 RIGHT PARENTHESIS; parenright
 14763 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 14764 % U+002E FULL STOP; period
 14765 \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
 14766 % U+003C LESS-THAN SIGN; less
 14767 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 14768 % U+003E GREATER-THAN SIGN; greater
 14769 \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
 ...

$\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
14770 % U+005C REVERSE SOLIDUS; backslash
14771 $\backslash \text{DeclareTextCommand}\{\text{textbackslash}\}\{\text{PD1}\}\{\backslash 134\}$ % U+005C
14772 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
14773 $\backslash \text{DeclareTextCommand}\{\text{textsetminus}\}\{\text{PD1}\}\{\text{textbackslash}\}$
 $\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
14774 % U+005E CIRCUMFLEX ACCENT; asciicircum
14775 $\backslash \text{DeclareTextCommand}\{\text{textasciicircum}\}\{\text{PD1}\}\{\backslash 136\}$ % U+005E
14776 % U+005F LOW LINE; underscore
14777 $\backslash \text{DeclareTextCommand}\{\text{textunderscore}\}\{\text{PD1}\}\{\backslash 137\}$ % U+005F
14778 $\backslash \text{DeclareTextCommand}\{\text{textmacronbelow}\}\{\text{PD1}\}\{\backslash 137\}$ % U+005F
14779 % U+0060 GRAVE ACCENT; grave
14780 $\backslash \text{DeclareTextCommand}\{\text{textasciigrave}\}\{\text{PD1}\}\{\backslash 140\}$ % U+0060
 $\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 150$: U+0068 LATIN SMALL LETTER H; h
14781 % U+0069 LATIN SMALL LETTER I; i
14782 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PD1}\}\{\text{i}\}\{\text{i}\}$ % $\backslash 151$ U+0069
 $\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 172$: U+007A LATIN SMALL LETTER Z; z
14783 % U+007B LEFT CURLY BRACKET; braceleft
14784 $\backslash \text{DeclareTextCommand}\{\text{textbraceleft}\}\{\text{PD1}\}\{\backslash 173\}$ % U+007B
14785 % U+007C VERTICAL LINE; *bar, verticalbar
14786 $\backslash \text{DeclareTextCommand}\{\text{textbar}\}\{\text{PD1}\}\{\backslash 174\}$ % U+007C
14787 % U+007D RIGHT CURLY BRACKET; braceright
14788 $\backslash \text{DeclareTextCommand}\{\text{textbraceright}\}\{\text{PD1}\}\{\backslash 175\}$ % U+007D
14789 % U+007E TILDE; asciitilde
14790 $\backslash \text{DeclareTextCommand}\{\text{textasciitilde}\}\{\text{PD1}\}\{\backslash 176\}$ % U+007E
Slot $\backslash 177$ (0x7F) is undefined in PDFDocEncoding.
14791 % U+2022 BULLET; bullet
14792 $\backslash \text{DeclareTextCommand}\{\text{textbullet}\}\{\text{PD1}\}\{\backslash 200\}$ % U+2022
14793 % U+2020 DAGGER; dagger
14794 $\backslash \text{DeclareTextCommand}\{\text{textdagger}\}\{\text{PD1}\}\{\backslash 201\}$ % U+2020
14795 % U+2021 DOUBLE DAGGER; daggerdbl, \ddagger (LaTeX)
14796 $\backslash \text{DeclareTextCommand}\{\text{textdaggerdbl}\}\{\text{PD1}\}\{\backslash 202\}$ % U+2021
14797 $\backslash \text{DeclareTextCommand}\{\text{tex addedddagger}\}\{\text{PD1}\}\{\backslash 203\}$ % U+2021
14798 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
14799 $\backslash \text{DeclareTextCommand}\{\text{textellipsis}\}\{\text{PD1}\}\{\backslash 203\}$ % U+2026
14800 % U+2014 EM DASH; emdash
14801 $\backslash \text{DeclareTextCommand}\{\text{textemdash}\}\{\text{PD1}\}\{\backslash 204\}$ % U+2014
14802 % U+2013 EN DASH; endash
14803 $\backslash \text{DeclareTextCommand}\{\text{textendash}\}\{\text{PD1}\}\{\backslash 205\}$ % U+2013
14804 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14805 $\backslash \text{DeclareTextCommand}\{\text{textflorin}\}\{\text{PD1}\}\{\backslash 206\}$ % U+0192
14806 % U+2044 FRACTION SLASH; fraction
14807 $\backslash \text{DeclareTextCommand}\{\text{textfractionsolidus}\}\{\text{PD1}\}\{\backslash 207\}$ % U+2044
14808 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guillemetleft
14809 $\backslash \text{DeclareTextCommand}\{\text{guillemetleft}\}\{\text{PD1}\}\{\backslash 210\}$ % U+2039

14810 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guiltingright
14811 \DeclareTextCommand{\guiltingright}{PD1}{\211}% U+203A
14812 % U+2212 MINUS SIGN; minus
14813 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
14814 % U+2030 PER MILLE SIGN; perthousand
14815 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
14816 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14817 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14818 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14819 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14820 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14821 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14822 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14823 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14824 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14825 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14826 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14827 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14828 % U+2122 TRADE MARK SIGN; trademark
14829 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14830 % U+FB01 LATIN SMALL LIGATURE FI; fi
14831 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14832 % U+FB02 LATIN SMALL LIGATURE FL; fl
14833 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14834 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14835 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
14836 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14837 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14838 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14839 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14840 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14841 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
14842 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
14843 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14844 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
14845 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14846 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
14847 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14848 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
14849 % U+0153 LATIN SMALL LIGATURE OE; oe
14850 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
14851 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14852 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
14853 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14854 \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.
14855 % U+20AC EURO SIGN; *Euro, euro
14856 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
14857 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
14858 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
14859 % U+00A2 CENT SIGN; cent
14860 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2

14861 % U+00A3 POUND SIGN; sterling
14862 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14863 % U+00A4 CURRENCY SIGN; currency
14864 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14865 % U+00A5 YEN SIGN; yen
14866 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14867 % U+00A6 BROKEN BAR; brokenbar
14868 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
14869 % U+00A7 SECTION SIGN; section
14870 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
14871 % U+00A8 DIAERESIS; dieresis
14872 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
14873 % U+00A9 COPYRIGHT SIGN; copyright
14874 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
14875 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14876 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14877 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
14878 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14879 \DeclareTextCommand{\guillemetleft}{PD1}{\253}% U+00AB
14880 % U+00AC NOT SIGN; logicalnot
14881 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14882 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.
14883 % U+00AE REGISTERED SIGN; registered
14884 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14885 % U+00AF MACRON; *macron, overscore
14886 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14887 % U+00B0 DEGREE SIGN; degree
14888 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14889 % U+00B1 PLUS-MINUS SIGN; plusminus
14890 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14891 % U+00B2 SUPERSCRIPT TWO; twosuperior
14892 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
14893 % U+00B3 SUPERSCRIPT THREE; threesuperior
14894 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
14895 % U+00B4 ACUTE ACCENT; acute
14896 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14897 % U+00B5 MICRO SIGN; mu, mu1
14898 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14899 % U+00B6 PILCROW SIGN; paragraph
14900 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14901 % U+00B7 MIDDLE DOT; middot, *periodcentered
14902 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14903 % U+00B8 CEDILLA; cedilla
14904 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14905 % U+00B9 SUPERSCRIPT ONE; onesuperior
14906 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
14907 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14908 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14909 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
14910 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14911 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
14912 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14913 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC

14914 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14915 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14916 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14917 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14918 % U+00BF INVERTED QUESTION MARK; questiondown
14919 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
14920 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14921 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14922 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14923 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14924 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14925 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14926 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14927 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14928 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14929 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
14930 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14931 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14932 % U+00C6 LATIN CAPITAL LETTER AE; AE
14933 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14934 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14935 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14936 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14937 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14938 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14939 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14940 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14941 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14942 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14943 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14944 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14945 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14946 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14947 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14948 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14949 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14950 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14951 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14952 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14953 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14954 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14955 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14956 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14957 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14958 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14959 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14960 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14961 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14962 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14963 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14964 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14965 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14966 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14967 % U+00D7 MULTIPLICATION SIGN; multiply

14968 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14969 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14970 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14971 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14972 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14973 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14974 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14975 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14976 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14977 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14978 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14979 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14980 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14981 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14982 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14983 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
14984 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14985 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14986 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14987 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
14988 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14989 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
14990 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14991 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
14992 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14993 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
14994 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14995 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
14996 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14997 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
14998 % U+00E6 LATIN SMALL LETTER AE; ae
14999 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15000 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15001 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15002 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15003 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15004 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15005 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15006 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15007 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15008 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15009 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15010 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15011 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15012 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
15013 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15014 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15015 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15016 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15017 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15018 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15019 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15020 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15021 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF

15022 % U+00F0 LATIN SMALL LETTER ETH; eth
 15023 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 15024 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 15025 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
 15026 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15027 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 15028 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15029 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
 15030 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15031 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
 15032 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 15033 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 15034 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 15035 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
 15036 % U+00F7 DIVISION SIGN; divide
 15037 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 15038 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 15039 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 15040 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 15041 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 15042 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 15043 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 15044 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 15045 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 15046 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 15047 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
 15048 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15049 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
 15050 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
 15051 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 15052 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
 15053 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15054 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
 15055 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A
 Glyphs that consist of several characters.
 15056 \DeclareTextCommand{\SS}{PD1}{SS}%
 15057 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%
 Aliases (german.sty)
 15058 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
 15059 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
 15060 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
 15061 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
 15062 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
 15063 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
 15064 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
 15065 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%
 Aliases (math names)
 15066 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
 15067 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
 15068 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
 15069 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
 15070 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
 15071 \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).

```

15072 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15073 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15074 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15075 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15076 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15077 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15078 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15079 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15080 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15081 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15082 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15083 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15084 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15085 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15086 \end{pd1enc}

```

46.2 PU encoding

```

15087 \begin{puenc}
15088 \DeclareFontEncoding{PU}{}{}

```

46.2.1 NFSS2 accents

```

15089 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15090 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15091 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15092 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15093 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15094 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15095 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15096 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15097 % U+0304 COMBINING MACRON; macroncmb
15098 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15099 % U+0306 COMBINING BREVE; brevecmb
15100 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15101 \ifx\CYRDZE@undefined \else
15102 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15103 \fi
15104 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15105 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15106 % U+0308 COMBINING DIAERESIS; dieresiscmb
15107 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15108 % U+030A COMBINING RING ABOVE; ringcmb
15109 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15110 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15111 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15112 % U+030C COMBINING CARON; caroncmb
15113 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15114 \end{puenc}
15115 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15116 \puextra\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15117 \begin{puenc}

```

```

15118 \ifx\CYRDZE\@undefined \else
15119 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15120 \fi
15121 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15122 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15123 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15124 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15125 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15126 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15127 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15128 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15129 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15130 % U+0327 COMBINING CEDILLA; cedillacmb
15131 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15132 % U+0328 COMBINING OGONEK; ogonekcmb
15133 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15134 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15135 % \textsubcircum (tipa)
15136 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15137 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15138 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15139 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15140 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15141 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15142 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15143 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15144 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15145 % U+20DD COMBINING ENCLOSING CIRCLE
15146 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15147 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15148 \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.

```

15149 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15150 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15151 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15152 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15153 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15154 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15155 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15156 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15157 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15158 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15159 </puenc>
15160 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15161 <*puenc>
15162 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15163 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15164 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15165 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{ \83\021\}}% U+0311

```


15166 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
15167 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15168 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
low}%
15169 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
15170 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
15171 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15172 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15173 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15174 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15175 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15176 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
15177 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
15178 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15179 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15180 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
15181 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15182 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15183 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15184 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15185 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15186 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15187 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15188 </puenc>
15189 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15190 <*puenc>
15191 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15192 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15193 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15194 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
15195 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
15196 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
15197 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcirc-
low}%
15198 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
15199 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
15200 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15201 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15202 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15203 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15204 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15205 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
15206 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)
15207 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15208 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15209 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15210 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15211 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15212 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15213 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15214 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15215 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15216 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%

```

15217 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15218 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15219 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1\}}%
15220 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15221 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

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

Special white space escape characters.

```

15222 % U+0009 (CHARACTER TABULATION)
15223 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15224 % U+000A (LINE FEED)
15225 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15226 % U+000D (CARRIAGE RETURN)
15227 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

15228 % U+0022 QUOTATION MARK; quotedbl
15229 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15230 % U+0023 NUMBER SIGN; numbersign
15231 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15232 % U+0024 DOLLAR SIGN; dollar
15233 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
15234 %* \textdollar -> \mathdollar
15235 %* \textdollar -> \EyesDollar (marvosym)
15236 % U+0025 PERCENT SIGN; percent
15237 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15238 % U+0026 AMPERSAND; ampersand
15239 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15240 %* \textampersand -> \binampersand (stmaryrd)
15241 %* \textampersand -> \with (cml)
15242 % U+0027 APOSTROPHE; quotesingle
15243 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15244 % U+0028 LEFT PARENTHESIS; parenleft
15245 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15246 % U+0029 RIGHT PARENTHESIS; parenright
15247 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15248 % U+002A ASTERISK; asterisk; (?)
15249 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15250 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15251 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15252 % U+002C COMMA; comma; \MVComma (marvosym)
15253 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15254 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15255 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15256 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15257 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15258 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15259 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15260 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15261 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15262 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15263 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15264 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)

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15265 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 15266 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 15267 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 15268 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 15269 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
 15270 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 15271 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
 15272 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 15273 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 15274 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15275 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15276 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15277 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15278 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15279 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 15280 % U+003C LESS-THAN SIGN; less
 15281 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 15282 % U+003E GREATER-THAN SIGN; greater
 15283 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 15284 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 15285 \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
 15286 % U+005C REVERSE SOLIDUS; backslash
 15287 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 15288 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15289 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 15290 % U+005F LOW LINE; underscore
 15291 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 15292 %* \textunderscore -> \mathunderscore (LaTeX)
 15293 % U+0060 GRAVE ACCENT; grave
 15294 \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
 15295 % U+0069 LATIN SMALL LETTER I; i
 15296 \DeclareTextCompositeCommand{.}{PU}{\i}{i}% \80\151 U+0069
 15297 \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
 15298 % U+007B LEFT CURLY BRACKET; braceleft

15299 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 15300 % U+007C VERTICAL LINE; *bar, verticalbar
 15301 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 15302 %* \textbar -> \textverline (tipa)
 15303 % U+007D RIGHT CURLY BRACKET; braceright
 15304 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 15305 % U+007E TILDE; asciitilde
 15306 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

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

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 15307 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15308 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 15309 % U+00A2 CENT SIGN; cent
 15310 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 15311 % U+00A3 POUND SIGN; sterling
 15312 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 15313 %* \textsterling -> \mathsterling (LaTeX)
 15314 %* \textsterling -> \pounds (LaTeX)
 15315 % U+00A4 CURRENCY SIGN; currency
 15316 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 15317 % U+00A5 YEN SIGN; yen
 15318 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 15319 % U+00A6 BROKEN BAR; brokenbar
 15320 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 15321 %* \textbrokenbar -> \brokenvert (wasysym)
 15322 % U+00A7 SECTION SIGN; section
 15323 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 15324 %* \textsection -> \mathsection (LaTeX)
 15325 %* \textsection -> \S (LaTeX)
 15326 % U+00A8 DIAERESIS; dieresis
 15327 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 15328 % U+00A9 COPYRIGHT SIGN; copyright
 15329 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 15330 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15331 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 15332 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
 15333 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 15334 \DeclareTextCommand{\guillemetleft}{PU}{\80\253}% U+00AB
 15335 % U+00AC NOT SIGN; logicalnot
 15336 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 15337 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 15338 % U+00AE REGISTERED SIGN; registered
 15339 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 15340 % U+00AF MACRON; *macron, overscore
 15341 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 15342 % U+00B0 DEGREE SIGN; degree
 15343 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 15344 % U+00B1 PLUS-MINUS SIGN; plusminus
 15345 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 15346 % U+00B2 SUPERSCRIPT TWO; twosuperior

15347 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15348 % U+00B3 SUPERSCRIP T THREE; threesuperior
15349 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15350 % U+00B4 ACUTE ACCENT; acute
15351 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15352 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15353 % U+00B5 MICRO SIGN; mu, mu1
15354 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15355 % U+00B6 PILCROW SIGN; paragraph
15356 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15357 %* \textparagraph -> \mathparagraph (LaTeX)
15358 % U+00B7 MIDDLE DOT; middot, *periodcentered
15359 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15360 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15361 %* \textperiodcentered -> \Squaredot (marvosym)
15362 % U+00B8 CEDILLA; cedilla
15363 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15364 % U+00B9 SUPERSCRIP T ONE; onesuperior
15365 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15366 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15367 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15368 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
15369 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15370 \DeclareTextCommand{\guillemetright}{PU}{\80\273}% U+00BB
15371 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15372 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15373 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15374 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15375 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15376 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15377 % U+00BF INVERTED QUESTION MARK; questiondown
15378 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15379 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15380 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15381 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15382 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15383 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15384 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15385 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15386 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15387 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15388 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15389 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15390 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15391 % U+00C6 LATIN CAPITAL LETTER AE; AE
15392 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15393 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15394 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15395 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15396 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15397 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15398 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15399 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15400 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA

15401 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15402 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
15403 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15404 \DeclareTextCompositeCommand{"}{PU}{I}{\80\314}% U+00CC
15405 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15406 \DeclareTextCompositeCommand{"}{PU}{I}{\80\315}% U+00CD
15407 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15408 \DeclareTextCompositeCommand{"}{PU}{I}{\80\316}% U+00CE
15409 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15410 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
15411 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15412 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15413 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15414 \DeclareTextCompositeCommand{"}{PU}{N}{\80\321}% U+00D1
15415 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15416 \DeclareTextCompositeCommand{"}{PU}{O}{\80\322}% U+00D2
15417 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15418 \DeclareTextCompositeCommand{"}{PU}{O}{\80\323}% U+00D3
15419 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15420 \DeclareTextCompositeCommand{"}{PU}{O}{\80\324}% U+00D4
15421 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15422 \DeclareTextCompositeCommand{"}{PU}{O}{\80\325}% U+00D5
15423 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15424 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
15425 % U+00D7 MULTIPLICATION SIGN; multiply
15426 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15427 %* \textmultiply -> \vartimes (stmaryrd)
15428 %* \textmultiply -> \MVMultiplication (marvosym)
15429 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15430 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15431 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15432 \DeclareTextCompositeCommand{"}{PU}{U}{\80\331}% U+00D9
15433 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15434 \DeclareTextCompositeCommand{"}{PU}{U}{\80\332}% U+00DA
15435 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15436 \DeclareTextCompositeCommand{"}{PU}{U}{\80\333}% U+00DB
15437 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15438 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
15439 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15440 \DeclareTextCompositeCommand{"}{PU}{Y}{\80\335}% U+00DD
15441 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15442 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15443 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15444 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15445 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15446 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15447 \DeclareTextCompositeCommand{"}{PU}{a}{\80\340}% U+00E0
15448 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15449 \DeclareTextCompositeCommand{"}{PU}{a}{\80\341}% U+00E1
15450 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15451 \DeclareTextCompositeCommand{"}{PU}{a}{\80\342}% U+00E2
15452 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15453 \DeclareTextCompositeCommand{"}{PU}{a}{\80\343}% U+00E3
15454 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis

15455 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\344}% U+00E4
15456 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15457 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15458 % U+00E6 LATIN SMALL LETTER AE; ae
15459 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15460 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15461 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15462 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15463 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15464 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15465 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15466 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15467 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15468 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15469 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15470 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15471 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15472 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15473 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15474 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15475 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15476 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15477 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15478 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15479 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15480 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15481 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15482 % U+00F0 LATIN SMALL LETTER ETH; eth
15483 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15484 %* \dh -> \eth (wsuipa, phonetic)
15485 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15486 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15487 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15488 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15489 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15490 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15491 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15492 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15493 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15494 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15495 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15496 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15497 % U+00F7 DIVISION SIGN; divide
15498 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15499 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15500 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15501 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15502 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15503 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15504 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15505 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15506 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15507 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15508 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC

15509 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15510 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 15511 % U+00FE LATIN SMALL LETTER THORN; thorn;
 15512 % \th, \thorn (wasysym), \textthorn (tipa)
 15513 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 15514 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 15515 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15516 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

15517 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 15518 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 15519 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 15520 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 15521 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 15522 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 15523 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 15524 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 15525 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 15526 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 15527 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 15528 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 15529 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 15530 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 15531 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 15532 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 15533 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 15534 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 15535 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 15536 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 15537 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
 cent
 15538 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 15539 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 15540 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 15541 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 15542 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 15543 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 15544 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 15545 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 15546 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 15547 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 15548 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 15549 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 15550 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 15551 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
 15552 % \textcrd (tipa)
 15553 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 15554 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
 15555 %* \textcrd -> \crossd (wsuipa)
 15556 % An alternate glyph with the stroke through the bowl:
 15557 %* \textcrd -> \textbard (tipa)
 15558 %* \textcrd -> \bard (wsuipa)

15559 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15560 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15561 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15562 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15563 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15564 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15565 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15566 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15567 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15568 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15569 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15570 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15571 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15572 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15573 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15574 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15575 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15576 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15577 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15578 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15579 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15580 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15581 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15582 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15583 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15584 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15585 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15586 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15587 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15588 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15589 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15590 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15591 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcomma-
maaccent
15592 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15593 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15594 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15595 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15596 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15597 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15598 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15599 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15600 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15601 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15602 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15603 %* \texthbar -> \textcrh (tipa)
15604 %* \texthbar -> \crossh (wsuipa)
15605 %* \texthbar -> \planck (phonetic)
15606 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15607 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15608 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15609 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15610 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129

```

15611 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15612 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15613 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15614 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15615 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15616 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15617 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15618 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15619 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15620 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15621 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15622 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15623 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15624 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15625 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15626 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15627 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15628 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15629 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15630 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15631 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15632 % U+0133 LATIN SMALL LIGATURE IJ; ij
15633 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15634 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15635 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15636 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15637 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15638 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15639 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
15640 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
15641 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
15642 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

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

```

15643 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
15644 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15645 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15646 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15647 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15648 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15649 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
15650 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15651 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15652 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15653 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15654 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15655 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15656 \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.`
15657 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
15658 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15659 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15660 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15661 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15662 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15663 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15664 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15665 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15666 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
15667 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15668 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
15669 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
15670 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15671 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15672 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15673 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15674 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15675 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15676 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15677 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
trophe, quoterightn
15678 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15679 % U+014A LATIN CAPITAL LETTER ENG; Eng
15680 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15681 % U+014B LATIN SMALL LETTER ENG; eng
15682 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15683 %* \ng -> \eng (wsuipa)
15684 %* \ng -> \engma (phonetic)
15685 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15686 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15687 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15688 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15689 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15690 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15691 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15692 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15693 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbla-
cute, Ohungarumlaut
15694 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15695 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
cute, ohungarumlaut
15696 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15697 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15698 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15699 % U+0153 LATIN SMALL LIGATURE OE; oe
15700 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15701 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15702 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
15703 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15704 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155

15705 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 15706 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 15707 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 15708 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 15709 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 15710 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 15711 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 15712 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 15713 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 15714 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 15715 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 15716 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 15717 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 15718 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 15719 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 15720 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 15721 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 15722 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 15723 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 15724 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 15725 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15726 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 15727 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15728 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 15729 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 15730 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 15731 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 15732 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 15733 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 15734 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 15735 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 15736 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 15737 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 15738 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 15739 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 15740 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 15741 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 15742 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 15743 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 15744 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 15745 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 15746 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 15747 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 15748 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 15749 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 15750 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 15751 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 15752 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 15753 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 15754 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 15755 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 15756 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F

15757 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 15758 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 15759 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 15760 \DeclareTextCompositeCommand{\h}{PU}{u}{\81\161}% U+0171
 15761 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 15762 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 15763 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 15764 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 15765 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 15766 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 15767 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 15768 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 15769 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 15770 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 15771 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 15772 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 15773 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15774 \DeclareTextCompositeCommand{"}{PU}{Y}{\81\170}% U+0178
 15775 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 15776 \DeclareTextCompositeCommand{'}{PU}{Z}{\81\171}% U+0179
 15777 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 15778 \DeclareTextCompositeCommand{'}{PU}{z}{\81\172}% U+017A
 15779 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 15780 \DeclareTextCompositeCommand{.}{PU}{Z}{\81\173}% U+017B
 15781 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 15782 \DeclareTextCompositeCommand{.}{PU}{z}{\81\174}% U+017C
 15783 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15784 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15785 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15786 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15787 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15788 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

15789 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 15790 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 15791 %* \textcrb -> \crossb (wsuipa)
 15792 % An alternate glyph with the stroke through the bowl:
 15793 %* \textcrb -> \textbarb (tipa)
 15794 %* \textcrb -> \barb (wsuipa)
 15795 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 15796 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 15797 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 15798 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 15799 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
 15800 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
 15801 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
 15802 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
 15803 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 15804 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin

15805 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
15806 %* \textflorin -> \Florin (marvosym)
15807 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
15808 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
15809 %* \texthvlig -> \hv (wsuipa)
15810 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
15811 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
15812 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texththk (tipa)
15813 \DeclareTextCommand{\texththk}{PU}{\81\231}% U+0199
15814 %* \texththk -> \hausak (phonetic)
15815 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
15816 % \textbarl (tipa), \barl (wsuipa)
15817 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
15818 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
15819 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
15820 % \textcrlambda (tipa)
15821 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
15822 %* \textcrlambda -> \crossnilambda (wsuipa)
15823 %* \textcrlambda -> \barlambd (phonetic)
15824 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
15825 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
15826 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegrightlong;
15827 % \textnrleg (tipx)
15828 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
15829 %* \textPUnrleg -> \textnrleg (tipx)
15830 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
15831 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
15832 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
15833 % \textlhookt (tipa)
15834 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
15835 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
15836 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
15837 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
15838 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
15839 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
15840 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
15841 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
15842 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
15843 % glottalinvertedstroke; \textcrinvglotstop (tipa)
15844 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
15845 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
15846 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
15847 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickdental;
15848 % \textpipe (tipa)
15849 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
15850 %* \textpipe -> \textpipevar (tipx)
15851 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
15852 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
15853 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
15854 %* \textdoublepipe -> \textdoublepipevar (tipx)
15855 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-

BLE BAR;

15856 % clickalveolar; \textdoublebarpipe (tipa)

15857 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2

15858 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)

15859 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron

15860 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD

15861 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron

15862 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE

15863 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron

15864 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF

15865 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron

15866 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0

15867 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0

15868 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron

15869 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1

15870 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron

15871 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2

15872 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron

15873 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3

15874 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron

15875 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4

15876 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)

15877 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD

15878 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke

15879 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4

15880 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke

15881 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

15882 %* \textgslash -> \textcrg (tipa)

15883 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron

15884 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6

15885 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron

15886 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7

15887 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron

15888 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8

15889 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron

15890 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9

15891 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek

15892 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA

15893 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek

15894 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB

15895 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron

15896 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0

15897 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0

15898 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute

15899 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4

15900 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute

15901 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5

15902 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE

15903 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8

15904 % U+01F9 LATIN SMALL LETTER N WITH GRAVE

15905 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9

15906 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute

15907 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC

15908 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

15909 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
15910 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
15911 % *Oslashacute, Ostrokeacut
15912 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
15913 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
15914 % *oslashacute, ostrokeacute
15915 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
15916 \</puenc>
15917 \<puextra>
15918 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
15919 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
15920 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
15921 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
15922 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
15923 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
15924 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
15925 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
15926 \</puextra>
15927 \<puenc>
15928 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
15929 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
15930 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
15931 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
15932 \</puenc>
15933 \<puextra>
15934 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15935 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15936 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15937 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15938 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15939 \</puextra>
15940 \<puenc>
15941 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
15942 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15943 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
15944 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15945 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15946 \</puenc>
15947 \<puextra>
15948 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
15949 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15950 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15951 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15952 \</puextra>
15953 \<puenc>
15954 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
15955 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15956 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve

15957 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15958 (/puenc)
15959 (*puextra)
15960 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15961 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15962 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15963 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15964 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15965 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
15966 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
15967 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
15968 (/puextra)
15969 (*puenc)
15970 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
15971 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
15972 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
15973 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
15974 % U+021E LATIN CAPITAL LETTER H WITH CARON
15975 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
15976 % U+021F LATIN SMALL LETTER H WITH CARON
15977 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
15978 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
15979 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
15980 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
15981 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
15982 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
15983 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
15984 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
15985 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
15986 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
15987 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
15988 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
15989 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
15990 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
15991 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
15992 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
15993 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
15994 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
15995 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
15996 % U+0233 LATIN SMALL LETTER Y WITH MACRON
15997 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
15998 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
15999 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
16000 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
16001 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
16002 % U+0237 LATIN SMALL LETTER DOTLESS J
16003 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
16004 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
16005 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
16006 %* \textPUdblig -> \textdblig (tipx)
16007 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
16008 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239

16009 %* \textPUqplig -> \textqplig (tipx)
 16010 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16011 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16012 %* \textslashc -> \textcentoldstyle (textcomp)
 16013 % With bar instead of stroke:
 16014 %* \textslashc -> \textbarc (tipa)

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

16015 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16016 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16017 %* \textturna -> \inva (wasysym)
 16018 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16019 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16020 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16021 %* \textscripta -> \vara (phonetic)
 16022 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16023 % \textturnscripta (tipa)
 16024 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16025 %* \textturnscripta -> \invscripta (wsuipa)
 16026 %* \textturnscripta -> \rotvara (phonetic)
 16027 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16028 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16029 %* \texthtb -> \hookb (wsuipa)
 16030 %* \texthtb -> \hausab (phonetic)
 16031 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16032 % \textopeno (tipa), \openo (wasysym)
 16033 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16034 %* \textopeno -> \varopeno (phonetic)
 16035 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16036 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16037 %* \textctc -> \curlyc (wsuipa)
 16038 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaid (tipa)
 16039 \DeclareTextCommand{\textrtaid}{PU}{\82\126}%* U+0256
 16040 %* \textrtaid -> \taid (wsuipa)
 16041 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16042 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16043 %* \texthtd -> \hookd (wsuipa)
 16044 %* \texthtd -> \hausad (phonetic)
 16045 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16046 % \textreve (tipa), \reve (wsuipa)
 16047 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16048 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16049 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16050 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16051 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16052 % \textrhookschwa (tipa)
 16053 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16054 %* \textrhookschwa -> \er (wsuipa)
 16055 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 % SILON; eopen;
 16056 % \niepsilon (wsuipa)
 16057 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16058 %* \textniepsilon -> \epsi (phonetic)
 16059 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;

16060 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16061 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
16062 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-reversedhook;
16063 % \textrhookrevepsilon (tipa)
16064 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16065 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16066 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenreversedclosed;
16067 % \textcloserevepsilon (tipa)
16068 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16069 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16070 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdotlessstroke;
16071 % \textbardotlessj (tipa)
16072 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16073 %* \textbardotlessj -> \barj (phonetic)
16074 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16075 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16076 %* \texthtg -> \hookg (wsuipa)
16077 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16078 % \textscriptg (tipa), \scriptg (wsuipa)
16079 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16080 %* \textscriptg -> \varg (phonetic)
16081 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16082 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16083 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16084 % \ipagamma (wsuipa), \vod (phonetic)
16085 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16086 %* \textipagamma -> \vod (pnonetic)
16087 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16088 % \babygamma (wsuipa)
16089 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16090 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16091 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16092 %* \textturnh -> \invh (wsuipa)
16093 %* \textturnh -> \udesc (phonetic)
16094 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16095 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16096 %* \texthth -> \hookh (wsuipa)
16097 %* \texthth -> \voicedh (phonetic)
16098 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
16099 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16100 %* \texththeng -> \hookheng (wsuipa)
16101 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16102 % \textbari (tipa), \bari (wsuipa)
16103 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16104 %* \textbari -> \ibar (phonetic)
16105 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16106 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16107 %* \textniiota -> \vari (phonetic)
16108 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16109 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A

16110 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16111 % \textltilde (tipa)
 16112 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16113 %* \textltilde -> \tildel (wsuipa)
 16114 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16115 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16116 %* \textbeltl -> \latfric (wsuipa)
 16117 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16118 % lhookretroflex; \textrtaill (tipa)
 16119 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
 16120 %* \textrtaill -> \taill (wsuipa)
 16121 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
 16122 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
 16123 %* \textlyoghlig -> \lz (wsuipa)
 16124 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
 16125 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
 16126 %* \textturnm -> \invm (wsuipa)
 16127 %* \textturnm -> \rotm (phonetic)
 16128 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
 turned;
 16129 % \textturnmrleg (tipa)
 16130 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
 16131 %* \textturnmrleg -> \legm (wsuipa)
 16132 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
 16133 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
 16134 %* \textltailm -> \labdentainas (wsuipa)
 16135 %* \textltailm -> \emgma (phonetic)
 16136 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
 tailn (tipa)
 16137 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
 16138 %* \textltailn -> \nj (wsuipa)
 16139 %* \textltailn -> \enya (phonetic)
 16140 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
 16141 % nhookretroflex; \textrtailn (tipa)
 16142 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
 16143 %* \textrtailn -> \tailn (wsuipa)
 16144 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
 16145 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
 16146 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
 16147 % LATIN CAPITAL LETTER BARRED O; obarred;
 16148 % \textbaro (tipa), \baro (wsuipa)
 16149 % But \baro from stmaryrd is different!
 16150 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
 16151 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoelig (tipa)
 16152 \DeclareTextCommand{\textscoelig}{PU}{\82\166}% U+0276
 16153 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
 16154 % \textcloseomega (tipa)
 16155 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
 16156 %* \textcloseomega -> \closedniomega (wsuipa)
 16157 %* \textcloseomega -> \varomega (phonetic)
 16158 % U+0278 LATIN SMALL LETTER PHI; philatin; \nippi (wsuipa)
 16159 \DeclareTextCommand{\textnippi}{PU}{\82\170}%* U+0278
 16160 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
 16161 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279

16162 %* \textturnr -> \invr (wsuipa)
16163 %* \textturnr -> \rotr (phonetic)
16164 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16165 % rlonglegturned; \textturnlonglegr (tipa)
16166 \DeclareTextCommand{\textturnlonglegr}{PU}{\82\172}% U+027A
16167 %* \textturnlonglegr -> \invlegr (wsuipa)
16168 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhocturned;
16169 % \textturnrrtail (tipa)
16170 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16171 %* \textturnrrtail -> \tailinvr (wsuipa)
16172 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
16173 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}% U+027C
16174 %* \textlonglegr -> \legr (wsuipa)
16175 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoct; \textrtailr (tipa)
16176 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16177 %* \textrtailr -> \tailr (wsuipa)
16178 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16179 % \textfishhookr (tipa)
16180 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16181 %* \textfishhookr -> \flapr (wsuipa)
16182 %* \textfishhookr -> \flap (phonetic)
16183 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16184 % \textlhtlongi (tipa)
16185 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16186 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16187 \DeclareTextCommand{\textscr}{PU}{\82\200}% U+0280
16188 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16189 % \textinvscr (tipa), \invscr (wsuipa)
16190 \DeclareTextCommand{\textinvscr}{PU}{\82\201}% U+0281
16191 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16192 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16193 %* \textrtails -> \tails (wsuipa)
16194 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16195 \DeclareTextCommand{\textesh}{PU}{\82\203}% U+0283
16196 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16197 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16198 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16199 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
16200 % \textvibyi (tipa)
16201 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16202 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16203 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16204 %* \textctesh -> \curlyesh (wsuipa)
16205 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16206 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16207 %* \textturnt -> \clickt (wsuipa)
16208 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
16209 % \textrtailt (tipa)
16210 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16211 %* \textrtailt -> \tailt (wsuipa)

16212 % U+0289 LATIN SMALL LETTER U BAR; ubar;
 16213 % \textbaru (tipa), \baru (wsuipa)
 16214 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
 16215 %* \textbaru -> \ubar (phonetic)
 16216 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
 16217 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
 16218 %* \textniupsilon -> \rotOmega (phonetic)
 16219 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
 16220 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
 16221 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
 16222 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
 16223 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
 16224 %* \textturnv -> \invv (wsuipa)
 16225 %* \textturnv -> \pwedge (phonetic)
 16226 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
 16227 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
 16228 %* \textturnw -> \invw (wsuipa)
 16229 %* \textturnw -> \rotw (phonetic)
 16230 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
 16231 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
 16232 %* \textturny -> \invy (wsuipa)
 16233 %* \textturny -> \roty (phonetic)
 16234 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
 16235 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
 16236 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
 16237 % \textrtailz (tipa)
 16238 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
 16239 %* \textrtailz -> \tailz (wsuipa)
 16240 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
 16241 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
 16242 %* \textctz -> \curlyz (wsuipa)
 16243 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
 16244 % \textyogh (tipa), \yogh (wsuipa)
 16245 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
 16246 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
 16247 % ezhcurl; \textctyogh (tipa)
 16248 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
 16249 %* \textctyogh -> \curlyyogh (wsuipa)
 16250 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
 16251 % \textglotstop (tipa), \glotstop (wsuipa)
 16252 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
 16253 %* \textglotstop -> \ejective (wsuipa)
 16254 %* \textglotstop -> \glottal (phonetic)
 16255 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
 16256 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
 16257 % \textrevglotstop (tipa), \revglotstop (wsuipa)
 16258 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
 16259 %* \textrevglotstop -> \reveject (wsuipa)
 16260 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
 16261 % \textinvglotstop (tipa), \invglotstop (wsuipa)
 16262 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296

16263 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16264 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16265 %* \textstretchc -> \clickc (wsuipa)
16266 %* \textstretchc -> \textstretchcvar (tipx)
16267 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16268 % \textbullseye (tipa)
16269 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16270 %* \textbullseye -> \clickb (wsuipa)
16271 %* \textbullseye -> \textObullseye (tipx)
16272 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16273 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16274 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16275 % \textcloseepsilon (tipa)
16276 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16277 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16278 % \texthtscg (tipa)
16279 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16280 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16281 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16282 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
tail; \textcdj (tipa)
16283 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16284 %* \textctj -> \textctjvar (tipx)
16285 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16286 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16287 %* \textturnk -> \textturnsck (tipx)
16288 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16289 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16290 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16291 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16292 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16293 % \textbarglotstop (tipa)
16294 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16295 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16296 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16297 % \textbarrevglotstop (tipa)
16298 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16299 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16300 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16301 %* \textdzlig -> \dz (wsuipa)
16302 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
16303 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
16304 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
16305 % \textdctzlig (tipa)
16306 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
16307 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
16308 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
16309 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
16310 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
16311 %* \texttshlig -> \tesh (wsuipa)
16312 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;

16313 % \texttctclig (tipa)
 16314 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16315 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16316 % \textlhtlongy (tipa)
 16317 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16318 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16319 % \textvibyy (tipa)
 16320 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

16321 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16322 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16323 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16324 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16325 % \textraiseglotstop (tipa)
 16326 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16327 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16328 % \textlptr (tipa)
 16329 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16330 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16331 % \textrptr (tipa)
 16332 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16333 % U+02C7 CARON; caron
 16334 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16335 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16336 % \textprimstress (tipa)
 16337 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16338 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16339 % \textsecstress (tipa)
 16340 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 16341 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 16342 % \textlengthmark (tipa)
 16343 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16344 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 16345 % \texthalflength (tipa)
 16346 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 16347 % U+02D8 BREVE; breve
 16348 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16349 % U+02D9 DOT ABOVE; dotaccent
 16350 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16351 % U+02DA RING ABOVE; ring
 16352 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16353 % U+02DB OGONEK; ogonek
 16354 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 16355 % U+02DC SMALL TILDE; ilde, *tilde
 16356 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 16357 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 16358 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 16359 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 16360 % U+02F3 MODIFIER LETTER LOW RING
 16361 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 16362 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 16363 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5


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16364 % U+02F7 MODIFIER LETTER LOW TILDE
16365 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16366 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16367 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16368 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16369 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

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16370 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16371 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16372 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16373 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
16374 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
16375 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
16376 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16377 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
16378 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
16379 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

Greek is only loaded if \textBeta is defined.

```

16380 \ifx\textBeta\@undefined \else
16381 \input{puenc-greekbasic.def}
16382 \fi
16383 </puenc>
16384 (*pugreek)
16385 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
16386 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
16387 \DeclareTextCommand{\textdexiakeraia}{PU}{\83\164}% U+0374
16388 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
16389 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
16390 \DeclareTextCommand{\textaristerikeraia}{PU}{\83\165}% U+0375
16391 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
16392 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
16393 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
16394 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
16395 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
16396 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
16397 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
16398 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
16399 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
    crontonos
16400 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
16401 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
16402 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
16403 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
16404 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
16405 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
16406 % iotadieresisnos
16407 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
16408 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
16409 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
16410 % U+0392 GREEK CAPITAL LETTER BETA; Beta

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16411 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
16412 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
16413 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
16414 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
16415 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
16416 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
16417 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
16418 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
16419 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
16420 % U+0397 GREEK CAPITAL LETTER ETA; Eta
16421 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
16422 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
16423 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
16424 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
16425 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
16426 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
16427 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
16428 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
16429 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
16430 % U+039C GREEK CAPITAL LETTER MU; Mu
16431 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
16432 % U+039D GREEK CAPITAL LETTER NU; Nu
16433 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
16434 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16435 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16436 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16437 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16438 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16439 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16440 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16441 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16442 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16443 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16444 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16445 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16446 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16447 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16448 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16449 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16450 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16451 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16452 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16453 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16454 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16455 % \Omega (LaTeX)
16456 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16457 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16458 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16459 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16460 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
16461 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16462 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos

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16463 \DeclareTextCompositeCommand{\'}{PU}{\textalpha}{\83\254}%* U+03AC
16464 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon-tonos
16465 \DeclareTextCompositeCommand{\'}{PU}{\textepsilon}{\83\255}% U+03AD
16466 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; eta-tonos
16467 \DeclareTextCompositeCommand{\'}{PU}{\texteta}{\83\256}% U+03AE
16468 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iota-tonos
16469 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\257}% U+03AF
16470 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16471 % AND TONOS; upsilon-dieresisto
16472 \DeclareTextCompositeCommand{\"}{PU}{\textupsilonacute}{\83\260}% U+03B0
16473 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16474 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16475 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16476 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
16477 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
16478 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
16479 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
16480 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
16481 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
16482 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
16483 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
16484 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
16485 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
16486 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
16487 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
16488 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
16489 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
16490 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
16491 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
16492 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
16493 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
16494 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
16495 % U+03BC GREEK SMALL LETTER MU; mugreek; *mu; \mu (LaTeX)
16496 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
16497 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
16498 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
16499 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
16500 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
16501 % U+03BF GREEK SMALL LETTER OMICRON; omicron
16502 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
16503 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
16504 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
16505 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
16506 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
16507 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
16508 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
16509 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
16510 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
16511 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
16512 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
16513 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
16514 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
16515 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
16516 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6

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16517 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
16518 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
16519 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
16520 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
16521 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
16522 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
16523 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
16524 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
16525 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
    silondieresis
16526 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
16527 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
16528 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
16529 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
16530 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
16531 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
16532 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
16533 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
16534 % U+03D8 GREEK LETTER ARCHAIC KOPPA;
16535 \DeclareTextCommand{\textQoppa}{PU}{\83\330}% U+03D8
16536 % U+03D9 GREEK SMALL LETTER ARCHAIC KOPPA;
16537 \DeclareTextCommand{\textqoppa}{PU}{\83\331}% U+03D9
16538 % U+03DA GREEK LETTER STIGMA; Stigmatreek
16539 \DeclareTextCommand{\textStigmatreek}{PU}{\83\332}% U+03DA
16540 \DeclareTextCommand{\textStigma}{PU}{\83\332}% U+03DA
16541 % U+03DB GREEK SMALL LETTER STIGMA
16542 \DeclareTextCommand{\textstigmatreek}{PU}{\83\333}% U+03DB
16543 \DeclareTextCommand{\textstigma}{PU}{\83\333}% U+03DB
16544 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
16545 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
16546 \DeclareTextCommand{\textDigamma}{PU}{\83\334}% U+03DC
16547 % U+03DD GREEK SMALL LETTER DIGAMMA
16548 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
16549 \DeclareTextCommand{\textdigamma}{PU}{\83\335}% U+03DD
16550 %* \textdigammagreek -> \digamma (AmS)
16551 % U+03DE GREEK LETTER KOPPA; Koppagreek
16552 \DeclareTextCommand{\textKoppa}{PU}{\83\336}% U+03DE
16553 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
16554 % U+03DF GREEK SMALL LETTER KOPPA
16555 \DeclareTextCommand{\textkoppa}{PU}{\83\337}% U+03DF
16556 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
16557 % U+03E0 GREEK LETTER SAMPI; Sampigreek
16558 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
16559 \DeclareTextCommand{\textSampi}{PU}{\83\340}% U+03E0
16560 % U+03E1 GREEK SMALL LETTER SAMPI
16561 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
16562 \DeclareTextCommand{\textsampi}{PU}{\83\341}% U+03E1
16563 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
16564 % \backepsilon (AmS)
16565 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6
16566 \pugreek

```

46.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names. Cyrillic only loaded if \CYRDZE is defined.

```
16567 (*puenc)
16568 \ifx\CYRDZE\@undefined \else
16569 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16570 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
16571 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
16572 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16573 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16574 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
16575 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16576 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
16577 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16578 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
16579 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16580 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16581 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16582 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16583 % Icyrrilic, *afii10055
16584 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16585 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
16586 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16587 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
16588 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16589 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16590 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16591 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16592 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16593 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16594 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16595 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16596 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
16597 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
16598 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16599 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
16600 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
16601 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16602 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
16603 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrrilic, *afii10145
16604 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16605 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16606 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16607 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16608 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16609 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16610 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16611 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16612 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
16613 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
16614 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
16615 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
16616 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
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16617 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
16618 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
16619 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
16620 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
16621 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
16622 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
16623 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
16624 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
16625 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
16626 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
16627 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
16628 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
16629 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
16630 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
16631 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
16632 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
16633 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
16634 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
16635 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
16636 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
16637 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
16638 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
16639 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
16640 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16641 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16642 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
16643 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16644 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16645 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16646 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16647 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16648 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16649 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16650 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
16651 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16652 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16653 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16654 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16655 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16656 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16657 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16658 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16659 % Hardsigncyrillic, *afii10044
16660 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16661 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16662 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16663 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16664 % Softsigncyrillic, *afii10046
16665 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16666 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
16667 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16668 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
16669 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16670 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049

16671 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16672 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16673 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16674 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16675 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16676 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16677 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16678 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16679 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16680 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16681 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16682 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16683 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16684 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
16685 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
16686 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
16687 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16688 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
16689 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16690 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16691 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16692 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16693 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16694 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16695 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16696 \DeclareTextCommand{\cyl}{PU}{\84\073}% U+043B
16697 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
16698 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
16699 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
16700 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
16701 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16702 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
16703 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
16704 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
16705 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
16706 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
16707 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
16708 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
16709 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
16710 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
16711 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
16712 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
16713 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
16714 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
16715 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
16716 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
16717 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
16718 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
16719 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
16720 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
16721 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
16722 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
16723 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
16724 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449

16725 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyril-
 lic
 16726 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
 16727 %* \cyrhrdsn -> \hardsign (tipa)
 16728 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
 16729 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
 16730 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
 16731 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
 16732 %* \cyrstsn -> \softsign (tipa)
 16733 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
 16734 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
 16735 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
 16736 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
 16737 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 16738 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
 16739 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 16740 \DeclareTextCompositeCommand{\`}{PU}{\cyr}{\84\120}% U+0450
 16741 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 16742 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
 16743 \DeclareTextCompositeCommand{\"}{PU}{\cyr}{\84\121}% U+0451
 16744 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 16745 \DeclareTextCommand{\cyrDje}{PU}{\84\122}% U+0452
 16746 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 16747 \DeclareTextCompositeCommand{\'}{PU}{\cyr}{\84\123}% U+0453
 16748 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 16749 \DeclareTextCommand{\cyrIe}{PU}{\84\124}% U+0454
 16750 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 16751 \DeclareTextCommand{\cyrDze}{PU}{\84\125}% U+0455
 16752 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
 16753 % *afii10103, icyrillic
 16754 \DeclareTextCommand{\cyrIi}{PU}{\84\126}% U+0456
 16755 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 16756 \DeclareTextCommand{\cyrYi}{PU}{\84\127}% U+0457
 16757 \DeclareTextCompositeCommand{\"}{PU}{\cyrIi}{\84\127}% U+0457
 16758 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 16759 \DeclareTextCommand{\cyrJe}{PU}{\84\130}% U+0458
 16760 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 16761 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
 16762 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 16763 \DeclareTextCommand{\cyrNje}{PU}{\84\132}% U+045A
 16764 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 16765 \DeclareTextCommand{\cyrTshe}{PU}{\84\133}% U+045B
 16766 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 16767 \DeclareTextCompositeCommand{\'}{PU}{\cyrK}{\84\134}% U+045C
 16768 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 16769 \DeclareTextCompositeCommand{\`}{PU}{\cyrI}{\84\135}% U+045D
 16770 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 16771 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 16772 \DeclareTextCompositeCommand{\U}{PU}{\cyrU}{\84\136}% U+045E
 16773 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 16774 \DeclareTextCommand{\cyrDzhe}{PU}{\84\137}% U+045F
 16775 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 16776 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 16777 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic

16778 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 16779 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 16780 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 16781 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 16782 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 16783 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 16784 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 16785 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 16786 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 16787 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 16788 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 16789 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 16790 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 16791 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittlei-
 otifiedcyrillic
 16792 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 16793 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittlei-
 otifiedcyrillic
 16794 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 16795 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 16796 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 16797 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 16798 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 16799 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 16800 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 16801 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 16802 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 16803 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 16804 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 16805 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 16806 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 16807 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 16808 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 16809 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 16810 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 16811 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 16812 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 16813 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 16814 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 16815 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 16816 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 16817 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 16818 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 16819 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 GRAVE ACCENT; Izhitsadblgravecyrillic
 16820 % GRAVE ACCENT; Izhitsadblgravecyrillic
 16821 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 16822 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 GRAVE ACCENT; izhitsadblgravecyrillic
 16823 % GRAVE ACCENT; izhitsadblgravecyrillic
 16824 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 16825 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 16826 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 16827 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic

16828 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 16829 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 16830 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 16831 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 16832 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 16833 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 16834 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 16835 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 16836 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 16837 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 16838 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 16839 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 16840 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 16841 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 16842 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 16843 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 16844 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 16845 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 16846 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 16847 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 16848 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 16849 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 16850 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 16851 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 16852 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 16853 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 16854 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 16855 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 16856 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 16857 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 16858 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 16859 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 16860 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 16861 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 16862 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 16863 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 16864 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492

16865 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 16866 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 16867 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 16868 % Ghemiddlehookcyrillic
 16869 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 16870 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 16871 % ghemiddlehookcyrillic
 16872 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 16873 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 16874 % Zhedescendercyrillic
 16875 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 16876 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 16877 % zhedescendercyrillic
 16878 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 16879 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 16880 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 16881 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 16882 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 16883 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 16884 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 16885 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 16886 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 16887 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 16888 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 16889 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 16890 % Kavertikalstrokecyrillic
 16891 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 16892 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 16893 % kavertikalstrokecyrillic
 16894 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 16895 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 16896 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 16897 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 16898 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 16899 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 16900 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 16901 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 16902 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 16903 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 16904 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 16905 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 16906 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 16907 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 16908 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 16909 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 16910 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 16911 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic

16912 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
16913 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
16914 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
16915 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
16916 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
16917 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
16918 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
16919 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
16920 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
16921 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
16922 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
16923 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
16924 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
16925 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
16926 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
16927 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
16928 \DeclareTextCommand{\cyrtasc}{PU}{\84\255}% U+04AD
16929 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
16930 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
16931 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
16932 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
16933 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
16934 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
16935 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
16936 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
16937 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
16938 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
16939 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
16940 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
16941 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
16942 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
16943 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
16944 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
16945 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
16946 % Chedescendercyrillic
16947 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
16948 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
16949 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
16950 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
16951 % Cheverticalstrokecyrillic
16952 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
16953 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
16954 % cheverticalstrokecyrillic

16955 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 16956 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 16957 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 16958 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 16959 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 16960 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-cyrillic
 16961 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 16962 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 16963 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 16964 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 16965 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 16966 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 16967 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 16968 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 16969 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 16970 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 16971 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 16972 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 16973 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 16974 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 16975 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 16976 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 16977 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 16978 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 16979 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 16980 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 16981 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 16982 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 16983 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 16984 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 16985 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 16986 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 16987 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 16988 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
 16989 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 16990 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
 16991 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 16992 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 16993 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 16994 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 16995 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 16996 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 16997 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 16998 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 16999 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17000 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic

17001 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
17002 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresis Cyrillic
17003 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
17004 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aie Cyrillic
17005 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
17006 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aie Cyrillic
17007 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
17008 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrev Cyrillic
17009 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
17010 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrev Cyrillic
17011 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
17012 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwac Cyrillic
17013 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
17014 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwac Cyrillic
17015 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
17016 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
17017 % Schwadie Cyrillic
17018 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
17019 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17020 % schwadie Cyrillic
17021 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
17022 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedie-
17023 % sis Cyrillic
17023 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
17024 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedie-
17025 % sis Cyrillic
17025 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
17026 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedie-
17027 % sis Cyrillic
17027 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
17028 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedie-
17029 % sis Cyrillic
17029 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
17030 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
17031 % Cyrillic
17031 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17032 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasian Cyrillic
17033 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17034 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacron Cyrillic
17035 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
17036 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacron Cyrillic
17037 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
17038 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idie Cyrillic
17039 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
17040 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idie Cyrillic
17041 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
17042 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odie Cyrillic
17043 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
17044 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odie Cyrillic
17045 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
17046 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarred Cyrillic
17047 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

17048 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 17049 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 17050 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 17051 % Obarreddieresiscyrillic
 17052 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 17053 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 17054 % obarreddieresiscyrillic
 17055 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17056 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17057 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17058 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17059 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17060 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 17061 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 17062 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 17063 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 17064 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 17065 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 17066 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 17067 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 17068 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 17069 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 17070 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 17071 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 17072 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 17073 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 17074 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 17075 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 17076 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 17077 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 17078 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 17079 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 17080 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 17081 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 17082 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 17083 \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
 17084 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 17085 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 17086 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 17087 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 17088 \fi
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE

\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

46.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`. `hebrew` is only loaded if `\hebdalet` is defined

```
17089 \ifx\hebdalet\@undefined\else
17090 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17091 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17092 % U+05D0 HEBREW LETTER ALEF
17093 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17094 % U+05D1 HEBREW LETTER BET
17095 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17096 % U+05D2 HEBREW LETTER GIMEL
17097 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17098 % U+05D3 HEBREW LETTER DALET
17099 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17100 % U+05D4 HEBREW LETTER HE
17101 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17102 % U+05D5 HEBREW LETTER VAV
17103 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17104 % U+05D6 HEBREW LETTER ZAYIN
17105 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17106 % U+05D7 HEBREW LETTER HET
17107 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
17108 % U+05D8 HEBREW LETTER TET
17109 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17110 % U+05D9 HEBREW LETTER YOD
17111 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17112 % U+05DA HEBREW LETTER FINAL KAF
17113 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17114 % U+05DB HEBREW LETTER KAF
17115 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17116 % U+05DC HEBREW LETTER LAMED
17117 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17118 % U+05DD HEBREW LETTER FINAL MEM
17119 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
17120 % U+05DE HEBREW LETTER MEM
17121 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
17122 % U+05DF HEBREW LETTER FINAL NUN
17123 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
17124 % U+05E0 HEBREW LETTER NUN
17125 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17126 % U+05E1 HEBREW LETTER SAMEKH
17127 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17128 % U+05E2 HEBREW LETTER AYIN
17129 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
17130 % U+05E3 HEBREW LETTER FINAL PE
17131 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
17132 % U+05E4 HEBREW LETTER PE
17133 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
17134 % U+05E5 HEBREW LETTER FINAL TSADI
17135 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
17136 % U+05E6 HEBREW LETTER TSADI
```


17137 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17138 % U+05E7 HEBREW LETTER QOF
 17139 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17140 % U+05E8 HEBREW LETTER RESH
 17141 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17142 % U+05E9 HEBREW LETTER SHIN
 17143 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17144 %* \hebshin -> \hebsin (he8)
 17145 % U+05EA HEBREW LETTER TAV
 17146 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17147 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17148 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17149 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17150 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17151 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17152 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 17153 \fi

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

17154 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17155 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

17156 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17157 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17158 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17159 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17160 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17161 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17162 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17163 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17164 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17165 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17166 %* \textPUscK -> \textscK (tipx)
 17167 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 17168 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17169 %* \textPUscm -> \textscm (tipx)
 17170 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 17171 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 17172 %* \textPUscP -> \textscP (tipx)
 17173 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17174 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17175 %* \textPUrevscr -> \textrevscr (tipx)
 17176 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 17177 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 17178 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17179 \DeclareTextCommand{\textiiinferior}{PU}{\9035\142}%* U+1D62
 17180 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17181 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17182 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17183 \DeclareTextCommand{\textuiinferior}{PU}{\9035\144}%* U+1D64
 17184 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17185 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65

17186 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17187 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 17188 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17189 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 17190 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17191 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 17192 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17193 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17194 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17195 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17196 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17197 % \barsci (wsuipa)
 17198 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17199 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17200 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17201 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17202 % \barscu (wsuipa)
 17203 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

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

17204 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17205 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 17206 %* \textPURhooka -> \textrhooka (tipx)
 17207 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 17208 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17209 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 17210 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 17211 %* \textPURhooke -> \textrhooke (tipx)
 17212 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17213 % \textrhookepsilon (tipx)
 17214 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 17215 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 17216 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 17217 % \textrhookopeno (tipx)
 17218 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 17219 %* \textPURhookopeno -> \textrhookopeno (tipx)

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

17220 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17221 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17222 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17223 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17224 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17225 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 17226 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17227 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 17228 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17229 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17230 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17231 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17232 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow

17233 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
17234 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
17235 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
17236 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
17237 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
17238 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17239 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
17240 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17241 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
17242 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17243 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17244 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17245 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17246 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17247 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17248 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17249 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17250 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17251 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17252 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17253 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17254 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17255 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17256 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17257 % Emacrongrave
17258 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17259 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17260 % emacrongrave
17261 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17262 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17263 % Emacronacute
17264 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17265 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17266 % emacronacute
17267 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17268 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17269 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17270 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17271 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17272 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17273 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17274 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17275 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17276 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17277 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17278 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17279 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17280 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17281 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
17282 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron

17283 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
17284 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17285 \DeclareTextCompositeCommand{.} {PU}{H}{\9036\042}% U+1E22
17286 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17287 \DeclareTextCompositeCommand{.} {PU}{h}{\9036\043}% U+1E23
17288 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17289 \DeclareTextCompositeCommand{d} {PU}{H}{\9036\044}% U+1E24
17290 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17291 \DeclareTextCompositeCommand{d} {PU}{h}{\9036\045}% U+1E25
17292 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17293 \DeclareTextCompositeCommand{"} {PU}{H}{\9036\046}% U+1E26
17294 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17295 \DeclareTextCompositeCommand{"} {PU}{h}{\9036\047}% U+1E27
17296 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17297 \DeclareTextCompositeCommand{c} {PU}{H}{\9036\050}% U+1E28
17298 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17299 \DeclareTextCompositeCommand{c} {PU}{h}{\9036\051}% U+1E29
17300 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17301 \DeclareTextCompositeCommand{\textsubbreve} {PU}{H}{\9036\052}% U+1E2A
17302 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17303 \DeclareTextCompositeCommand{\textsubbreve} {PU}{h}{\9036\053}% U+1E2B
17304 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17305 \DeclareTextCompositeCommand{\textsubtilde} {PU}{I}{\9036\054}% U+1E2C
17306 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17307 \DeclareTextCompositeCommand{\textsubtilde} {PU}{i}{\9036\055}% U+1E2D
17308 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17309 \DeclareTextCompositeCommand{'} {PU}{K}{\9036\060}% U+1E30
17310 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17311 \DeclareTextCompositeCommand{'} {PU}{k}{\9036\061}% U+1E31
17312 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17313 \DeclareTextCompositeCommand{d} {PU}{K}{\9036\062}% U+1E32
17314 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17315 \DeclareTextCompositeCommand{d} {PU}{k}{\9036\063}% U+1E33
17316 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17317 \DeclareTextCompositeCommand{b} {PU}{K}{\9036\064}% U+1E34
17318 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17319 \DeclareTextCompositeCommand{b} {PU}{k}{\9036\065}% U+1E35
17320 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17321 \DeclareTextCompositeCommand{d} {PU}{L}{\9036\066}% U+1E36
17322 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17323 \DeclareTextCompositeCommand{d} {PU}{l}{\9036\067}% U+1E37
17324 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17325 \DeclareTextCompositeCommand{b} {PU}{L}{\9036\072}% U+1E3A
17326 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17327 \DeclareTextCompositeCommand{b} {PU}{l}{\9036\073}% U+1E3B
17328 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17329 \DeclareTextCompositeCommand{\textsubcircum} {PU}{L}{\9036\074}% U+1E3C
17330 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17331 \DeclareTextCompositeCommand{\textsubcircum} {PU}{l}{\9036\075}% U+1E3D
17332 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17333 \DeclareTextCompositeCommand{'} {PU}{M}{\9036\076}% U+1E3E
17334 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute

17335 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17336 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17337 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\100}% U+1E40
17338 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17339 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\101}% U+1E41
17340 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17341 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17342 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17343 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17344 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17345 \DeclareTextCompositeCommand{\'}{PU}{N}{\9036\104}% U+1E44
17346 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17347 \DeclareTextCompositeCommand{\'}{PU}{n}{\9036\105}% U+1E45
17348 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17349 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17350 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17351 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17352 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17353 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17354 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17355 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17356 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17357 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17358 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17359 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17360 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17361 % Omacrongrave
17362 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17363 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17364 % omacrongrave
17365 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17366 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17367 % Omacronacute
17368 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17369 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17370 % omacronacute
17371 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17372 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17373 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17374 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17375 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17376 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17377 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\126}% U+1E56
17378 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17379 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\127}% U+1E57
17380 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17381 \DeclareTextCompositeCommand{\'}{PU}{R}{\9036\130}% U+1E58
17382 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17383 \DeclareTextCompositeCommand{\'}{PU}{r}{\9036\131}% U+1E59
17384 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17385 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17386 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow

17387 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17388 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17389 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17390 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17391 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17392 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17393 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17394 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17395 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17396 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17397 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17398 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17399 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17400 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17401 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17402 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17403 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17404 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17405 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17406 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17407 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17408 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17409 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17410 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17411 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17412 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
17413 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17414 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
17415 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17416 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17417 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17418 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17419 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17420 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17421 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17422 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17423 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17424 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17425 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17426 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
17427 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17428 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17429 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17430 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17431 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17432 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17433 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17434 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow

17435 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17436 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17437 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17438 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17439 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17440 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17441 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17442 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17443 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17444 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17445 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17446 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17447 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17448 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17449 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17450 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17451 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17452 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17453 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17454 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17455 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17456 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17457 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17458 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17459 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17460 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17461 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17462 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17463 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17464 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17465 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17466 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17467 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17468 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17469 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17470 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17471 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17472 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17473 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17474 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17475 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17476 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17477 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17478 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17479 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17480 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17481 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17482 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17483 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
17484 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17485 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17486 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17487 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17488 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-

taccent

17489 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B

17490 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow

17491 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0

17492 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow

17493 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1

17494 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow

17495 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8

17496 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow

17497 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9

17498 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde

17499 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC

17500 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde

17501 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD

17502 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow

17503 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA

17504 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow

17505 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB

17506 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow

17507 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC

17508 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow

17509 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD

17510 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow

17511 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4

17512 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow

17513 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5

17514 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave

17515 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2

17516 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave

17517 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3

17518 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow

17519 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4

17520 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow

17521 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5

17522 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde

17523 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8

17524 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde

17525 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

17526 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner

17527 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C

17528 % U+2013 EN DASH; endash

17529 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013

17530 % U+2014 EM DASH; emdash

17531 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014

17532 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar

17533 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016

17534 %* \textbardbl -> \textdoublevertline (tipa)

17535 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft

17536 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018

17537 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright

17538 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019

17539 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase

17540 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
17541 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
17542 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
17543 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
17544 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
17545 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
17546 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
17547 % U+2020 DAGGER; dagger
17548 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
17549 %* \textdagger -> \dag (LaTeX)
17550 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
17551 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
17552 %* \textdaggerdbl -> \ddagger (LaTeX)
17553 %* \textdaggerdbl -> \ddag (LaTeX)
17554 % U+2022 BULLET; bullet
17555 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
17556 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
17557 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
17558 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
17559 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
17560 %* \textellipsis -> \mathellipsis
17561 % U+2030 PER MILLE SIGN; perthousand
17562 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
17563 % U+2031 PER TEN THOUSAND SIGN
17564 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
17565 % U+2032 PRIME; minute; \prime (MnSymbol)
17566 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
17567 % U+2033 DOUBLE PRIME; \second (mathabx)
17568 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
17569 % U+2034 TRIPLE PRIME; \third (mathabx)
17570 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
17571 % U+2035 REVERSED PRIME; \backprime (AmS)
17572 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
17573 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
17574 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
17575 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
inglright
17576 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
17577 % U+203B REFERENCE MARK; referencemark
17578 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
17579 % U+203D INTERROBANG
17580 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
17581 % U+2044 FRACTION SLASH; fraction
17582 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
17583 % U+2045 LEFT SQUARE BRACKET WITH QUILL
17584 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
17585 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
17586 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
17587 % U+2052 COMMERCIAL MINUS SIGN
17588 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
17589 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
17590 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
17591 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)

17592 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 17593 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17594 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

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

17595 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17596 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17597 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17598 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17599 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17600 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17601 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17602 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17603 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17604 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17605 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17606 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17607 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 17608 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 17609 % U+2079 SUPERSCRIPT NINE; ninesuperior
 17610 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 17611 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 17612 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 17613 % U+207B SUPERSCRIPT MINUS
 17614 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 17615 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 17616 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 17617 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 17618 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 17619 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 17620 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 17621 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 17622 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 17623 % U+2080 SUBSCRIPT ZERO; zeroinferior
 17624 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 17625 % U+2081 SUBSCRIPT ONE; oneinferior
 17626 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 17627 % U+2082 SUBSCRIPT TWO; twoinferior
 17628 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 17629 % U+2083 SUBSCRIPT THREE; threeinferior
 17630 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 17631 % U+2084 SUBSCRIPT FOUR; fourinferior
 17632 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 17633 % U+2085 SUBSCRIPT FIVE; fiveinferior
 17634 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 17635 % U+2086 SUBSCRIPT SIX; sixinferior
 17636 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 17637 % U+2087 SUBSCRIPT SEVEN; seveninferior
 17638 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 17639 % U+2088 SUBSCRIPT EIGHT; eightinferior
 17640 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 17641 % U+2089 SUBSCRIPT NINE; nineinferior
 17642 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 17643 % U+208A SUBSCRIPT PLUS SIGN

17644 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 17645 % U+208B SUBSCRIPT MINUS
 17646 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 17647 % U+208C SUBSCRIPT EQUALS SIGN
 17648 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 17649 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 17650 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 17651 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 17652 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 17653 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 17654 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 17655 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 17656 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 17657 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 17658 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 17659 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 17660 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 17661 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 17662 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 17663 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 17664 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 17665 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 17666 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 17667 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 17668 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 17669 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 17670 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 17671 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 17672 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 17673 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 17674 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 17675 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 17676 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 17677 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 17678 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

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

17679 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 17680 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 17681 % U+20A4 LIRA SIGN; afii08941, *lira
 17682 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 17683 % U+20A6 NAIRA SIGN
 17684 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 17685 % U+20A7 PESETA SIGN; peseta
 17686 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 17687 % U+20A9 WON SIGN; won
 17688 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 17689 % U+20AB DONG SIGN; dong
 17690 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 17691 % U+20AC EURO SIGN; *Euro, euro
 17692 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 17693 %* \texteuro -> \EurDig (marvosym)
 17694 %* \texteuro -> \EURdig (marvosym)
 17695 %* \texteuro -> \EurHv (marvosym)

17696 %* \texteuro -> \EURhv (marvosym)
 17697 %* \texteuro -> \EurCr (marvosym)
 17698 %* \texteuro -> \EURcr (marvosym)
 17699 %* \texteuro -> \EurTm (marvosym)
 17700 %* \texteuro -> \EURtm (marvosym)
 17701 %* \texteuro -> \Eur (marvosym)
 17702 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 17703 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 17704 %* \textDeleatur -> \Denarius (marvosym)
 17705 % U+20B1 PESO SIGN
 17706 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 17707 % U+20B2 GUARANI SIGN
 17708 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

17709 % U+2103 DEGREE CELSIUS; centigrade
 17710 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 17711 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 17712 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 17713 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 17714 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 17715 % U+2113 SCRIPT SMALL L (=ell, liter); affi61289, lsquare; \ell (LaTeX)
 17716 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 17717 % U+2116 NUMERO SIGN; *affi61352, numero
 17718 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 17719 % U+2117 SOUND RECORDING COPYRIGHT
 17720 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 17721 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 17722 % weierstrass; \wp (LaTeX)
 17723 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 17724 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 17725 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 17726 % U+211E PRESCRIPTION TAKE; prescription
 17727 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 17728 % U+2120 SERVICE MARK
 17729 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 17730 % U+2122 TRADE MARK SIGN; trademark
 17731 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 17732 % U+2126 OHM SIGN; Ohm, Omega
 17733 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 17734 % U+2127 INVERTED OHM SIGN
 17735 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 17736 %* \textmho -> \agemO (wasysym)
 17737 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 17738 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 17739 % U+212B ANGSTROM SIGN; angstrom
 17740 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 17741 % U+212E ESTIMATED SYMBOL; estimated
 17742 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 17743 %* \textestimated -> \EstimatedSign (marvosym)
 17744 %* \textestimated -> \Ecommerce (marvosym)
 17745 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 17746 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132

17747 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 17748 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 17749 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 17750 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 17751 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 17752 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 17753 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 17754 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 17755 % U+213B FACSIMILE SIGN; \fax (marvosym)
 17756 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 17757 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 17758 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 17759 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 17760 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 17761 %* \textinvamp -> \bindnasrepma (stmaryrd)
 17762 %* \textinvamp -> \parr (cml)

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

17763 % U+2150 VULGAR FRACTION ONE SEVENTH
 17764 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 17765 % U+2151 VULGAR FRACTION ONE NINTH
 17766 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 17767 % U+2152 VULGAR FRACTION ONE TENTH
 17768 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 17769 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17770 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17771 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17772 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 17773 % U+2155 VULGAR FRACTION ONE FIFTH
 17774 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17775 % U+2156 VULGAR FRACTION TWO FIFTHS
 17776 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17777 % U+2157 VULGAR FRACTION THREE FIFTHS
 17778 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17779 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17780 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17781 % U+2159 VULGAR FRACTION ONE SIXTH
 17782 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17783 % U+215A VULGAR FRACTION FIVE SIXTHS
 17784 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 17785 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 17786 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 17787 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 17788 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 17789 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 17790 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 17791 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 17792 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 17793 % U+2184 LATIN SMALL LETTER REVERSED C
 17794 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 17795 % U+2189 VULGAR FRACTION ZERO THIRDS
 17796 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

46.2.21 Arrows: U+2190 to U+21FF

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17797 % U+2190 LEFTWARDS ARROW; arrowleft
17798 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
17799 % U+2191 UPWARDS ARROW; arrowup
17800 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
17801 % U+2192 RIGHTWARDS ARROW; arrowright
17802 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
17803 %* \textrightarrow -> \MVRightArrow (marvosym)
17804 %* \textrightarrow -> \MVRightarrow (marvosym)
17805 % U+2193 DOWNWARDS ARROW; arrowdown
17806 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
17807 %* \textdownarrow -> \MVArrowDown (marvosym)
17808 %* \textdownarrow -> \Force (marvosym)
17809 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
17810 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\224}%* U+2194
17811 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
17812 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
17813 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
17814 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
17815 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
17816 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
17817 %* \textnearrow -> \textglobrise (tipa)
17818 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
17819 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
17820 %* \textsearrow -> \textglobfall (tipa)
17821 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
17822 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
17823 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
17824 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
17825 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
17826 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
17827 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
17828 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
17829 % \ntwoheadleftarrow (txfonts/pxfonts)
17830 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17831 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17832 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17833 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17834 % \twoheadrightarrow (AmS)
17835 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17836 % \ntwoheadrightarrow (txfonts/pxfonts)
17837 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17838 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
17839 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17840 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17841 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17842 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17843 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17844 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17845 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17846 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17847 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17848 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17849 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA

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17850 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17851 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17852 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17853 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17854 % U+21AE LEFT RIGHT ARROW WITH STROKE; \nletrightarrow (AmS)
17855 \DeclareTextCommand{\textnletrightarrow}{PU}{\9041\256}%* U+21AE
17856 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17857 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17858 %* \textlightning -> \Lightning (marvosym)
17859 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17860 % \dlsh (mathabx)
17861 \DeclareTextCommand{\textdlsh}{PU}{\9041\265}%* U+21B5
17862 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17863 % \curvearrowleft (AmS)
17864 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
17865 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17866 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17867 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
    barbup;
17868 % \leftharpoonup (LaTeX)
17869 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17870 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17871 % \leftharpoondown (LaTeX)
17872 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
17873 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17874 % \upharpoonright (AmS)
17875 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17876 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
17877 % \upharpoonleft (AmS)
17878 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17879 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbup
17880 % \rightharpoonup (LaTeX)
17881 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17882 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17883 % \rightharpoondown (LaTeX)
17884 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17885 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17886 % \downharpoonright (AmS)
17887 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17888 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17889 % \downharpoonleft (AmS)
17890 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17891 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17892 % \rightarrowoverleft; \rightleftarrows (MnSymbol)
17893 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17894 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
    rowupleftofdown;
17895 % \updownarrows (MnSymbol)
17896 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17897 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; \arrowleft-
    overright;
17898 % \leftrightarrows (AmS)
17899 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6

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17900 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17901 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17902 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17903 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17904 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17905 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17906 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17907 \DeclareTextCommand{\textdownarrows}{PU}{\9041\312}%* U+21CA
17908 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17909 % \leftrightharpoons (AmS);
17910 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17911 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17912 % \rightleftharpoons (LaTeX, AmS)
17913 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17914 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
    blstroke;
17915 % \nLeftarrow (AmS)
17916 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
17917 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
17918 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17919 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightdblstroke;
17920 % \rightarrow (AmS)
17921 \DeclareTextCommand{\textrightarrow}{PU}{\9041\317}%* U+21CF
17922 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17923 % \Leftarrow (LaTeX)
17924 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
17925 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17926 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17927 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17928 % \Rightarrow (LaTeX)
17929 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
17930 %* \textRightarrow -> \Conclusion (marvosym)
17931 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
17932 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17933 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17934 % \Leftrightarrow (LaTeX)
17935 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17936 %* \textLeftrightarrow -> \Equivalence (marvosym)
17937 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17938 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17939 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17940 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17941 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17942 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17943 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17944 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17945 % U+21D9 SOUTH WEST DOUBLE ARROW; \Svarrow (MnSymbol)
17946 \DeclareTextCommand{\textSvarrow}{PU}{\9041\331}%* U+21D9
17947 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
17948 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
17949 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)

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17950 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17951 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17952 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17953 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17954 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17955 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17956 % \dashleftarrow (AmS)
17957 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
17958 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
17959 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
17960 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
17961 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
(AmS)
17962 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
17963 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
17964 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
17965 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
17966 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17967 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17968 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17969 % \downuparrows (MnSymbol)
17970 \DeclareTextCommand{\texdownuparrows}{PU}{\9041\365}%* U+21F5
17971 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17972 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17973 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17974 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
17975 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
(stmaryrd)
17976 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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

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17977 % U+2200 FOR ALL; forall; \forall (LaTeX)
17978 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
17979 % U+2201 COMPLEMENT; \complement (AmS)
17980 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
17981 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
17982 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
17983 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
17984 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
17985 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
17986 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
17987 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
17988 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
17989 %* \textemptyset -> \varnothing (AmS)
17990 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
17991 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
17992 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
17993 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
17994 % U+2208 ELEMENT OF; element; \in (LaTeX)
17995 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
17996 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
17997 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209

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17998 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
17999 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18000 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18001 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18002 %* \textni -> \owns (mathabx)
18003 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18004 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18005 %* \textnotowner -> \notni (txfonts/pxfonts)
18006 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18007 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18008 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18009 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18010 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18011 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18012 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18013 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18014 % U+2212 MINUS SIGN; minus
18015 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18016 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18017 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18018 % U+2214 DOT PLUS; \dotplus (AmS)
18019 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18020 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18021 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18022 % \DividesNot (marvosym)
18023 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18024 % U+2216 SET MINUS; \setminus (LaTeX)
18025 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18026 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18027 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18028 % U+2218 RING OPERATOR; \circ (LaTeX)
18029 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18030 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18031 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18032 % U+221A SQUARE ROOT; radical
18033 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18034 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18035 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18036 %* \textpropto -> \varprop (wasysym)
18037 % U+221E INFINITY; infinity; \infty (LaTeX)
18038 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18039 % U+2220 ANGLE; angle; \angle (LaTeX)
18040 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18041 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18042 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18043 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18044 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18045 %* \textsphericalangle -> \varangle (wasysym)
18046 %* \textsphericalangle -> \Anglesign (marvosym)
18047 %* \textsphericalangle -> \AngleSign (marvosym)
18048 % U+2223 DIVIDES; divides; \mid (LaTeX)
18049 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18050 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18051 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224

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18052 %* \textnmid -> \notdivides (mathabx)
18053 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18054 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18055 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18056 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18057 %* \textnparallel -> nUpdownline (MnSymbol)
18058 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18059 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18060 % \owedge (stmaryrd)
18061 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18062 %* \textowedge -> \varowedge (stmaryrd)
18063 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18064 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18065 % \ovee (stmaryrd)
18066 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18067 %* \textovee -> \varovee (stmaryrd)
18068 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18069 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18070 % U+222A UNION; union; \cup (LaTeX)
18071 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18072 % U+222B INTEGRAL; integral; \int (LaTeX)
18073 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18074 %* \textint -> \varint (wasysym)
18075 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18076 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18077 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18078 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18079 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18080 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18081 %* \textoint -> \varoint (wasysym)
18082 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18083 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18084 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18085 % \ointclockwise (txfonts/pxfonts)
18086 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18087 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrackwise (tx-
      fonts/pxfonts)
18088 \DeclareTextCommand{\textointctrackwise}{PU}{\9042\063}%* U+2233
18089 % U+2234 THEREFORE; therefore; \therefore (AmS)
18090 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18091 %* \texttherefore -> uptherefore (MnSymbol)
18092 % U+2235 BECAUSE; because; \because (AmS)
18093 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18094 %* \textbecause -> \downtherefore (MnSymbol)
18095 % U+2236 RATIO; \vdotdot (MnSymbol)
18096 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18097 % U+2237 PROPORTION; \squaredots (MnSymbol)
18098 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18099 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18100 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18101 %* \textdotminus -> \textdotdiv (mathabx)
18102 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18103 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18104 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)

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18105 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18106 %* \textsim -> \AC (wasysym)
18107 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18108 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18109 % \nbacksim (txfonts/pxfonts)
18110 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18111 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18112 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18113 %* \textwr -> \wreath (MnSymbol)
18114 % U+2241 NOT TILDE; \nsim (AmS)
18115 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18116 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18117 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18118 % \neqsim (MnSymbol)
18119 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18120 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
      TeX)
18121 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18122 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18123 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18124 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18125 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18126 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18127 % \ncong (AmS)
18128 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18129 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18130 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18131 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts0
18132 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18133 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18134 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18135 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18136 % \napproxeq (txfonts/pxfonts)
18137 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18138 % U+224B TRIPLE TILDE; \triple sim (MnSymbol)
18139 \DeclareTextCommand{\texttriple sim}{PU}{\9042\113}%* U+224B
18140 %* \texttriple sim -> \VHF (wasysym)
18141 % \ntriple sim (MnSymbol)
18142 \DeclareTextCommand{\textntriple sim}{PU}{\9042\113\83\070}%* U+224B U+0338
18143 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18144 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18145 % \nbackcong (MnSymbol)
18146 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18147 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18148 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18149 % \nasymp (txfonts/pxfonts)
18150 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18151 %* \textnasymp -> \notasym (mathabx)
18152 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18153 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18154 % \nBumpeq (txfonts/pxfonts)
18155 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18156 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18157 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F

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18158 % \nbumpeq (txfonts/pxfonts)
18159 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18160 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18161 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18162 % \ndoteq (MnSymbol)
18163 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18164 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18165 % \doteqdot (AmS)
18166 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18167 %* \textdoteqdot -> \Doteq (MnSymbol)
18168 % \nDoteq (MnSymbol)
18169 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18170 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18171 % \fallingdotseq (AmS)
18172 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18173 % \nfallingdotseq (MnSymbol)
18174 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18175 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18176 % \risingdotseq (AmS)
18177 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18178 % \nrisingdotseq (MnSymbol)
18179 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18180 % U+2254 COLON EQUALS; \colonequals (colonequals)
18181 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18182 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18183 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18184 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18185 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18186 % \neqcirc (MnSymbol)
18187 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18188 % U+2257 RING EQUAL TO; \circeq (AmS)
18189 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18190 % \ncirceq (MnSymbol)
18191 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18192 % U+2259 ESTIMATES; \hateq (MnSymbol)
18193 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18194 %* \texthateq -> \corresponds (mathabx)
18195 %* \texthateq -> \Corresponds (marvosym)
18196 % \nhateq (MnSymbol)
18197 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18198 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18199 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18200 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18201 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18202 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18203 %* \textneq -> \nequal (MnSymbol)
18204 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18205 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18206 %* \textequiv -> \Congruent (marvosym)
18207 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18208 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18209 %* \textnequiv -> \NotCongruent (marvosym)

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18210 %* \textnequiv -> \notequiv (mathabx)
18211 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18212 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18213 \DeclareTextCommand{\textile}{PU}{\9042\144}%* U+2264
18214 %* \textleq -> \LessOrEqual (marvosym)
18215 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18216 % \ge (LaTeX), \geq (LaTeX)
18217 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18218 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18219 %* \textgeq -> \LargerOrEqual (marvosym)
18220 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18221 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18222 % \nleqq (txfonts/pxfonts)
18223 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18224 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
18225 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18226 % \ngeqq (txfonts/pxfonts)
18227 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18228 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18229 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18230 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18231 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18232 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18233 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18234 % \nll (txfonts/pxfonts)
18235 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18236 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18237 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18238 % \ngg (txfonts/pxfonts)
18239 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18240 % U+226C BETWEEN; \between (AmS)
18241 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18242 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18243 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18244 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18245 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18246 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18247 % \nleq (AmS)
18248 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18249 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18250 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18251 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18252 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18253 %* \textlessim -> \apprle (wasysym)
18254 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18255 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18256 %* \textgtrsim -> \apprge (wasysym)
18257 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
18258 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18259 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)

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18260 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18261 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18262 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18263 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18264 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18265 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
      fonts/pxfonts)
18266 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18267 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
      fonts/pxfonts)
18268 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18269 % U+227A PRECEDES; precedes; \prec (LaTeX)
18270 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18271 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18272 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18273 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18274 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18275 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18276 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18277 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18278 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18279 % \nprecsim (txfonts/pxfonts)
18280 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18281 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18282 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18283 % \nsuccsim (txfonts/pxfonts)
18284 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18285 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18286 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18287 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
18288 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18289 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18290 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18291 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18292 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18293 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18294 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18295 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18296 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18297 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18298 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18299 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18300 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18301 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18302 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18303 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18304 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18305 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
18306 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18307 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
18308 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18309 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)

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18310 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18311 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18312 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18313 % U+228F SQUARED IMAGE OF; \sqsubset (latexsym, ...)
18314 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18315 % \nsqsubset (txfonts/pxfonts)
18316 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18317 % U+2290 SQUARED ORIGINAL OF; \sqsupset (latexsym, ...)
18318 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18319 % \nsqsupset (txfonts/pxfonts)
18320 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18321 % U+2291 SQUARED IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18322 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18323 % \nsqsubseteq (txfonts/pxfonts)
18324 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18325 % U+2292 SQUARED ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18326 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18327 % \nsqsupseteq (txfonts/pxfonts)
18328 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18329 % U+2293 SQUARED CAP; \sqcap (LaTeX)
18330 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18331 % U+2294 SQUARED CUP; \sqcup (LaTeX)
18332 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18333 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18334 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18335 %* \textoplus -> \varoplus (stmaryrd)
18336 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18337 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18338 %* \textominus -> \varominus (stmaryrd)
18339 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18340 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18341 %* \textotimes -> \varotimes (stmaryrd)
18342 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18343 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18344 %* \textoslash -> \varoslash (stmaryrd)
18345 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18346 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18347 %* \textodot -> \varodot (stmaryrd)
18348 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18349 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18350 %* \textcircledcirc -> \ocirc (mathabx)
18351 %* \textcircledcirc -> \varocircle (stmaryrd)
18352 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18353 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18354 %* \textcircledast -> \varoast (stmaryrd)
18355 %* \textcircledast -> \oasterisk (mathabx)
18356 % U+229D CIRCLED DASH; \circleddash (AmS)
18357 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18358 % U+229E SQUARED PLUS; \boxplus (AmS)
18359 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18360 % U+229F SQUARED MINUS; \boxminus (AmS)
18361 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18362 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18363 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0

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18364 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18365 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18366 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18367 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18368 %* \textvdash -> \rightvdash (MnSymbol)
18369 % U+22A3 LEFT TACK; \dashv (LaTeX)
18370 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18371 %* \textdashv -> \leftvdash (MnSymbol)
18372 % \ndashv (mathabx)
18373 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18374 %* \textndashv -> \nleftvdash (MnSymbol)
18375 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
18376 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18377 %* \texttop -> \downvdash (MnSymbol)
18378 % \ndownvdash (MnSymbol)
18379 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18380 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18381 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18382 %* \textbot -> \upvdash (MnSymbol)
18383 % \nupvdash (MnSymbol)
18384 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18385 %* \textnupvdash -> \nperp (MnSymbol)
18386 % U+22A8 TRUE; \Vdash (AmS)
18387 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18388 %* \textvDash -> \models (LaTeX)
18389 %* \textvDash -> \rightmodels (MnSymbol)
18390 % U+22A9 FORCES; \Vdash (AmS)
18391 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18392 %* \textVdash -> \rightVdash (MnSymbol)
18393 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18394 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18395 % \nVvdash (mathabx)
18396 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18397 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18398 % \VDash (mathabx)
18399 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18400 %* \textVDash -> \rightModels (MnSymbol)
18401 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18402 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18403 %* \textnvdash -> \nrightvdash (MnSymbol)
18404 % U+22AD NOT TRUE; \nvDash (AmS)
18405 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18406 %* \textnvDash -> \nrightmodels (MnSymbol)
18407 %* \textnvDash -> \nmodels (MnSymbol)
18408 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18409 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18410 %* \textnVdash -> \nrightVdash (MnSymbol)
18411 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18412 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18413 %* \textnVDash -> \nrightModels (MnSymbol)
18414 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18415 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18416 %* \textlhd -> \lessclosed (MnSymbol)

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18417 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18418 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18419 %* \textrhd -> \gtrclosed (MnSymbol)
18420 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18421 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18422 %* \textunlhd -> \leqclosed (MnSymbol)
18423 %* \textunlhd -> \trianglelefteq (MnSymbol)
18424 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
texsym, ...)
18425 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18426 %* \textunrhd -> \geqclosed (MnSymbol)
18427 %* \textunrhd -> \trianglerighteq (MnSymbol)
18428 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18429 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18430 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18431 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18432 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18433 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18434 % U+22BB XOR; \veebar (AmS)
18435 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18436 % U+22BC NAND; \barwedge (mathabx)
18437 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18438 % U+22C6 STAR OPERATOR; \star (LaTeX)
18439 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18440 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18441 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18442 % U+22C8 BOWTIE; \bowtie (LaTeX)
18443 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18444 %* \textbowtie -> \Bowtie (wasysym)
18445 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18446 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18447 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18448 % \rtimes (AmS)
18449 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18450 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18451 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18452 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18453 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18454 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18455 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18456 % \nbacksimeq (txfonts/pxfonts)
18457 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18458 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18459 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18460 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18461 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18462 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18463 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18464 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18465 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18466 % \nSubset (txfonts/pxfonts)
18467 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18468 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18469 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1

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18470 % \nSupset (txfonts/pxfonts)
18471 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18472 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18473 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18474 %* \textCap -> \doublecap (mathabx)
18475 % U+22D3 DOUBLE UNION; \Cup (AmS)
18476 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18477 %* \textCup -> \doublecup (mathabx)
18478 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18479 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18480 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18481 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18482 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18483 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18484 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18485 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18486 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18487 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18488 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18489 % \lesseqgtr (AmS)
18490 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18491 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18492 % \gtreqless (AmS)
18493 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18494 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18495 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18496 % \ncurlyeqprec (mathabx)
18497 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18498 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18499 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18500 % \ncurlyeqsucc (mathabx)
18501 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18502 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18503 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18504 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18505 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18506 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
18507 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
18508 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
18509 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18510 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18511 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18512 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18513 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
18514 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18515 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18516 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18517 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18518 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18519 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18520 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)

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18521 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
 18522 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
 18523 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
 18524 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 18525 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 18526 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 18527 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
 18528 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 18529 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 18530 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 18531 % \ntrianglelefteq (AmS)
 18532 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 18533 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 18534 % \ntrianglerighteq (AmS)
 18535 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 18536 %* \textntrianglerighteq -> \textngeqclosed
 18537 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
 18538 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 18539 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 18540 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 18541 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 18542 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 18543 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 18544 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 18545 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 18546 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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

18547 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 18548 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 18549 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 18550 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 18551 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 18552 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 18553 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 18554 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 18555 % U+231A WATCH; \clock (wasysym)
 18556 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 18557 %* \textclock -> \Clocklogo (marvosym)
 18558 %* \textclock -> \ClockLogo (marvosym)
 18559 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 18560 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 18561 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 18562 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 18563 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 18564 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 18565 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 18566 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 18567 % U+2322 FROWN; \frown (LaTeX)
 18568 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 18569 % U+2323 SMILE; \smile (LaTeX)
 18570 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 18571 % U+2328 KEYBOARD; \Keyboard (marvosym)

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18572 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
18573 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft; \langle (LaTeX)
18574 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
18575 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright; \rangle (LaTeX)
18576 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
18577 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
18578 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
18579 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
18580 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
18581 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
18582 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
18583 %* \textstmaryrdbaro -> \baro (stmaryrd)
18584 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
18585 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
18586 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
18587 % \notbackslash (wasysym)
18588 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
18589 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
18590 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
18591 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
18592 % \APLleftarrowbox (wasysym)
18593 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
18594 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
18595 % \APLrightarrowbox (wasysym)
18596 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
18597 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
18598 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
18599 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
18600 % \APLdownarrowbox (wasysym)
18601 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
18602 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
18603 % \APLinput (wasysym)
18604 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
18605 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
18606 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
18607 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
18608 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
18609 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
18610 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
18611 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
18612 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
18613 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
18614 % \ForwardToIndex (marvosym)
18615 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
18616 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
18617 % \RewindToIndex (marvosym)
18618 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

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

18619 % U+2422 BLANK SYMBOL
 18620 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 18621 % U+2423 OPEN BOX; blank
 18622 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

18623 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 18624 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 18625 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

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

18626 % U+2460 CIRCLED DIGIT ONE; onecircle
 18627 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 18628 % U+2461 CIRCLED DIGIT TWO; twocircle
 18629 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 18630 % U+2462 CIRCLED DIGIT THREE; threecircle
 18631 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 18632 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 18633 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 18634 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 18635 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 18636 % U+2465 CIRCLED DIGIT SIX; sixcircle
 18637 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 18638 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 18639 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 18640 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 18641 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 18642 % U+2468 CIRCLED DIGIT NINE; ninecircle
 18643 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 18644 % U+2469 CIRCLED NUMBER TEN; tencircle
 18645 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 18646 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 18647 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 18648 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 18649 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 18650 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 18651 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 18652 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 18653 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 18654 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 18655 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 18656 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 18657 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 18658 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 18659 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 18660 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 18661 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 18662 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 18663 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 18664 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 18665 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 18666 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 18667 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 18668 % \CircledA (marvosym)

18669 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18670 %* \textCircledA -> \CleaningA
18671 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18672 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18673 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18674 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18675 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18676 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18677 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18678 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18679 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18680 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18681 % \CleaningF (marvosym)
18682 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18683 % \CleaningFF (marvosym)
18684 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18685 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18686 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18687 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18688 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18689 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18690 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18691 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18692 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
18693 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18694 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18695 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
18696 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18697 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18698 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18699 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18700 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18701 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
18702 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18703 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18704 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18705 % \CleaningP (marvosym)
18706 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18707 % \CleaningPP (marvosym)
18708 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18709 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18710 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18711 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18712 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18713 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18714 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18715 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18716 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18717 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18718 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18719 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18720 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18721 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18722 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC

18723 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 18724 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 18725 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 18726 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 18727 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 18728 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 18729 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 18730 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 18731 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 18732 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 18733 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 18734 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 18735 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 18736 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 18737 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 18738 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 18739 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 18740 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 18741 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 18742 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 18743 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 18744 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 18745 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 18746 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 18747 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 18748 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 18749 % U+24DA CIRCLED LATIN SMALL LETTER K; kcicle
 18750 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 18751 % U+24DB CIRCLED LATIN SMALL LETTER L; lcicle
 18752 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 18753 % U+24DC CIRCLED LATIN SMALL LETTER M; mcicle
 18754 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 18755 % U+24DD CIRCLED LATIN SMALL LETTER N; ncicle
 18756 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 18757 % U+24DE CIRCLED LATIN SMALL LETTER O; ocicle
 18758 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 18759 % U+24DF CIRCLED LATIN SMALL LETTER P; pcicle
 18760 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 18761 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcicle
 18762 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 18763 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcicle
 18764 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 18765 % U+24E2 CIRCLED LATIN SMALL LETTER S; scicle
 18766 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 18767 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcicle
 18768 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 18769 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucicle
 18770 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 18771 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcicle
 18772 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 18773 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcicle
 18774 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 18775 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcicle
 18776 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7

18777 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
18778 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
18779 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
18780 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
18781 % U+24EA CIRCLED DIGIT ZERO
18782 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

46.2.27 Box Drawing: U+2500 to 257F

18783 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
Line (marvosym)
18784 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
18785 %* \textCuttingLine -> \Kutline (marvosym)
18786 %* \textCuttingLine -> \CutLine (marvosym)
18787 %* \textCuttingLine -> \Cutline (marvosym)

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

18788 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
18789 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
18790 %* \textUParrow -> \MoveUp (marvosym)
18791 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
18792 % \bigtriangleup (LaTeX)
18793 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
18794 %* \textbigtriangleup -> \APLup (wasysym)
18795 %* \textbigtriangleup -> \Bleech (marvosym)
18796 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
18797 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
18798 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
18799 % whiterightpointingtriangle; \triangleright (LaTeX)
18800 \DeclareTextCommand{\texttripleright}{PU}{\9045\267}%* U+25B7
18801 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
18802 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
18803 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
18804 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18805 %* \textDOWNarrow -> \MoveDown (marvosym)
18806 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
angle;
18807 % \bigtriangledown (LaTeX)
18808 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18809 %* \textbigtriangledown -> \APLdown (wasysym)
18810 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18811 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18812 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
18813 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18814 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18815 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18816 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18817 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18818 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18819 %* \textdiamond -> \Diamond (wasysym)
18820 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
18821 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18822 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)

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18823 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
18824 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
18825 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
18826 % U+25E6 WHITE BULLET; *openbullet, whitebullet
18827 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
18828 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
18829 % \boxbar (stmaryrd)
18830 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
18831 % U+25EF LARGE CIRCLE; largecircle
18832 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
18833 %* \textbigcircle -> \varbigcirc (stmaryrd)
18834 %

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

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18835 % U+2601 CLOUD; \Cloud (ifsym)
18836 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
18837 % U+2605 BLACK STAR; \FiveStar (bding)
18838 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
18839 % U+2606 WHITE STAR; \FiveStarOpen (bding)
18840 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
18841 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
18842 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
18843 %* \textPhone -> \Telefon (marvosym)
18844 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
18845 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
18846 %* \textboxempty -> \Box (wasysym)
18847 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
18848 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
18849 %* \textCheckedbox -> \CheckedBox (marvosym)
18850 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
18851 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
18852 %* \textCrossedbox -> \XBox (wasysym)
18853 %* \textCrossedbox -> \CrossedBox (marvosym)
18854 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
18855 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
18856 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
18857 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
18858 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
18859 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
18860 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
18861 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
18862 %* \textHandLeft -> \rightpointleft (fourier)
18863 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
18864 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
18865 %* \textHandRight -> \leftpointright (fourier)
18866 %* \textHandRight -> \PointingHand (marvosym)
18867 %* \textHandRight -> \Pointinghand (marvosym)
18868 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
18869 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
18870 %* \textRadioactivity -> \Radiation (ifsym)
18871 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
18872 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
18873 % U+2625 ANKH; \Ankh (marvosym)
18874 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625

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18875 % U+262F YIN YANG; \YinYang (marvosym)
18876 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18877 %* \textYinYang -> \Yinyang (marvosym)
18878 %* \textYinYang -> \YingYang (marvosym)
18879 %* \textYinYang -> \Yingyang (marvosym)
18880 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18881 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18882 %* \textfrownie -> \Frowny (marvosym)
18883 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18884 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18885 %* \textsmiley -> \Smiley (marvosym)
18886 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18887 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18888 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
18889 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18890 %* \textsun -> \Sun (marvosym)
18891 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18892 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
18893 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18894 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18895 % U+263F MERCURY; \mercury (wasysym)
18896 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18897 %* \textmercury -> \Mercury (marvosym)
18898 % U+2640 FEMALE SIGN; female; \female (wasysym)
18899 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18900 %* \textPUfemale -> \textfemale (tipx)
18901 %* \textPUfemale -> \female (wasysym)
18902 %* \textPUfemale -> \venus (wasysym)
18903 %* \textPUfemale -> \Venus (marvosym)
18904 %* \textPUfemale -> \Female (marvosym)
18905 % U+2641 EARTH; \earth (wasysym)
18906 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18907 %* \textearth -> \Earth (marvosym)
18908 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18909 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18910 %* \textmale -> \mars (wasysym)
18911 %* \textmale -> \Mars (marvosym)
18912 %* \textmale -> \Male (marvosym)
18913 % U+2643 JUPITER; \jupiter (wasysym)
18914 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18915 %* \textjupiter -> \Jupiter (marvosym)
18916 % U+2644 SATURN; \saturn (wasysym)
18917 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18918 %* \textsaturn -> \Saturn (marvosym)
18919 % U+2645 URANUS; \uranus (wasysym)
18920 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18921 %* \texturanus -> \Uranus (marvosym)
18922 % U+2646 NEPTUNE; \neptune (wasysym)
18923 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18924 %* \textneptune -> \Neptune (marvosym)
18925 % U+2647 PLUTO; \pluto (wasysym)
18926 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18927 %* \textpluto -> \Pluto (marvosym)
18928 % U+2648 ARIES; \aries (wasysym)

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18929 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18930 %* \textaries -> \Aries (marvosym)
18931 % U+2649 TAURUS; \taurus (wasysym)
18932 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18933 %* \texttaurus -> \Taurus (marvosym)
18934 % U+264A GEMINI; \gemini (wasysym)
18935 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18936 %* \textgemini -> \Gemini (marvosym)
18937 % U+264B CANCER; \cancer (wasysym)
18938 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18939 %* \textcancer -> \Cancer (marvosym)
18940 % U+264C LEO; \leo (wasysym)
18941 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18942 %* \textleo -> \Leo (marvosym)
18943 % U+264D VIRGO; \virgo (wasysym)
18944 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18945 %* \textvirgo -> \Virgo (marvosym)
18946 % U+264E LIBRA; \libra (wasysym)
18947 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18948 %* \textlibra -> \Libra (marvosym)
18949 % U+264F SCORPIO; \scorpio (wasysym)
18950 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18951 %* \textscorpio -> \Scorpio (marvosym)
18952 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
18953 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18954 %* \textsagittarius -> \Sagittarius (marvosym)
18955 % U+2651 CAPRICORN; \capricornus (wasysym)
18956 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18957 %* \textcapricornus -> \Capricorn (marvosym)
18958 % U+2652 AQUARIUS; \aquarius (wasysym)
18959 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18960 %* \textaquarius -> \Aquarius (marvosym)
18961 % U+2653 PISCES; \pisces (wasysym)
18962 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18963 %* \textpisces -> \Pisces (marvosym)
18964 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18965 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18966 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18967 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18968 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18969 %* \textheartsuitwhite -> \Heart (marvosym)
18970 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18971 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18972 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18973 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18974 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18975 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18976 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18977 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18978 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18979 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18980 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18981 % U+2666 BLACK DIAMOND SUIT; diamond
18982 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666

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18983 % U+2667 WHITE CLUB SUIT; clubsuitwhite
18984 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
18985 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
18986 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
18987 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
18988 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
18989 %* \textmusicalnote -> \eighthnote (wasysym, arev)
18990 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
18991 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
18992 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
18993 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
18994 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
18995 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
18996 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
18997 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
18998 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
18999 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19000 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19001 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19002 %* \textrecycle -> \Recycling (marvosym)
19003 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19004 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19005 % U+2691 BLACK FLAG; \Flag (ifsym)
19006 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19007 %* \textFlag -> \VarFlag (ifsym)
19008 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19009 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19010 % U+2694 CROSSED SWORDS; \dsmlilitary (dictsym)
19011 \DeclareTextCommand{\textdsmlilitary}{PU}{\9046\224}%* U+2694
19012 %* \textdsmlilitary -> \textxswup (fourier)
19013 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19014 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19015 % U+2696 SCALES; \dsjuridical (dictsym)
19016 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
19017 % U+2697 ALEMBIC; \dschemical (dictsym)
19018 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
19019 % U+2698 FLOWER; \dsbiological (dictsym)
19020 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
19021 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19022 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
19023 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19024 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19025 % U+26A0 WARNING SIGN; \danger (fourier)
19026 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19027 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19028 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
19029 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19030 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
19031 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
19032 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
19033 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19034 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5

19035 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19036 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19037 % U+26AD MARRIAGE SYMBOL
 19038 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19039 % U+26AE DIVORCE SYMBOL
 19040 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19041 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19042 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19043 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19044 % U+26B9 SEXTILE; \hexstar (wasysym)
 19045 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19046 % U+26BD SOCCER BALL; \Football (marvosym)
 19047 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19048 %* \textSoccerBall -> \Football (marvosym)
 19049 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19050 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19051 % U+26C6 RAIN; \Rain (ifsym)
 19052 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19053 % U+26D4 NO ENTRY; \noway (fourier)
 19054 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19055 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19056 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19057 % U+26FA TENT; \Tent (ifsym)
 19058 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

46.2.30 Dingbats: U+2700 to U+27BF

19059 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)
 19060 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19061 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19062 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19063 % U+2702 BLACK SCISSORS; \ScissorRight (bbding)
 19064 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19065 %* \textScissorRight -> \RightScissors (marvosym)
 19066 %* \textScissorRight -> \Leftscissors (marvosym)
 19067 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbding)
 19068 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19069 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbding)
 19070 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19071 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbding)
 19072 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19073 % U+2707 TAPE DRIVE; \Tape (bbding)
 19074 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19075 % U+2708 AIRPLANE; \Plane (bbding)
 19076 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19077 % U+2709 ENVELOPE; \Envelope (bbding),
 19078 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19079 %* \textEnvelope -> \Letter (marvosym)
 19080 % U+270C VICTORY HAND; \Peace (bbding)
 19081 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19082 % U+270D WRITING HAND; \WritingHand (marvosym)
 19083 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19084 %* \textWritingHand -> \Writinghand (marvosym)
 19085 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbding)
 19086 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E

19087 % U+270F PENCIL; \PencilRight (bding)
 19088 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19089 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19090 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19091 % U+2711 WHITE NIB; \NibRight (bding)
 19092 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19093 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19094 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19095 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19096 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19097 %* \textCheckmark -> \checkmark (MnSymbol)
 19098 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19099 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19100 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19101 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19102 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19103 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19104 % U+2717 BALLOT X; \XSolidBrush (bding)
 19105 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19106 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19107 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19108 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19109 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19110 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19111 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19112 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19113 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19114 % U+271D LATIN CROSS; \Cross (bding)
 19115 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19116 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19117 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19118 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19119 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19120 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19121 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19122 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19123 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19124 %* \textDavidStar -> \davidstar (wasysym)
 19125 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19126 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19127 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19128 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19129 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19130 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19131 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19132 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19133 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19134 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19135 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19136 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19137 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19138 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19139 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)

19140 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
19141 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
19142 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
19143 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
19144 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
19145 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
19146 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
19147 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
19148 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
19149 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
19150 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
19151 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
19152 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
19153 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
19154 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
19155 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
19156 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
19157 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
19158 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
19159 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
19160 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
19161 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
19162 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
19163 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
19164 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
19165 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
19166 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
19167 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
19168 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
19169 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
19170 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
19171 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
19172 % \SixFlowerOpenCenter (bding)
19173 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
19174 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
19175 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
19176 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
19177 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
19178 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
19179 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
19180 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
19181 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
19182 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
19183 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
19184 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
19185 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
19186 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)

19187 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19188 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19189 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19190 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19191 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19192 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19193 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19194 % U+2747 SPARKLE; \Sparkle (bding)
 19195 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19196 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19197 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19198 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19199 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19200 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19201 % \EightFlowerPetalRemoved (bding)
 19202 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19203 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19204 % \EightAsterisk (bding)
 19205 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19206 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19207 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19208 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19209 % \SquareShadowBottomRight (bding)
 19210 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19211 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19212 % \SquareShadowTopRight (bding)
 19213 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19214 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19215 % \SquareCastShadowBottomRight (bding)
 19216 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19217 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19218 % \SquareCastShadowTopRight (bding)
 19219 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19220 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 19221 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19222 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 19223 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19224 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 19225 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19226 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 19227 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

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

19228 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19229 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19230 % \notperp (mathabx)
 19231 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19232 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19233 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19234 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19235 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19236 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19237 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC

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19238 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
19239 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
19240 %* \textlbrackdbl -> \lbracket (stmaryrd)
19241 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
19242 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
19243 %* \textrbrackdbl -> \rrbracket (stmaryrd)

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

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19244 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
19245 % \circlearrowleft (AmS)
19246 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
19247 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
19248 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
19249 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
19250 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
19251 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
19252 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
19253 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
19254 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
19255 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
19256 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
19257 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
19258 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
19259 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
19260 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
19261 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
19262 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
19263 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
    from (stmaryrd)
19264 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
19265 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
    sto (stmaryrd)
19266 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

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

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19267 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
    bol)
19268 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
19269 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
    bol)
19270 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
19271 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
19272 \DeclareTextCommand{\texthooknwarrow}{PU}{\9051\043}%* U+2923
19273 % U+2924 NORTH EAST ARROW WITH HOOK; \hooknearrow (MnSymbol)
19274 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
19275 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
19276 \DeclareTextCommand{\texthooksearrow}{PU}{\9051\045}%* U+2925
19277 % U+2926 SOUTH WEST ARROW WITH HOOK; \hookswarrow (MnSymbol)
19278 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
19279 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
19280 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
19281 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
19282 % \rcurvearrowne (MnSymbol)
19283 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934

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19284 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
      WARDS;
19285 % \lcurvearrowse (MnSymbol)
19286 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
19287 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
      WARDS;
19288 % \lcurvearrowsw (MnSymbol)
19289 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
19290 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
      WARDS;
19291 % \rcurvearrowse (MnSymbol)
19292 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
19293 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
      Symbol)
19294 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19295 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19296 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19297 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19298 % \rcurvearrowdown (MnSymbol)
19299 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19300 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19301 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19302 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
      bol)
19303 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19304 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19305 % \rcurvearrowright (MnSymbol)
19306 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19307 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \lefttrighthar-
      poon (mathabx)
19308 \DeclareTextCommand{\textlefttrightharpoon}{PU}{\9051\112}%* U+294A
19309 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
      poon (mathabx)
19310 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19311 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19312 % \updownharpoonrightleft (MnSymbol)
19313 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19314 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19315 % \updownharpoonleftright (MnSymbol)
19316 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19317 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19318 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19319 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19320 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19321 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19322 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19323 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
      WARDS HARPOON
19324 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19325 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19326 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
      WARDS HARPOON
19327 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19328 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965

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19329 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19330 % \leftbarharpoon (mathabx)
 19331 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19332 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19333 % LONG DASH; \barleftharpoon (mathabx)
 19334 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19335 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19336 % LONG DASH; \rightbarharpoon (mathabx)
 19337 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19338 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19339 % LONG DASH; \barrightharpoon (mathabx)
 19340 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19341 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19342 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19343 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19344 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19345 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19346 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19347 % U+297F DOWN FISH TAIL
 19348 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

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

19349 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19350 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19351 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19352 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19353 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19354 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19355 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19356 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19357 %* \textobar -> \textvarobar (stmaryrd)
 19358 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19359 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19360 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19361 %* \textobslash -> \obackslash (mathabx)
 19362 %* \textobslash -> \varobslash (stmaryrd)
 19363 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19364 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19365 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19366 %* \textobot -> \odplus (ulsy)
 19367 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 19368 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19369 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19370 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19371 %* \textolessthan -> \varolessthan (stmaryrd)
 19372 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19373 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19374 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19375 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19376 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19377 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)

19378 \DeclareTextCommand{\textboxslash}{PU}{\9051\305}%* U+29C5
 19379 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19380 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19381 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19382 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19383 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19384 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19385 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19386 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19387 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19388 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19389 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19390 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

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

19391 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19392 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19393 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19394 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19395 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19396 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19397 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19398 % pxfonts, wasysym)
 19399 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 19400 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19401 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19402 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 19403 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 19404 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19405 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19406 %* \textminusdot -> \divdot (mathabx)
 19407 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 19408 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 19409 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19410 % \dtimes (mathdesign)
 19411 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 19412 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 19413 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 19414 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 19415 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 19416 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 19417 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 19418 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 19419 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 19420 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 19421 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 19422 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 19423 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 19424 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 19425 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 19426 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 19427 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 19428 %* \textdoublevee -> \merge (stmaryrd)
 19429 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;

19430 % \doublebarwedge (AmS)
 19431 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 19432 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 19433 % \veedoublebar (mahtabx)
 19434 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 19435 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 19436 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 19437 % \neqdot (MnSymbol)
 19438 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 19439 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 19440 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 19441 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 19442 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 19443 % \nleqslant (txfonts/pxfonts)
 19444 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 19445 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 19446 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 19447 % \ngeqslant (txfonts/pxfonts)
 19448 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 19449 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 19450 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 19451 % \nlessapprox (txfonts/pxfonts)
 19452 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 19453 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 19454 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 19455 % \ngtrapprox (txfonts/pxfonts)
 19456 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 19457 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 19458 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 19459 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 19460 % \gneq (AmS)
 19461 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 19462 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 19463 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 19464 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 19465 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 19466 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 19467 % \lesseqgtr (AmS)
 19468 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 19469 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 19470 % \gtreqless (AmS)
 19471 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 19472 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 19473 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 19474 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 19475 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 19476 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 19477 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 19478 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 19479 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 19480 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)

```

19481 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19482 % \npreceq (txfonts/pxfonts)
19483 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19484 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
      Symbol)
19485 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19486 % \nsucceq (txfonts/pxfonts)
19487 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19488 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
      neq (mathabx)
19489 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19490 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
      neq (mathabx)
19491 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
19492 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19493 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19494 % \npreceqq (txfonts/pxfonts)
19495 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19496 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19497 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19498 % \nsucceqq (txfonts/pxfonts)
19499 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
19500 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
19501 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
19502 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
19503 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
19504 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
19505 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
19506 % \nprecapprox (txfonts/pxfonts)
19507 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19508 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19509 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19510 % \nsuccapprox (txfonts/pxfonts)
19511 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19512 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
      prox (AmS)
19513 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19514 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
      prox (AmS)
19515 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
19516 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19517 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19518 % \nsubseteqq (txfonts/pxfonts, mathabx)
19519 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19520 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19521 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19522 % \nsupseteqq (mathabx)
19523 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19524 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19525 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19526 %* \textdashV -> \leftVdash (MnSymbol)
19527 % \ndashV (mathabx)
19528 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19529 %* \textndashV -> \nleftVdash (MnSymbol)

```

19530 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 19531 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 19532 %* \textDashv -> \leftmodels (MnSymbol)
 19533 % \nDashv (mathabx)
 19534 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 19535 %* \textnDashv -> \leftmodels (MnSymbol)
 19536 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 19537 % \DashV (mathabx)
 19538 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 19539 %* \textDashV -> \leftModels (MnSymbol)
 19540 % \nDashV (mathabx)
 19541 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 19542 %* \textnDashV -> \leftModels (MnSymbol)
 19543 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 19544 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 19545 % \ndownmodels (MnSymbol)
 19546 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 19547 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 19548 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 19549 % \nupmodels (MnSymbol)
 19550 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 19551 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 19552 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 19553 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 19554 % \interleave (stmaryrd)
 19555 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 19556 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 19557 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19558 %* \textsslash -> \varparallel (txfonts\pxfonts)

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

19559 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19560 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19561 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19562 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

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

19563 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19564 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

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

19565 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19566 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19567 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19568 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19569 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19570 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

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

19571 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19572 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19573 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19574 % \textdownstep (tipa)
 19575 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

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

```
19576 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
19577 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
19578 %* \textPUheng -> \textheng (tipx)
19579 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
19580 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
19581 %* \textPULhookfour -> \textlhookfour (tipx)
19582 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
19583 \DeclareTextCommand{\textPUScf}{PU}{\9247\060}% U+A730
19584 %* \textPUScf -> \textscf (tipx)
19585 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
19586 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
19587 %* \textPUaolig -> \textao lig (tipx)
19588 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
19589 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
19590 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
19591 \DeclareTextCommand{\textcircumlw}{PU}{\9247\210}% U+A788
```

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

```
19592 % U+FB01 LATIN SMALL LIGATURE FI; fi
19593 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
19594 % U+FB02 LATIN SMALL LIGATURE FL; fl
19595 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

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

```
19596 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
19597 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
19598 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
19599 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
19600 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
19601 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
19602 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
19603 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
19604 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
19605 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
19606 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
19607 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
19608 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
19609 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
19610 %* \textfullnote -> \Ganz (harmony)
19611 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
19612 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
19613 %* \texthalfnote -> \Halb (harmony)
19614 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
19615 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
19616 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
19617 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
19618 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
19619 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
19620 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
19621 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162
```

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

19622 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 19623 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 19624 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 19625 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 19626 % U+1F468 MAN; \ManFace (marvosym)
 19627 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 19628 % U+1F469 WOMAN; \WomanFace (marvosym)
 19629 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 19630 %* \textWomanFace -> \Womanface (marvosym)
 19631 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 19632 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 19633 %* \textFax -> \Faxmachine (marvosym)
 19634 % U+1F525 FIRE; \Fire (ifsym)
 19635 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

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

19636 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 19637 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 19638 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 19639 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 19640 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 19641 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

46.2.45 Miscellaneous

19642 \DeclareTextCommand{\SS}{PU}{SS}%
 19643 % \textcopyleft (textcomp)
 19644 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 19645 % \ccnc (ccllicenses)
 19646 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 19647 % \ccnd (ccllicenses)
 19648 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 19649 % \ccsa (ccllicenses)
 19650 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
 19651 % \Info (marvosym, china2e)
 19652 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
 19653 % \CESign (marvosym)
 19654 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
 19655 %* \textCESign -> \CESign (marvosym)

46.2.46 Aliases

Aliases (german.sty)

19656 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
 19657 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
 19658 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
 19659 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
 19660 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
 19661 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
 19662 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
 19663 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%
 Aliases (math names)

19664 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
 19665 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
 19666 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*

```

19667 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19668 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19669 </puenc>

```

46.3 PU encoding, additions for VnT_EX

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```

19670 <*puvnenc>

19671 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19672 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19673 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19674 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19675 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19676 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19677 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19678 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19679 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19680 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19681 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19682 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

19683 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19684 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
19685 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
19686 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
19687 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19688 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19689 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19690 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
19691 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19692 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19693 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
19694 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
19695 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
19696 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
19697 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
19698 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
19699 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
19700 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
19701 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
19702 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
19703 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
19704 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
19705 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
19706 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
19707 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
19708 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
19709 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
19710 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
19711 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
19712 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
19713 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
19714 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD

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19715 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
19716 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
19717 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
19718 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
19719 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
19720 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
19721 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
19722 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
19723 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
19724 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
19725 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
19726 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
19727 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
19728 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
19729 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
19730 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
19731 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
19732 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
19733 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
19734 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
19735 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
19736 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
19737 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
19738 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
19739 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
19740 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
19741 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
19742 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
19743 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
19744 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
19745 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
19746 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
19747 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
19748 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
19749 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
19750 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
19751 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
19752 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
19753 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
19754 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
19755 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
19756 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
19757 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
19758 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19759 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19760 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
19761 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19762 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
19763 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19764 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19765 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19766 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19767 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19768 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD

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19769 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19770 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
19771 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19772 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19773 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19774 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19775 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
19776 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19777 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19778 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19779 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19780 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19781 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
19782 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19783 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
19784 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
19785 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
19786 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
19787 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
19788 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
19789 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
19790 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
19791 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
19792 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
19793 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
19794 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
19795 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19796 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19797 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19798 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19799 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19800 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19801 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
19802 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19803 </p>

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46.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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19804 (*puarenc)

19805 % U+0621;afi57409;ARABIC LETTER HAMZA
19806 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19807 % U+0622;afi57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19808 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19809 % U+0623;afi57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19810 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19811 % U+0624;afi57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19812 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19813 % U+0625;afi57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19814 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19815 % U+0626;afi57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19816 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19817 % U+0627;afi57415;ARABIC LETTER ALEF

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19818 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 19819 % U+0628;afii57416;ARABIC LETTER BEH
 19820 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 19821 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 19822 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 19823 % U+062A;afii57418;ARABIC LETTER TEH
 19824 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 19825 % U+062B;afii57419;ARABIC LETTER THEH
 19826 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 19827 % U+062C;afii57420;ARABIC LETTER JEEM
 19828 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 19829 % U+062D;afii57421;ARABIC LETTER HAH
 19830 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 19831 % U+062E;afii57422;ARABIC LETTER KHAH
 19832 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 19833 % U+062F;afii57423;ARABIC LETTER DAL
 19834 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 19835 % U+0630;afii57424;ARABIC LETTER THAL
 19836 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 19837 % U+0631;afii57425;ARABIC LETTER REH
 19838 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 19839 % U+0632;afii57426;ARABIC LETTER ZAIN
 19840 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 19841 % U+0633;afii57427;ARABIC LETTER SEEN
 19842 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 19843 % U+0634;afii57428;ARABIC LETTER SHEEN
 19844 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 19845 % U+0635;afii57429;ARABIC LETTER SAD
 19846 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 19847 % U+0636;afii57430;ARABIC LETTER DAD
 19848 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 19849 % U+0637;afii57431;ARABIC LETTER TAH
 19850 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 19851 % U+0638;afii57432;ARABIC LETTER ZAH
 19852 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 19853 % U+0639;afii57433;ARABIC LETTER AIN
 19854 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 19855 % U+063A;afii57434;ARABIC LETTER GHAIN
 19856 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 19857 % U+0640;afii57440;ARABIC TATWEEL
 19858 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 19859 % U+0641;afii57441;ARABIC LETTER FEH
 19860 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 19861 % U+0642;afii57442;ARABIC LETTER QAF
 19862 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 19863 % U+0643;afii57443;ARABIC LETTER KAF
 19864 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 19865 % U+0644;afii57444;ARABIC LETTER LAM
 19866 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 19867 % U+0645;afii57445;ARABIC LETTER MEEM
 19868 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 19869 % U+0646;afii57446;ARABIC LETTER NOON
 19870 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 19871 % U+0647;afii57470;ARABIC LETTER HEH

19872 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 19873 % U+0648;afii57448;ARABIC LETTER WAW
 19874 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 19875 % U+0649;afii57449;ARABIC LETTER ALEF MAKURA
 19876 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 19877 % U+064A;afii57450;ARABIC LETTER YEH
 19878 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 19879 % U+064B;afii57451;ARABIC FATHATAN
 19880 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 19881 % U+064C;afii57452;ARABIC DAMMATAN
 19882 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 19883 % U+064D;afii57453;ARABIC KASRATAN
 19884 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 19885 % U+064E;afii57454;ARABIC FATHA
 19886 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 19887 % U+064F;afii57455;ARABIC DAMMA
 19888 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 19889 % U+0650;afii57456;ARABIC KASRA
 19890 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 19891 % U+0651;afii57457;ARABIC SHADDA
 19892 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 19893 % U+0652;afii57458;ARABIC SUKUN
 19894 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 19895 % U+067E ARABIC LETTER PEH; afii57506
 19896 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 19897 % U+0686 ARABIC LETTER TCHEH; afii57507
 19898 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 19899 % U+0698 ARABIC LETTER JEH; afii57508
 19900 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 19901 % U+06A9 ARABIC LETTER KEHEH
 19902 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 19903 % U+06AF ARABIC LETTER GAF; afii57509
 19904 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 19905 % U+06CC ARABIC LETTER FARSI YEH
 19906 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 19907 % U+200C ZERO WIDTH NON-JOINER; afii61664
 19908 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 19909 % U+200D ZERO WIDTH JOINER; afii301
 19910 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D
 19911 </puarenc>
 19912 <*psdextra>
 19913 \Hy@VersionCheck{psdextra.def}
 19914 \newcommand*{\psdmapshortnames}{%
 19915 \let\MVPlus\textMVPlus
 19916 \let\MVComma\textMVComma
 19917 \let\MVMinus\textMVMinus
 19918 \let\MVPeriod\textMVPeriod
 19919 \let\MVDivision\textMVDivision
 19920 \let\MVZero\textMVZero
 19921 \let\MVOne\textMVOne
 19922 \let\MVTwo\textMVTwo

19923 \let\MVThree\textMVThree
 19924 \let\MVFour\textMVFour
 19925 \let\MVFive\textMVFive
 19926 \let\MVSix\textMVSix
 19927 \let\MVSeven\textMVSeven
 19928 \let\MVEight\textMVEight
 19929 \let\MVNine\textMVNine
 19930 \let\MVAt\textMVAt
 19931 \let\copyright\textcopyright
 19932 \let\twosuperior\texttwosuperior
 19933 \let\threesuperior\textthreesuperior
 19934 \let\onesuperior\textonesuperior
 19935 \let\Thorn\textThorn
 19936 \let\thorn\textthorn
 19937 \let\hbar\texthbar
 19938 \let\hausasB\texthausasB
 19939 \let\hausasD\texthausasD
 19940 \let\hausasK\texthausasK
 19941 \let\barl\textbarl
 19942 \let\inve\textinve
 19943 \let\slashc\textslashc
 19944 \let\scripta\textscripta
 19945 \let\openo\textopeno
 19946 \let\rtaild\textrtaild
 19947 \let\reve\textreve
 19948 \let\schwa\textschwa
 19949 \let\niepsilon\textniepsilon
 19950 \let\reveysion\textreveysion
 19951 \let\rhookreveysion\texthookreveysion
 19952 \let\scriptg\textscriptg
 19953 \let\scg\textscg
 19954 \let\ipagamma\textipagamma
 19955 \let\babygamma\textbabygamma
 19956 \let\bari\textbari
 19957 \let\niiota\textniiota
 19958 \let\sci\textsci
 19959 \let\scn\textscn
 19960 \let\niphi\textniphi
 19961 \let\longlegr\textlonglegr
 19962 \let\scr\textscr
 19963 \let\invscr\textinvscr
 19964 \let\esh\textesh
 19965 \let\baru\textbaru
 19966 \let\niupsilon\textniupsilon
 19967 \let\scriptv\textscriptv
 19968 \let\turnv\textturnv
 19969 \let\turnw\textturnw
 19970 \let\turny\textturny
 19971 \let\scy\textscy
 19972 \let\yogh\textyogh
 19973 \let\glotstop\textglotstop
 19974 \let\revglotstop\textrevglotstop
 19975 \let\invglotstop\textinvglotstop
 19976 \let\Gamma\textGamma

19977 \let\Delta\textDelta
 19978 \let\Theta\textTheta
 19979 \let\Lambda\textLambda
 19980 \let\Xi\textXi
 19981 \let\Pi\textPi
 19982 \let\Sigma\textSigma
 19983 \let\Upsilon\textUpsilon
 19984 \let\Phi\textPhi
 19985 \let\Psi\textPsi
 19986 \let\Omega\textOmega
 19987 \let\alpha\textalpha
 19988 \let\beta\textbeta
 19989 \let\gamma\textgamma
 19990 \let\delta\textdelta
 19991 \let\epsilon\textepsilon
 19992 \let\zeta\textzeta
 19993 \let\eta\texteta
 19994 \let\theta\texttheta
 19995 \let\iota\textiota
 19996 \let\kappa\textkappa
 19997 \let\lambda\textlambda
 19998 \let\mu\textmu
 19999 \let\mugreek\textmugreek
 20000 \let\nu\textnu
 20001 \let\xi\textxi
 20002 \let\pi\textpi
 20003 \let\rho\rho
 20004 \let\varsigma\textvarsigma
 20005 \let\sigma\textsigma
 20006 \let\tau\texttau
 20007 \let\upsilon\textupsilon
 20008 \let\phi\textphi
 20009 \let\chi\textchi
 20010 \let\psi\textpsi
 20011 \let\omega\textomega
 20012 \let\scd\textscd
 20013 \let\scu\textscu
 20014 \let\iinferior\textiinferior
 20015 \let\rinferior\extrinferior
 20016 \let\uiinferior\textuiinferior
 20017 \let\vinferior\textvinferior
 20018 \let\betainferior\textbetainferior
 20019 \let\gammainferior\textgammainferior
 20020 \let\rhoinferior\extrhoinferior
 20021 \let\phiinferior\textphiinferior
 20022 \let\chiinferior\textchiinferior
 20023 \let\barsci\textbarsci
 20024 \let\barp\textbarp
 20025 \let\barscu\textbarscu
 20026 \let\htrtaild\texthtrtaild
 20027 \let\dagger\textdagger
 20028 \let\bullet\textbullet
 20029 \let\hdotfor\texthdotfor
 20030 \let\prime\textprime

20031 \let\second\textsecond
 20032 \let\third\textthird
 20033 \let\backprime\textbackprime
 20034 \let\lefttherefore\textlefttherefore
 20035 \let\fourth\textfourth
 20036 \let\diamonddots\textdiamonddots
 20037 \let\zerosuperior\textzerosuperior
 20038 \let\isuperior\textisuperior
 20039 \let\foursuperior\textfoursuperior
 20040 \let\fivesuperior\textfivesuperior
 20041 \let\sixsuperior\textsixsuperior
 20042 \let\sevensuperior\textsevensuperior
 20043 \let\eightsuperior\texteightsuperior
 20044 \let\ninesuperior\textninesuperior
 20045 \let\plussuperior\textplussuperior
 20046 \let\minussuperior\textminussuperior
 20047 \let>equalsuperior\textequalsuperior
 20048 \let\parenleftsuperior\textparenleftsuperior
 20049 \let\parenrightsuperior\textparenrightsuperior
 20050 \let\nsuperior\textnsuperior
 20051 \let\zeroinferior\textzeroinferior
 20052 \let\oneinferior\textoneinferior
 20053 \let\twoinferior\texttwoinferior
 20054 \let\threeinferior\textthreeinferior
 20055 \let\fourinferior\textfourinferior
 20056 \let\fiveinferior\textfiveinferior
 20057 \let\sixinferior\textsixinferior
 20058 \let\seveninferior\textseveninferior
 20059 \let\eightinferior\texteightinferior
 20060 \let\nineinferior\textnineinferior
 20061 \let\plusinferior\textplusinferior
 20062 \let\minusinferior\textminusinferior
 20063 \let>equalsinferior\textequalsinferior
 20064 \let\parenleftinferior\textparenleftinferior
 20065 \let\parenrightinferior\textparenrightinferior
 20066 \let\ainferior\textainferior
 20067 \let\einferior\texteinferior
 20068 \let\oinferior\textoinferior
 20069 \let\xinferior\textxinferior
 20070 \let\schwainferior\textschwainferior
 20071 \let\hinferior\texthinferior
 20072 \let\kinferior\textkinferior
 20073 \let\linferior\textlinferior
 20074 \let\minferior\textminferior
 20075 \let\ninferior\textnninferior
 20076 \let\pinferior\textpinferior
 20077 \let\sinferior\textsinferior
 20078 \let\tinferior\texttinferior
 20079 \let\Deleatur\textDeleatur
 20080 \let\hslash\texthslash
 20081 \let\Im\textIm
 20082 \let\ell\textell
 20083 \let\wp\textwp
 20084 \let\Re\textRe

20085 \let\mho\textmho
 20086 \let\riota\textriota
 20087 \let\Finv\textFinv
 20088 \let\aleph\textaleph
 20089 \let\beth\textbeth
 20090 \let\gimel\textgimel
 20091 \let\daleth\textdaleth
 20092 \let\xfax\textfax
 20093 \let\Game\textGame
 20094 \let\leftarrow\textleftarrow
 20095 \let\uparrow\textuparrow
 20096 \let\rightarrow\textrightarrow
 20097 \let\downarrow\textdownarrow
 20098 \let\leftrightarrow\textleftrightarrow
 20099 \let\updownarrow\textupdownarrow
 20100 \let\nwarrow\textnwarrow
 20101 \let\nearrow\textnearrow
 20102 \let\searrow\textsearrow
 20103 \let\swarrow\textswarrow
 20104 \let\nleftarrow\textnleftarrow
 20105 \let\nrightarrow\textnrightarrow
 20106 \let\twoheadleftarrow\texttwoheadleftarrow
 20107 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20108 \let\twoheaduparrow\texttwoheaduparrow
 20109 \let\twoheadrightarrow\texttwoheadrightarrow
 20110 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20111 \let\twoheaddownarrow\texttwoheaddownarrow
 20112 \let\leftarrowtail\textleftarrowtail
 20113 \let\rightarrowtail\textrightarrowtail
 20114 \let\mapsto\textmapsto
 20115 \let\hookleftarrow\texthookleftarrow
 20116 \let\hookrightarrow\texthookrightarrow
 20117 \let\looparrowleft\textlooparrowleft
 20118 \let\looparrowright\textlooparrowright
 20119 \let\leftrightharpoonup\textleftrightharpoonup
 20120 \let\lightning\textlightning
 20121 \let\dlsh\textdlsh
 20122 \let\curvearrowleft\textcurvearrowleft
 20123 \let\curvearrowright\textcurvearrowright
 20124 \let\leftharpoonup\textleftharpoonup
 20125 \let\leftharpoondown\textleftharpoondown
 20126 \let\upharpoonright\textupharpoonright
 20127 \let\upharpoonleft\textupharpoonleft
 20128 \let\rightharpoonup\text\rightharpoonup
 20129 \let\rightharpoondown\text\rightharpoondown
 20130 \let\downharpoonright\textdownharpoonright
 20131 \let\downharpoonleft\textdownharpoonleft
 20132 \let\rightleftarrows\textrightleftarrows
 20133 \let\updownarrows\textupdownarrows
 20134 \let\leftrightarrows\textleftrightarrows
 20135 \let\leftleftarrows\textleftleftarrows
 20136 \let\upuparrows\textupuparrows
 20137 \let\rightrightarrows\text\rightrightarrows
 20138 \let\downdownarrows\textdowndownarrows

20139 $\backslash\text{let}\backslash\text{leftrightharpoons}\backslash\text{textleftrightharpoons}$
 20140 $\backslash\text{let}\backslash\text{rightleftharpoons}\backslash\text{textrightleftharpoons}$
 20141 $\backslash\text{let}\backslash\text{nLeftarrow}\backslash\text{textnLeftarrow}$
 20142 $\backslash\text{let}\backslash\text{nLeftrightarrow}\backslash\text{textnLeftrightarrow}$
 20143 $\backslash\text{let}\backslash\text{nRrightarrow}\backslash\text{textnRrightarrow}$
 20144 $\backslash\text{let}\backslash\text{Leftarrow}\backslash\text{textLeftarrow}$
 20145 $\backslash\text{let}\backslash\text{Uparrow}\backslash\text{textUparrow}$
 20146 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20147 $\backslash\text{let}\backslash\text{Downarrow}\backslash\text{textDownarrow}$
 20148 $\backslash\text{let}\backslash\text{Leftrightarrow}\backslash\text{textLeftrightarrow}$
 20149 $\backslash\text{let}\backslash\text{Updownarrow}\backslash\text{textUpdownarrow}$
 20150 $\backslash\text{let}\backslash\text{Narrow}\backslash\text{textNarrow}$
 20151 $\backslash\text{let}\backslash\text{Nearrow}\backslash\text{textNearrow}$
 20152 $\backslash\text{let}\backslash\text{Searrow}\backslash\text{textSearrow}$
 20153 $\backslash\text{let}\backslash\text{Swarrow}\backslash\text{textSwarrow}$
 20154 $\backslash\text{let}\backslash\text{Lleftarrow}\backslash\text{textLleftarrow}$
 20155 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20156 $\backslash\text{let}\backslash\text{leftsquigarrow}\backslash\text{textleftsquigarrow}$
 20157 $\backslash\text{let}\backslash\text{rightsquigarrow}\backslash\text{textrightsquigarrow}$
 20158 $\backslash\text{let}\backslash\text{dashleftarrow}\backslash\text{texdashleftarrow}$
 20159 $\backslash\text{let}\backslash\text{dasheduparrow}\backslash\text{texdasheduparrow}$
 20160 $\backslash\text{let}\backslash\text{dashrightarrow}\backslash\text{texdashrightarrow}$
 20161 $\backslash\text{let}\backslash\text{dasheddownarrow}\backslash\text{texdasheddownarrow}$
 20162 $\backslash\text{let}\backslash\text{pointer}\backslash\text{textpointer}$
 20163 $\backslash\text{let}\backslash\text{downuparrows}\backslash\text{texdownuparrows}$
 20164 $\backslash\text{let}\backslash\text{leftarrowtriangle}\backslash\text{textleftarrowtriangle}$
 20165 $\backslash\text{let}\backslash\text{rightarrowtriangle}\backslash\text{textrightarrowtriangle}$
 20166 $\backslash\text{let}\backslash\text{leftrightarrowtriangle}\backslash\text{textleftrightarrowtriangle}$
 20167 $\backslash\text{let}\backslash\text{forall}\backslash\text{textforall}$
 20168 $\backslash\text{let}\backslash\text{complement}\backslash\text{textcomplement}$
 20169 $\backslash\text{let}\backslash\text{partial}\backslash\text{textpartial}$
 20170 $\backslash\text{let}\backslash\text{exists}\backslash\text{textexists}$
 20171 $\backslash\text{let}\backslash\text{nexists}\backslash\text{textnexists}$
 20172 $\backslash\text{let}\backslash\text{emptyset}\backslash\text{textemptyset}$
 20173 $\backslash\text{let}\backslash\text{triangle}\backslash\text{texttriangle}$
 20174 $\backslash\text{let}\backslash\text{nabla}\backslash\text{texnabla}$
 20175 $\backslash\text{let}\backslash\text{in}\backslash\text{textin}$
 20176 $\backslash\text{let}\backslash\text{notin}\backslash\text{textnotin}$
 20177 $\backslash\text{let}\backslash\text{smallin}\backslash\text{textsmallin}$
 20178 $\backslash\text{let}\backslash\text{ni}\backslash\text{textni}$
 20179 $\backslash\text{let}\backslash\text{notowner}\backslash\text{textnotowner}$
 20180 $\backslash\text{let}\backslash\text{smallowns}\backslash\text{textsmallowns}$
 20181 $\backslash\text{let}\backslash\text{prod}\backslash\text{textprod}$
 20182 $\backslash\text{let}\backslash\text{amalg}\backslash\text{textamalg}$
 20183 $\backslash\text{let}\backslash\text{sum}\backslash\text{textsum}$
 20184 $\backslash\text{let}\backslash\text{mp}\backslash\text{textmp}$
 20185 $\backslash\text{let}\backslash\text{dotplus}\backslash\text{texdotplus}$
 20186 $\backslash\text{let}\backslash\text{Divides}\backslash\text{textDivides}$
 20187 $\backslash\text{let}\backslash\text{DividesNot}\backslash\text{textDividesNot}$
 20188 $\backslash\text{let}\backslash\text{setminus}\backslash\text{textsetminus}$
 20189 $\backslash\text{let}\backslash\text{ast}\backslash\text{textast}$
 20190 $\backslash\text{let}\backslash\text{circ}\backslash\text{textcirc}$
 20191 $\backslash\text{let}\backslash\text{surd}\backslash\text{textsurd}$
 20192 $\backslash\text{let}\backslash\text{propto}\backslash\text{textpropto}$

20193 ∞
 20194 \angle
 20195 \measuredangle
 20196 \sphericalangle
 20197 \mid
 20198 nmid
 20199 \parallel
 20200 $\mathrm{nparallel}$
 20201 \wedge
 20202 \owedge
 20203 \vee
 20204 \ovee
 20205 \cap
 20206 \cup
 20207 \int
 20208 \iint
 20209 \iiint
 20210 \oint
 20211 \oiint
 20212 \ointclockwise
 20213 \ointctrlockwise
 20214 \therefore
 20215 \because
 20216 \vdots
 20217 sqaredots
 20218 $\dot{-}$
 20219 eqcolon
 20220 \sim
 20221 \backsim
 20222 $\mathrm{nbacksim}$
 20223 \wr
 20224 nsim
 20225 eqsim
 20226 neqsim
 20227 simeq
 20228 nsimeq
 20229 \cong
 20230 ncong
 20231 \approx
 20232 $\mathrm{napprox}$
 20233 approxeq
 20234 napproxeq
 20235 triplesim
 20236 ntriplesim
 20237 backcong
 20238 nbackcong
 20239 asymp
 20240 nasymp
 20241 Bumpeq
 20242 nBumpeq
 20243 bumpeq
 20244 nbumpeq
 20245 doteq
 20246 ndoteq

20247 \let\doteqdot\textdoteqdot
 20248 \let\nDoteq\textnDoteq
 20249 \let\fallingdoteq\textfallingdoteq
 20250 \let\nfallingdoteq\textnfallingdoteq
 20251 \let\risingdoteq\textrisingdoteq
 20252 \let\nrisingdoteq\textnrisingdoteq
 20253 \let\colonequals\textcolonequals
 20254 \let\equalscolon\textequalscolon
 20255 \let\eqcirc\texteqcirc
 20256 \let\neqcirc\textneqcirc
 20257 \let\circeq\textcirceq
 20258 \let\ncirceq\textncirceq
 20259 \let\hateq\texthateq
 20260 \let\nhateq\textnhateq
 20261 \let\triangleeq\texttriangleeq
 20262 \let\neq\textneq
 20263 \let\ne\textne
 20264 \let\equiv\textequiv
 20265 \let\nequiv\textnequiv
 20266 \let\leq\textleq
 20267 \let\le\textle
 20268 \let\geq\textgeq
 20269 \let\ge\textge
 20270 \let\leqq\textleqq
 20271 \let\hleqq\texthleqq
 20272 \let\geqq\textgeqq
 20273 \let\hgeqq\texthgeqq
 20274 \let\lneqq\textlneqq
 20275 \let\gneqq\textgneqq
 20276 \let\ll\textll
 20277 \let\nll\textnll
 20278 \let\gg\textgg
 20279 \let\ngg\textngg
 20280 \let\between\textbetween
 20281 \let\nless\textnless
 20282 \let\ngtr\textngtr
 20283 \let\hleq\texthleq
 20284 \let\hgeq\texthgeq
 20285 \let\lesssim\textlessim
 20286 \let\gtrsim\textgtrsim
 20287 \let\nlessim\textnlessim
 20288 \let\ngtrsim\textngtrsim
 20289 \let\lessgtr\textlessgtr
 20290 \let\gtrless\textgtrless
 20291 \let\ngtrless\textngtrless
 20292 \let\nlessgtr\textnlessgtr
 20293 \let\prec\textprec
 20294 \let\succ\textsucc
 20295 \let\preccurlyeq\textpreccurlyeq
 20296 \let\succcurlyeq\textsucccurlyeq
 20297 \let\precsim\textprecsim
 20298 \let\precsim\textnprecsim
 20299 \let\succsim\textsuccsim
 20300 \let\succsim\textnsuccsim

20301 \let\nprec\textnprec
 20302 \let\nsucc\textnsucc
 20303 \let\subset\textsubset
 20304 \let\supset\textsupset
 20305 \let\nsubset\textnsubset
 20306 \let\nsupset\textnsupset
 20307 \let\subseteq\textsubseteq
 20308 \let\supseteq\textsupseteq
 20309 \let\nsubsubseteq\textnsubsubseteq
 20310 \let\nsupseteq\textnsupseteq
 20311 \let\subsetneq\textsubsetneq
 20312 \let\supsetneq\textsupsetneq
 20313 \let\cupdot\textcupdot
 20314 \let\cupplus\textcupplus
 20315 \let\sqsubset\textsqsubset
 20316 \let\nsqsubset\textnsqsubset
 20317 \let\sqsupset\textsqsupset
 20318 \let\nsqsupset\textnsqsupset
 20319 \let\sqsubseteq\textsqsubseteq
 20320 \let\nsqsubseteq\textnsqsubseteq
 20321 \let\sqsupseteq\textsqsupseteq
 20322 \let\nsqsupseteq\textnsqsupseteq
 20323 \let\sqcap\textsqcap
 20324 \let\sqcup\textsqcup
 20325 \let\oplus\textoplus
 20326 \let\ominus\textominus
 20327 \let\otimes\textotimes
 20328 \let\oslash\textoslash
 20329 \let\odot\textodot
 20330 \let\circledcirc\textcircledcirc
 20331 \let\circledast\textcircledast
 20332 \let\circleddash\textcircleddash
 20333 \let\boxplus\textboxplus
 20334 \let\boxminus\textboxminus
 20335 \let\boxtimes\textboxtimes
 20336 \let\boxdot\textboxdot
 20337 \let\vdash\textvdash
 20338 \let\dashv\textdashv
 20339 \let\ndashv\textndashv
 20340 \let\top\texttop
 20341 \let\ndownvdash\textndownvdash
 20342 \let\bot\textbot
 20343 \let\nupvdash\textnupvdash
 20344 \let\vDash\textvDash
 20345 \let\Vdash\textVdash
 20346 \let\Vvdash\textVvdash
 20347 \let\NVdash\textNVdash
 20348 \let\VDash\textVDash
 20349 \let\Nvdash\textNvdash
 20350 \let\NVDash\textNVDash
 20351 \let\NVdash\textNVdash
 20352 \let\NVDash\textNVDash
 20353 \let\lhd\textlhd
 20354 \let\rhd\textrhd

20355 $\backslash\text{let}\backslash\text{unlhd}\backslash\text{textunlhd}$
 20356 $\backslash\text{let}\backslash\text{unrhd}\backslash\text{textunrhd}$
 20357 $\backslash\text{let}\backslash\text{multimapdotbothA}\backslash\text{textmultimapdotbothA}$
 20358 $\backslash\text{let}\backslash\text{multimapdotbothB}\backslash\text{textmultimapdotbothB}$
 20359 $\backslash\text{let}\backslash\text{multimap}\backslash\text{textmultimap}$
 20360 $\backslash\text{let}\backslash\text{veebar}\backslash\text{textveebar}$
 20361 $\backslash\text{let}\backslash\text{barwedge}\backslash\text{textbarwedge}$
 20362 $\backslash\text{let}\backslash\text{star}\backslash\text{textstar}$
 20363 $\backslash\text{let}\backslash\text{divideontimes}\backslash\text{textdivideontimes}$
 20364 $\backslash\text{let}\backslash\text{bowtie}\backslash\text{textbowtie}$
 20365 $\backslash\text{let}\backslash\text{ltimes}\backslash\text{textltimes}$
 20366 $\backslash\text{let}\backslash\text{rtimes}\backslash\text{textrtimes}$
 20367 $\backslash\text{let}\backslash\text{leftthreetimes}\backslash\text{textleftthreetimes}$
 20368 $\backslash\text{let}\backslash\text{rightthreetimes}\backslash\text{textrightthreetimes}$
 20369 $\backslash\text{let}\backslash\text{backsimeq}\backslash\text{textbacksimeq}$
 20370 $\backslash\text{let}\backslash\text{nbacksimeq}\backslash\text{textnbacksimeq}$
 20371 $\backslash\text{let}\backslash\text{curlyvee}\backslash\text{textcurlyvee}$
 20372 $\backslash\text{let}\backslash\text{curlywedge}\backslash\text{textcurlywedge}$
 20373 $\backslash\text{let}\backslash\text{Subset}\backslash\text{textSubset}$
 20374 $\backslash\text{let}\backslash\text{nSubset}\backslash\text{textnSubset}$
 20375 $\backslash\text{let}\backslash\text{Supset}\backslash\text{textSupset}$
 20376 $\backslash\text{let}\backslash\text{nSupset}\backslash\text{textnSupset}$
 20377 $\backslash\text{let}\backslash\text{Cap}\backslash\text{textCap}$
 20378 $\backslash\text{let}\backslash\text{Cup}\backslash\text{textCup}$
 20379 $\backslash\text{let}\backslash\text{pitchfork}\backslash\text{textpitchfork}$
 20380 $\backslash\text{let}\backslash\text{lessdot}\backslash\text{textlessdot}$
 20381 $\backslash\text{let}\backslash\text{gtrdot}\backslash\text{textgtrdot}$
 20382 $\backslash\text{let}\backslash\text{lll}\backslash\text{textlll}$
 20383 $\backslash\text{let}\backslash\text{ggg}\backslash\text{textggg}$
 20384 $\backslash\text{let}\backslash\text{lesseqgtr}\backslash\text{textlesseqgtr}$
 20385 $\backslash\text{let}\backslash\text{gtreqless}\backslash\text{textgtreqless}$
 20386 $\backslash\text{let}\backslash\text{curlyeqprec}\backslash\text{textcurlyeqprec}$
 20387 $\backslash\text{let}\backslash\text{ncurlyeqprec}\backslash\text{textncurlyeqprec}$
 20388 $\backslash\text{let}\backslash\text{curlyeqsucc}\backslash\text{textcurlyeqsucc}$
 20389 $\backslash\text{let}\backslash\text{ncurlyeqsucc}\backslash\text{textncurlyeqsucc}$
 20390 $\backslash\text{let}\backslash\text{npreccurlyeq}\backslash\text{textnpreccurlyeq}$
 20391 $\backslash\text{let}\backslash\text{nsucccurlyeq}\backslash\text{textnsucccurlyeq}$
 20392 $\backslash\text{let}\backslash\text{nqsubseteq}\backslash\text{textnqsubseteq}$
 20393 $\backslash\text{let}\backslash\text{nqsupseteq}\backslash\text{textnqsupseteq}$
 20394 $\backslash\text{let}\backslash\text{sqsubsetneq}\backslash\text{textsqsubsetneq}$
 20395 $\backslash\text{let}\backslash\text{sqsupsetneq}\backslash\text{textsqsupsetneq}$
 20396 $\backslash\text{let}\backslash\text{lnsim}\backslash\text{textlnsim}$
 20397 $\backslash\text{let}\backslash\text{gnsim}\backslash\text{textgnsim}$
 20398 $\backslash\text{let}\backslash\text{precnsim}\backslash\text{textprecnsim}$
 20399 $\backslash\text{let}\backslash\text{succnsim}\backslash\text{textsuccnsim}$
 20400 $\backslash\text{let}\backslash\text{ntriangleleft}\backslash\text{textntriangleleft}$
 20401 $\backslash\text{let}\backslash\text{ntriangleright}\backslash\text{textntriangleright}$
 20402 $\backslash\text{let}\backslash\text{ntrianglelefteq}\backslash\text{textntrianglelefteq}$
 20403 $\backslash\text{let}\backslash\text{ntrianglerighteq}\backslash\text{textntrianglerighteq}$
 20404 $\backslash\text{let}\backslash\text{vdots}\backslash\text{textvdots}$
 20405 $\backslash\text{let}\backslash\text{cdots}\backslash\text{textcdots}$
 20406 $\backslash\text{let}\backslash\text{udots}\backslash\text{textudots}$
 20407 $\backslash\text{let}\backslash\text{ddots}\backslash\text{textddots}$
 20408 $\backslash\text{let}\backslash\text{barin}\backslash\text{textbarin}$

20409 \let\diameter\textdiameter
 20410 \let\backneg\textbackneg
 20411 \let\wasylozenge\textwasylozenge
 20412 \let\invbackneg\textinvbackneg
 20413 \let\clock\textclock
 20414 \let\ulcorner\textulcorner
 20415 \let\urcorner\texturcorner
 20416 \let\llcorner\textllcorner
 20417 \let\lrcorner\textlrcorner
 20418 \let\frown\textfrown
 20419 \let\smile\textsmile
 20420 \let\Keyboard\textKeyboard
 20421 \let\langle\textlangle
 20422 \let\rangle\textrangle
 20423 \let\APLinv\textAPLinv
 20424 \let\Tumbler\textTumbler
 20425 \let\notslash\textnotslash
 20426 \let\notbackslash\textnotbackslash
 20427 \let\boxbackslash\textboxbackslash
 20428 \let\APLleftarrowbox\textAPLleftarrowbox
 20429 \let\APLrightarrowbox\textAPLrightarrowbox
 20430 \let\APLuparrowbox\textAPLuparrowbox
 20431 \let\APLdownarrowbox\textAPLdownarrowbox
 20432 \let\APLinput\textAPLinput
 20433 \let\Request\textRequest
 20434 \let\Beam\textBeam
 20435 \let\hexagon\texthexagon
 20436 \let\APLbox\textAPLbox
 20437 \let\ForwardToIndex\textForwardToIndex
 20438 \let\RewindToIndex\textRewindToIndex
 20439 \let\bbslash\textbbslash
 20440 \let\CircledA\textCircledA
 20441 \let\CleaningF\textCleaningF
 20442 \let\CleaningFF\textCleaningFF
 20443 \let\CleaningP\textCleaningP
 20444 \let\CleaningPP\textCleaningPP
 20445 \let\CuttingLine\textCuttingLine
 20446 \let\UParrow\textUParrow
 20447 \let\bigtriangleup\textbigtriangleup
 20448 \let\Forward\textForward
 20449 \let\triangleright\texttriangleright
 20450 \let\RHD\textRHD
 20451 \let\DOWNarrow\textDOWNarrow
 20452 \let\bigtriangledown\textbigtriangledown
 20453 \let\Rewind\textRewind
 20454 \let\triangleleft\texttriangleleft
 20455 \let\LHD\textLHD
 20456 \let\diamond\textdiamond
 20457 \let\lozenge\textlozenge
 20458 \let\LEFTCIRCLE\textLEFTCIRCLE
 20459 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20460 \let\openbullet\textopenbullet
 20461 \let\boxbar\textboxbar
 20462 \let\bigcircle\textbigcircle

20463 \let\Cloud\textCloud
 20464 \let\FiveStar\textFiveStar
 20465 \let\FiveStarOpen\textFiveStarOpen
 20466 \let\Phone\textPhone
 20467 \let\boxempty\textboxempty
 20468 \let\Checkedbox\textCheckedbox
 20469 \let\Crossedbox\textCrossedbox
 20470 \let\Coffeecup\textCoffeecup
 20471 \let\HandCuffLeft\textHandCuffLeft
 20472 \let\HandCuffRight\textHandCuffRight
 20473 \let\HandLeft\textHandLeft
 20474 \let\HandRight\textHandRight
 20475 \let\Radioactivity\textRadioactivity
 20476 \let\Biohazard\textBiohazard
 20477 \let\Ankh\textAnkh
 20478 \let\YinYang\textYinYang
 20479 \let\frownie\textfrownie
 20480 \let\smiley\textsmiley
 20481 \let\blacksmiley\textblacksmiley
 20482 \let\sun\textsun
 20483 \let\leftmoon\textleftmoon
 20484 \let\rightmoon\textrightmoon
 20485 \let\mercury\textmercury
 20486 \let\earth\textearth
 20487 \let\male\textmale
 20488 \let\jupiter\textjupiter
 20489 \let\saturn\textsaturn
 20490 \let\uranus\texturanus
 20491 \let\neptune\textneptune
 20492 \let\pluto\textpluto
 20493 \let\aries\textaries
 20494 \let\taurus\texttaurus
 20495 \let\gemini\textgemini
 20496 \let\cancer\textcancer
 20497 \let\leo\textleo
 20498 \let\virgo\textvirgo
 20499 \let\libra\textlibra
 20500 \let\scorpio\textscorpio
 20501 \let\sagittarius\textsagittarius
 20502 \let\capricornus\textcapricornus
 20503 \let\aquarius\textaquarius
 20504 \let\pisces\textpisces
 20505 \let\quarternote\textquarternote
 20506 \let\twonotes\texttwonotes
 20507 \let\sixteenthnote\textsixteenthnote
 20508 \let\flat\textflat
 20509 \let\natural\textnatural
 20510 \let\sharp\textsharp
 20511 \let\recycle\textrecycle
 20512 \let\Wheelchair\textWheelchair
 20513 \let\Flag\textFlag
 20514 \let\MineSign\textMineSign
 20515 \let\ds\textds
 20516 \let\dsmedical\textdsmedical

20517 \let\dsjuridical\textdsjuridical
 20518 \let\dschemical\textdschemical
 20519 \let\dsbiological\textdsbiological
 20520 \let\dscommercial\textdscommercial
 20521 \let\manstar\textmanstar
 20522 \let\danger\textdanger
 20523 \let\FemaleFemale\textFemaleFemale
 20524 \let\MaleMale\textMaleMale
 20525 \let\FemaleMale\textFemaleMale
 20526 \let\Hermaphrodite\textHermaphrodite
 20527 \let\Neutral\textNeutral
 20528 \let\hexstar\texthexstar
 20529 \let\SunCloud\textSunCloud
 20530 \let\Rain\textRain
 20531 \let\noway\textnoway
 20532 \let\Mountain\textMountain
 20533 \let\Tent\textTent
 20534 \let\ScissorRight\textScissorRight
 20535 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20536 \let\ScissorHollowRight\textScissorHollowRight
 20537 \let\PhoneHandset\textPhoneHandset
 20538 \let\Tape\textTape
 20539 \let\Plane\textPlane
 20540 \let\Envelope\textEnvelope
 20541 \let\Peace\textPeace
 20542 \let\WritingHand\textWritingHand
 20543 \let\PencilRightDown\textPencilRightDown
 20544 \let\PencilRight\textPencilRight
 20545 \let\PencilRightUp\textPencilRightUp
 20546 \let\NibRight\textNibRight
 20547 \let\NibSolidRight\textNibSolidRight
 20548 \let\Checkmark\textCheckmark
 20549 \let\CheckmarkBold\textCheckmarkBold
 20550 \let\XSolid\textXSolid
 20551 \let\XSolidBold\textXSolidBold
 20552 \let\XSolidBrush\textXSolidBrush
 20553 \let\PlusOutline\textPlusOutline
 20554 \let\Plus\textPlus
 20555 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 20556 \let\PlusCenterOpen\textPlusCenterOpen
 20557 \let\Cross\textCross
 20558 \let\CrossOpenShadow\textCrossOpenShadow
 20559 \let\CrossOutline\textCrossOutline
 20560 \let\CrossMaltese\textCrossMaltese
 20561 \let\DavidStar\textDavidStar
 20562 \let\FourAsterisk\textFourAsterisk
 20563 \let\JackStar\textJackStar
 20564 \let\JackStarBold\textJackStarBold
 20565 \let\ClowerTips\textClowerTips
 20566 \let\FourStar\textFourStar
 20567 \let\FourStarOpen\textFourStarOpen
 20568 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 20569 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 20570 \let\FiveStarOpenDotted\textFiveStarOpenDotted

20571 \let\FiveStarOutline\textFiveStarOutline
 20572 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 20573 \let\FiveStarConvex\textFiveStarConvex
 20574 \let\FiveStarShadow\textFiveStarShadow
 20575 \let\AsteriskBold\textAsteriskBold
 20576 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 20577 \let\EightStarTaper\textEightStarTaper
 20578 \let\EightStarConvex\textEightStarConvex
 20579 \let\SixStar\textSixStar
 20580 \let\EightStar\textEightStar
 20581 \let\EightStarBold\textEightStarBold
 20582 \let\TwelveStar\textTwelveStar
 20583 \let\SixteenStarLight\textSixteenStarLight
 20584 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 20585 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 20586 \let\Asterisk\textAsterisk
 20587 \let\SixFlowerAlternate\textSixFlowerAlternate
 20588 \let\FiveFlowerPetal\textFiveFlowerPetal
 20589 \let\FiveFlowerOpen\textFiveFlowerOpen
 20590 \let\EightFlowerPetal\textEightFlowerPetal
 20591 \let\SunshineOpenCircled\textSunshineOpenCircled
 20592 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 20593 \let\SnowflakeChevron\textSnowflakeChevron
 20594 \let\Snowflake\textSnowflake
 20595 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 20596 \let\Sparkle\textSparkle
 20597 \let\SparkleBold\textSparkleBold
 20598 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 20599 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 20600 \let\EightAsterisk\textEightAsterisk
 20601 \let\CircleShadow\textCircleShadow
 20602 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 20603 \let\SquareTopRight\textSquareTopRight
 20604 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 20605 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 20606 \let\DiamandSolid\textDiamandSolid
 20607 \let\RectangleThin\textRectangleThin
 20608 \let\Rectangle\textRectangle
 20609 \let\RectangleBold\textRectangleBold
 20610 \let\perp\textperp
 20611 \let\notperp\textnotperp
 20612 \let\veedot\textveedot
 20613 \let\wedgedot\textwedgedot
 20614 \let\leftspoon\textleftspoon
 20615 \let\lbrackdbl\textlbrackdbl
 20616 \let\rbrackdbl\textrbrackdbl
 20617 \let\circlearrowleft\textcirclearrowleft
 20618 \let\circlearrowright\textcirclearrowright
 20619 \let\longleftarrow\textlongleftarrow
 20620 \let\longrightarrow\textlongrightarrow
 20621 \let\longleftarrow\textlongleftarrow
 20622 \let\Longleftarrow\textLongleftarrow
 20623 \let\Longrightarrow\textLongrightarrow
 20624 \let\Longleftarrow\textLongleftarrow

20625 \let\longmapsto\textlongmapsto
 20626 \let\Longmapsfrom\textLongmapsfrom
 20627 \let\Longmapsto\textLongmapsto
 20628 \let\nwsearrow\textnwsearrow
 20629 \let\neswarrow\textneswarrow
 20630 \let\lhooknarrow\textlhooknarrow
 20631 \let\rhooknarrow\extrhooknarrow
 20632 \let\lhooksearrow\textlhooksearrow
 20633 \let\rhooksearrow\extrhooksearrow
 20634 \let\leadsto\textleadsto
 20635 \let\rcurvearrowne\textrcurvearrowne
 20636 \let\lcurvearrowse\textlcurvearrowse
 20637 \let\lcurvearrowsw\textlcurvearrowsw
 20638 \let\rcurvearrowse\textrcurvearrowse
 20639 \let\lcurvearrowdown\textlcurvearrowdown
 20640 \let\rcurvearrowdown\textrcurvearrowdown
 20641 \let\rcurvearrowleft\textrcurvearrowleft
 20642 \let\rcurvearrowright\textrcurvearrowright
 20643 \let\leftrightharpoon\textleftrightharpoon
 20644 \let\rightrightharpoon\extrightrightharpoon
 20645 \let\updownharpoonrightleft\textupdownharpoonrightleft
 20646 \let\updownharpoonleftright\textupdownharpoonleftright
 20647 \let\leftleftharpoons\textleftleftharpoons
 20648 \let\upupharpoons\textupupharpoons
 20649 \let\rightrightharpoons\extrightrightharpoons
 20650 \let\downdownharpoons\textdowndownharpoons
 20651 \let\leftbarharpoon\textleftbarharpoon
 20652 \let\barleftharpoon\textbarleftharpoon
 20653 \let\rightbarharpoon\textrightbarharpoon
 20654 \let\barrightharpoon\textbarrightharpoon
 20655 \let\updownharpoons\textupdownharpoons
 20656 \let\downupharpoons\textdownupharpoons
 20657 \let\moo\textmoo
 20658 \let\llparenthesis\textllparenthesis
 20659 \let\rrparenthesis\extrrparenthesis
 20660 \let\invdiameter\textinvdiameter
 20661 \let\obar\textobar
 20662 \let\obslash\textobslash
 20663 \let\obot\textobot
 20664 \let\NoChemicalCleaning\textNoChemicalCleaning
 20665 \let\olessthan\textolessthan
 20666 \let\ogreaterthan\textogreaterthan
 20667 \let\boxslash\textboxslash
 20668 \let\boxbslash\textboxbslash
 20669 \let\boxast\textboxast
 20670 \let\boxcircle\textboxcircle
 20671 \let\boxbox\textboxbox
 20672 \let\Valve\textValve
 20673 \let\multimapboth\textmultimapboth
 20674 \let\shuffle\textshuffle
 20675 \let\uplus\textuplus
 20676 \let\bigdoublewedge\textbigdoublewedge
 20677 \let\bigdoublevee\textbigdoublevee
 20678 \let\Join\textJoin

20679 $\backslash\text{let}\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 20680 $\backslash\text{let}\backslash\text{circplus}\backslash\text{textcircplus}$
 20681 $\backslash\text{let}\backslash\text{minusdot}\backslash\text{textminusdot}$
 20682 $\backslash\text{let}\backslash\text{dottimes}\backslash\text{textdottimes}$
 20683 $\backslash\text{let}\backslash\text{dtimes}\backslash\text{textdtimes}$
 20684 $\backslash\text{let}\backslash\text{odiv}\backslash\text{textodiv}$
 20685 $\backslash\text{let}\backslash\text{invneg}\backslash\text{textinvneg}$
 20686 $\backslash\text{let}\backslash\text{sqdoublecap}\backslash\text{textsquaddoublecap}$
 20687 $\backslash\text{let}\backslash\text{capdot}\backslash\text{textcapdot}$
 20688 $\backslash\text{let}\backslash\text{sqdoublecup}\backslash\text{textsquaddoublecup}$
 20689 $\backslash\text{let}\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 20690 $\backslash\text{let}\backslash\text{doublevee}\backslash\text{textdoublevee}$
 20691 $\backslash\text{let}\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 20692 $\backslash\text{let}\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 20693 $\backslash\text{let}\backslash\text{eqdot}\backslash\text{texteqdot}$
 20694 $\backslash\text{let}\backslash\text{neqdot}\backslash\text{textneqdot}$
 20695 $\backslash\text{let}\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 20696 $\backslash\text{let}\backslash\text{leqslant}\backslash\text{textleqslant}$
 20697 $\backslash\text{let}\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 20698 $\backslash\text{let}\backslash\text{geqslant}\backslash\text{textgeqslant}$
 20699 $\backslash\text{let}\backslash\text{ngeqslant}\backslash\text{textngeqslant}$
 20700 $\backslash\text{let}\backslash\text{lessapprox}\backslash\text{textlessapprox}$
 20701 $\backslash\text{let}\backslash\text{nlessapprox}\backslash\text{textnlessapprox}$
 20702 $\backslash\text{let}\backslash\text{gtrapprox}\backslash\text{textgtrapprox}$
 20703 $\backslash\text{let}\backslash\text{ngtrapprox}\backslash\text{textngtrapprox}$
 20704 $\backslash\text{let}\backslash\text{lneq}\backslash\text{textlneq}$
 20705 $\backslash\text{let}\backslash\text{gneq}\backslash\text{textgneq}$
 20706 $\backslash\text{let}\backslash\text{lnapprox}\backslash\text{textlnapprox}$
 20707 $\backslash\text{let}\backslash\text{gnapprox}\backslash\text{textgnapprox}$
 20708 $\backslash\text{let}\backslash\text{lesseqgtr}\backslash\text{textlesseqgtr}$
 20709 $\backslash\text{let}\backslash\text{gtreqless}\backslash\text{textgtreqless}$
 20710 $\backslash\text{let}\backslash\text{eqslantless}\backslash\text{texteqslantless}$
 20711 $\backslash\text{let}\backslash\text{eqslantgtr}\backslash\text{texteqslantgtr}$
 20712 $\backslash\text{let}\backslash\text{leftslice}\backslash\text{textleftslice}$
 20713 $\backslash\text{let}\backslash\text{rightslice}\backslash\text{textrightslice}$
 20714 $\backslash\text{let}\backslash\text{preceq}\backslash\text{textpreceq}$
 20715 $\backslash\text{let}\backslash\text{npreceq}\backslash\text{textnpreceq}$
 20716 $\backslash\text{let}\backslash\text{succeq}\backslash\text{textsucceq}$
 20717 $\backslash\text{let}\backslash\text{nsucceq}\backslash\text{textnsucceq}$
 20718 $\backslash\text{let}\backslash\text{precneq}\backslash\text{textprecneq}$
 20719 $\backslash\text{let}\backslash\text{succneq}\backslash\text{textsuccneq}$
 20720 $\backslash\text{let}\backslash\text{preceqq}\backslash\text{textpreceqq}$
 20721 $\backslash\text{let}\backslash\text{npreceqq}\backslash\text{textnpreceqq}$
 20722 $\backslash\text{let}\backslash\text{succeqq}\backslash\text{textsucceqq}$
 20723 $\backslash\text{let}\backslash\text{nsucceqq}\backslash\text{textnsucceqq}$
 20724 $\backslash\text{let}\backslash\text{precneqq}\backslash\text{textprecneqq}$
 20725 $\backslash\text{let}\backslash\text{succneqq}\backslash\text{textsuccneqq}$
 20726 $\backslash\text{let}\backslash\text{precapprox}\backslash\text{textprecapprox}$
 20727 $\backslash\text{let}\backslash\text{nprecapprox}\backslash\text{textnprecapprox}$
 20728 $\backslash\text{let}\backslash\text{succapprox}\backslash\text{textsuccapprox}$
 20729 $\backslash\text{let}\backslash\text{nsuccapprox}\backslash\text{textnsuccapprox}$
 20730 $\backslash\text{let}\backslash\text{precnapprox}\backslash\text{textprecnapprox}$
 20731 $\backslash\text{let}\backslash\text{succnapprox}\backslash\text{textsuccnapprox}$
 20732 $\backslash\text{let}\backslash\text{subseteqq}\backslash\text{textsubseteqq}$

20733 \let\subsetteqq\textsubsetteqq
 20734 \let\supseteqq\textsupseteqq
 20735 \let\subsetteqq\textsubsetteqq
 20736 \let\dashV\textdashV
 20737 \let\ndashV\textndashV
 20738 \let\Dashv\textDashv
 20739 \let\ndashv\textndashv
 20740 \let\DashV\textDashV
 20741 \let\ndashV\textndashV
 20742 \let\downmodels\textdownmodels
 20743 \let\ndownmodels\textndownmodels
 20744 \let\upmodels\textupmodels
 20745 \let\upmodels\textupmodels
 20746 \let\upspoon\textupspoon
 20747 \let\interleave\textinterleave
 20748 \let\slash\textslash
 20749 \let\pentagon\textpentagon
 20750 \let\varhexagon\textvarhexagon
 20751 \let\jinferior\textjinferior
 20752 \let\slashdiv\textslashdiv
 20753 \let\fivedots\textfivedots
 20754 \let\oo\textoo
 20755 \let\GaPa\textGaPa
 20756 \let\HaPa\textHaPa
 20757 \let\ViPa\textViPa
 20758 \let\AcPa\textAcPa
 20759 \let\SePa\textSePa
 20760 \let\ZwPa\textZwPa
 20761 \let\fullnote\textfullnote
 20762 \let\halfnote\texthalfnote
 20763 \let\Vier\textVier
 20764 \let\Acht\textAcht
 20765 \let\Sech\textSech
 20766 \let\Zwdr\textZwdr
 20767 \let\Mundus\textMundus
 20768 \let\Moon\textMoon
 20769 \let\ManFace\textManFace
 20770 \let\WomanFace\textWomanFace
 20771 \let\Fax\textFax
 20772 \let\Fire\textFire
 20773 \let\Bicycle\textBicycle
 20774 \let\Gentsroom\textGentsroom
 20775 \let\Ladiesroom\textLadiesroom
 20776 \let\ccnc\textccnc
 20777 \let\ccsa\textccsa
 20778 \let\Info\textInfo
 20779 \let\CESign\textCESign
 20780 \let\neg\textneg
 20781 \let\times\texttimes
 20782 \let\div\textdiv
 20783 \let\pm\textpm
 20784 \let\cdot\textcdot
 20785 }% \psdmapshortnames
 20786 \newcommand*{\psdaliasnames}{%

20787 \let\epsdice\HyPsd@DieFace
 20788 \let\fcdice\HyPsd@DieFace
 20789 \let\MoonPha\HyPsd@MoonPha
 20790 \let\mathdollar\textdollar
 20791 \let\EyesDollar\textdollar
 20792 \let\binampersand\textampersand
 20793 \let\with\textampersand
 20794 \let\mathunderscore\textunderscore
 20795 \let\textvertline\textbar
 20796 \let\mathsterling\textsterling
 20797 \let\pounds\textsterling
 20798 \let\brokenvert\textbrokenbar
 20799 \let\mathsection\textsection
 20800 \let\S\textsection
 20801 \let\mathparagraph\textparagraph
 20802 \let\MultiplicationDot\textperiodcentered
 20803 \let\Squaredot\textperiodcentered
 20804 \let\vartimes\textmultiply
 20805 \let\MVMultiplication\textmultiply
 20806 \let\eth\dh
 20807 \let\crossd\textcrd
 20808 \let\textbard\textcrd
 20809 \let\bard\textcrd
 20810 \let\textcrh\texthbar
 20811 \let\crossh\texthbar
 20812 \let\planck\texthbar
 20813 \let\eng\ng
 20814 \let\engma\ng
 20815 \let\crossb\textcrb
 20816 \let\textbarb\textcrb
 20817 \let\barb\textcrb
 20818 \let\Florin\textflorin
 20819 \let\hv\texthvl
 20820 \let\hausak\texthtk
 20821 \let\crossnilambda\textcrlambda
 20822 \let\barlambda\textcrlambda
 20823 \let\lambdabar\textcrlambda
 20824 \let\lambdaslash\textcrlambda
 20825 \let\textnrleg\textPUnrleg
 20826 \let\textpipevar\textpipe
 20827 \let\textdoublepipevar\textdoublepipe
 20828 \let\textdoublebarpipevar\textdoublebarpipe
 20829 \let\textcrg\textgslash
 20830 \let\textdblig\textPUdblig
 20831 \let\textqplig\textPUqplig
 20832 \let\textcentoldstyle\textslashc
 20833 \let\textbarc\textslashc
 20834 \let\inva\textturna
 20835 \let\vara\textscripta
 20836 \let\invscripta\textturnscripta
 20837 \let\rotvara\textturnscripta
 20838 \let\hookb\texthtb
 20839 \let\hausab\texthtb
 20840 \let\varopeno\textopeno

20841 \let\curlyc\textctc
 20842 \let\taild\textrtaild
 20843 \let\hookd\texthtd
 20844 \let\hausad\texthtd
 20845 \let\er\textrhooschwa
 20846 \let\epsi\textniepsilon
 20847 \let\hookrepsilon\texthookrepsilon
 20848 \let\closedrepsilon\textcloserepsilon
 20849 \let\barj\textbardotlessj
 20850 \let\hookg\texthtg
 20851 \let\varg\textscriptg
 20852 \let\vod\textipagamma
 20853 \let\invh\textturnh
 20854 \let\udesc\textturnh
 20855 \let\hookh\textthh
 20856 \let\voicedh\textthh
 20857 \let\hookheng\textthheng
 20858 \let\ibar\textbari
 20859 \let\vari\textniota
 20860 \let\tildel\textltilde
 20861 \let\latfric\textbeltl
 20862 \let\taill\textrtail
 20863 \let\lz\textlyoghlig
 20864 \let\invm\textturnm
 20865 \let\rotm\textturnm
 20866 \let\legm\textturnmleg
 20867 \let\labdentainas\textltailm
 20868 \let\emgma\textltailm
 20869 \let\nj\textltailn
 20870 \let\enya\textltailn
 20871 \let\tailn\textrtailn
 20872 \let\closedniomega\textcloseomega
 20873 \let\varomega\textcloseomega
 20874 \let\invr\textturnr
 20875 \let\rotr\textturnr
 20876 \let\invlegr\textturnlonglegr
 20877 \let\tailinvr\textturnrrtail
 20878 \let\legr\textlonglegr
 20879 \let\tailr\textrtailr
 20880 \let\flapr\textfishhookr
 20881 \let\flap\textfishhookr
 20882 \let\tails\textrtails
 20883 \let\curlyesh\textctesh
 20884 \let\clickt\textturnt
 20885 \let\tailt\textrtailt
 20886 \let\ubar\textbaru
 20887 \let\rotOmega\textniupsilon
 20888 \let\invv\textturnv
 20889 \let\pwedge\textturnv
 20890 \let\invw\textturnw
 20891 \let\rotw\textturnw
 20892 \let\invy\textturny
 20893 \let\roty\textturny
 20894 \let\tailz\textrtailz

20895 \let\curlyz\textctz
 20896 \let\curlyyogh\textctyogh
 20897 \let\ejective\textglotstop
 20898 \let\glottal\textglotstop
 20899 \let\reveject\textrevglotstop
 20900 \let\clickc\textstretchc
 20901 \let\textstretchcvar\textstretchc
 20902 \let\clickb\textbullseye
 20903 \let\textObullseye\textbullseye
 20904 \let\textctjvar\textctj
 20905 \let\textturnsck\textturnk
 20906 \let\dz\textdzlig
 20907 \let\tesh\textteshlig
 20908 \let\digamma\textdigammagreek
 20909 \let\hardsign\cyrhrdsn
 20910 \let\softsign\cyrsoftsn
 20911 \let\hebsin\hebshin
 20912 \let\textsck\textPUscck
 20913 \let\textscm\textPUscm
 20914 \let\textscp\textPUscp
 20915 \let\textrevscr\textPUrevscr
 20916 \let\textrhooca\textPURhooca
 20917 \let\textrhooke\textPURhooke
 20918 \let\textrhookepsilon\textPURhookepsilon
 20919 \let\textrhookeno\textPURhookopeno
 20920 \let\textdoublevertline\textbardbl
 20921 \let\dag\textdagger
 20922 \let\ddagger\textdaggerdbl
 20923 \let\ddag\textdaggerdbl
 20924 \let\mathellipsis\textellipsis
 20925 \let\EurDig\texteuro
 20926 \let\EURdig\texteuro
 20927 \let\EurHv\texteuro
 20928 \let\EURhv\texteuro
 20929 \let\EurCr\texteuro
 20930 \let\EURcr\texteuro
 20931 \let\EurTm\texteuro
 20932 \let\EURtm\texteuro
 20933 \let\Eur\texteuro
 20934 \let\Denarius\textDeleatur
 20935 \let\agemO\textmho
 20936 \let\EstimatedSign\textestimated
 20937 \let\Ecommerce\textestimated
 20938 \let\bindnasrepma\textinvamp
 20939 \let\parr\textinvamp
 20940 \let\MVRightArrow\textrightarrow
 20941 \let\MVRightarrow\textrightarrow
 20942 \let\MVArrowDown\textdownarrow
 20943 \let\Force\textdownarrow
 20944 \let\textglobrise\textnearrow
 20945 \let\textglobfall\textsearrow
 20946 \let\Lightning\textlightning
 20947 \let\Conclusion\textrightarrow
 20948 \let\dashedleftarrow\textdashleftarrow

20949 `\let\dashedrightarrow\textdashrightarrow`
 20950 `\let\varnothing\textemptyset`
 20951 `\let\owns\textni`
 20952 `\let\notni\textnotowner`
 20953 `\let\varprop\textpropto`
 20954 `\let\varangle\text{sphericalangle}`
 20955 `\let\Anglesign\text{sphericalangle}`
 20956 `\let\AngleSign\text{sphericalangle}`
 20957 `\let\notdivides\textnmid`
 20958 `\let\varowedge\textowedge`
 20959 `\let\varovee\textovee`
 20960 `\let\varint\textint`
 20961 `\let\varoint\textoint`
 20962 `\let\downtherefore\textbecause`
 20963 `\let\textdotdiv\textdotminus`
 20964 `\let\AC\textsim`
 20965 `\let\wreath\textwr`
 20966 `\let\nthickapprox\textnapprox`
 20967 `\let\VHF\texttriplesim`
 20968 `\let\notasymp\textnasymp`
 20969 `\let\Doteq\textdoteqdot`
 20970 `\let\corresponds\texthateq`
 20971 `\let\Corresponds\texthateq`
 20972 `\let\nequal\textneq`
 20973 `\let\Congruent\textequiv`
 20974 `\let\NotCongruent\textnequiv`
 20975 `\let\notequiv\textnequiv`
 20976 `\let\LessOrEqual\textleq`
 20977 `\let\LargerOrEqual\textgeq`
 20978 `\let\apprle\textlesssim`
 20979 `\let\apprge\textgtrsim`
 20980 `\let\varoplus\textoplus`
 20981 `\let\varominus\textominus`
 20982 `\let\varotimes\textotimes`
 20983 `\let\varoslash\textoslash`
 20984 `\let\varodot\textodot`
 20985 `\let\ocirc\textcircledcirc`
 20986 `\let\varocircle\textcircledcirc`
 20987 `\let\varoast\textcircledast`
 20988 `\let\oasterisk\textcircledast`
 20989 `\let\rightvdash\textvdash`
 20990 `\let\leftvdash\textdashv`
 20991 `\let\nleftvdash\textndashv`
 20992 `\let\downvdash\texttop`
 20993 `\let\upvdash\textbot`
 20994 `\let\nperp\textnupvdash`
 20995 `\let\models\textvDash`
 20996 `\let\rightmodels\textvDash`
 20997 `\let\rightVdash\textVdash`
 20998 `\let\rightModels\textVDash`
 20999 `\let\nrightvdash\textnvdash`
 21000 `\let\nrightmodels\textnvDash`
 21001 `\let\nmodels\textnvDash`
 21002 `\let\nrightVdash\textnVdash`

21003 \let\nrightModels\textnVDash
 21004 \let\lessclosed\textlhd
 21005 \let\gtrclosed\textrhd
 21006 \let\leqclosed\textunlhd
 21007 \let\trianglelefteq\textunlhd
 21008 \let\geqclosed\textunrhd
 21009 \let\trianglerighteq\textunrhd
 21010 \let\Bowtie\textbowtie
 21011 \let\varcurlyvee\textcurlyvee
 21012 \let\varcurlywedge\textcurlywedge
 21013 \let\doublecap\textCap
 21014 \let\doublecup\textCup
 21015 \let\varsqsubsetneq\textsqsubsetneq
 21016 \let\varsqsupsetneq\textsqsupsetneq
 21017 \let\nlessclosed\textntriangleleft
 21018 \let\ngtrclosed\textntriangleright
 21019 \let\Clocklogo\textclock
 21020 \let\ClockLogo\textclock
 21021 \let\baro\textstmaryrdbaro
 21022 \let\varparallelinv\textbbslash
 21023 \let\CleaningA\textCircledA
 21024 \let\Kutline\textCuttingLine
 21025 \let\CutLine\textCuttingLine
 21026 \let\Cutline\textCuttingLine
 21027 \let\MoveUp\textUParrow
 21028 \let\APLup\textbigtriangleup
 21029 \let\Bleech\textbigtriangleup
 21030 \let\MoveDown\textDOWNarrow
 21031 \let\APLdown\textbigtriangledown
 21032 \let\Diamond\textdiamond
 21033 \let\varbigcirc\textbigcircle
 21034 \let\Telefon\textPhone
 21035 \let\Box\textboxempty
 21036 \let\CheckBox\textCheckedbox
 21037 \let\XBox\textCrossedbox
 21038 \let\CrossedBox\textCrossedbox
 21039 \let\rightpointleft\textHandLeft
 21040 \let\leftpointright\textHandRight
 21041 \let\PointingHand\textHandRight
 21042 \let\Pointinghand\textHandRight
 21043 \let\Radiation\textRadioactivity
 21044 \let\Yinyang\textYinYang
 21045 \let\YingYang\textYinYang
 21046 \let\Yingyang\textYinYang
 21047 \let\Frowny\textfrownie
 21048 \let\Smiley\textsmiley
 21049 \let\Sun\textsun
 21050 \let\Mercury\textmercury
 21051 \let\textfemale\textPUfemale
 21052 \let\female\textPUfemale
 21053 \let\venus\textPUfemale
 21054 \let\Venus\textPUfemale
 21055 \let\Female\textPUfemale
 21056 \let\Earth\textearth

21057 \let\mars\textmale
 21058 \let\Mars\textmale
 21059 \let\Male\textmale
 21060 \let\Jupiter\textjupiter
 21061 \let\Saturn\textsaturn
 21062 \let\Uranus\texturanus
 21063 \let\Neptune\textneptune
 21064 \let\Pluto\textpluto
 21065 \let\Aries\textaries
 21066 \let\Taurus\texttaurus
 21067 \let\Gemini\textgemini
 21068 \let\Cancer\textcancer
 21069 \let\Leo\textleo
 21070 \let\Virgo\textvirgo
 21071 \let\Libra\textlibra
 21072 \let\Scorpio\textscorpio
 21073 \let\Sagittarius\textsagittarius
 21074 \let\Capricorn\textcapricornus
 21075 \let\Aquarius\textaquarius
 21076 \let\Pisces\textpisces
 21077 \let\spadesuit\textspadesuitblack
 21078 \let\Heart\textheartsuitwhite
 21079 \let\heartsuit\textheartsuitwhite
 21080 \let\diamondsuit\textdiamondsuitwhite
 21081 \let\clubsuit\textclubsuitblack
 21082 \let\eighthnote\textmusicalnote
 21083 \let\Recycling\textrecycle
 21084 \let\VarFlag\textFlag
 21085 \let\textxswup\textdsmilitary
 21086 \let\textuncrfemale\textPUuncrfemale
 21087 \let\Football\textSoccerBall
 21088 \let\CutLeft\textScissorRightBrokenBottom
 21089 \let\Cutright\textScissorRightBrokenBottom
 21090 \let\RightScissors\textScissorRight
 21091 \let\Leftscissors\textScissorRight
 21092 \let\Letter\textEnvelope
 21093 \let\Writinghand\textWritingHand
 21094 \let\checkmark\textCheckmark
 21095 \let\davidstar\textDavidStar
 21096 \let\llbracket\textlbrackdbl
 21097 \let\rrbracket\textrrbrackdbl
 21098 \let\RightTorque\textlcurvearrowdown
 21099 \let\Righttorque\textlcurvearrowdown
 21100 \let\LeftTorque\textrcurvearrowdown
 21101 \let\Lefttorque\textrcurvearrowdown
 21102 \let\textvarobar\textobar
 21103 \let\circledbslash\textobslash
 21104 \let\obackslash\textobslash
 21105 \let\varobslash\textobslash
 21106 \let\odplus\textobot
 21107 \let\varolessthan\textolessthan
 21108 \let\varogreaterthan\textogreaterthan
 21109 \let\divdot\textminusdot
 21110 \let\doublesqcap\textsquaddoublecap

```

21111 \let\doublesqcup\textsqdoublecup
21112 \let\merge\textdoublevee
21113 \let\leftVdash\textdashV
21114 \let\leftVdash\textndashV
21115 \let\leftmodels\textDashv
21116 \let\leftmodels\textnDashv
21117 \let\leftModels\textDashV
21118 \let\leftModels\textnDashV
21119 \let\varparallel\textsslash
21120 \let\textheng\textPUheng
21121 \let\textlhookfour\textPUlhookfour
21122 \let\textscf\textPUscf
21123 \let\texttaolig\textPUaolig
21124 \let\Ganz\textfullnote
21125 \let\Halb\texthalfnote
21126 \let\Womanface\textWomanFace
21127 \let\Faxmachine\textFax
21128 \let\CEsign\textCESign
21129 }% \psdaliasnames
21130 </psdextra>

```

47 End of file hycheck.tex

```

21131 <*check>
21132 \typeout{}
21133 \begin{document}
21134 \end{document}
21135 </check>

```

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