

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 hycheck.tex

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

```
1 \langle*check\rangle
2 \documentclass{article}
3 \makeatletter
```

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

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

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

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

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

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

`\HyC@checkPackage`

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



```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

82 \let\HyC@org@robustoptcmd\HyC@noValue
83 \HyC@next
84 }

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```

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

```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

114 \def\HyC@DeclareRobustCommand{%
115 \edef\HyC@robustcmd{%

```

```

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

\HyC@def The parameter text of \def or \edef is stored in the token register \HyC@Toks.
\HyC@edef
125 \def\HyC@def#1#{%
126 \HyC@Toks={#1}%
127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

\HyC@doCheck This command performs the checks and prints the result.
130 \def\HyC@doCheck{%
131 \typeout{* Checking ` \HyC@string\HyC@cmd':}%
132 \HyC@checkItem{cmd}%
133 \HyC@checkItem{robustcmd}%
134 \HyC@checkItem{optcmd}%
135 \HyC@checkItem{robustoptcmd}%
136 \endgroup
137 }

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

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

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

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

```

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

`\Hy@SetCatcodes`

```

181 \def\Hy@SetCatcodes{%
182   \@makeother`\%
183   \@makeother\=%
184   \catcode`\$=3 %
185   \catcode`\&=4 %
186   \catcode`\^=7 %
187   \catcode`\_ =8 %
188   \@makeother\| %
189   \@makeother\:%
190   \@makeother\(%
191   \@makeother\)%
192   \@makeother\[ %
193   \@makeother\] %
194   \@makeother\/ %
195   \@makeother\! %
196   \@makeother\<%

```

```

197 \@makeother\>%
198 \@makeother\.%
199 \@makeother\;%
200 \@makeother\+%
201 \@makeother\-%
202 \@makeother\"%
203 \@makeother\'%
204 }

```

\Hy@RestoreCatcodes

```

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

```

231 \Hy@SetCatcodes

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

```

232 \RequirePackage{ltxcmds}[2010/11/12]
233 \RequirePackage{iftex}[2019/10/24]
234 \RequirePackage{pdftexcmds}[2018/09/10]
235 \RequirePackage{infwarerr}[2010/04/08]
236 \RequirePackage{keyval}[1997/11/10]
237 \RequirePackage{kvsetkeys}[2007/09/29]
238 \RequirePackage{kvdefinekeys}[2011/04/07]
239 \RequirePackage{pdfescape}[2007/11/11]
240 \RequirePackage{hycolor}
241 \RequirePackage{letltxmacro}[2008/06/13]
242 \RequirePackage{auxhook}[2009/12/14]
243 \def\Hy@Error{\@PackageError{hyperref}}
244 \def\Hy@Warning{\@PackageWarning{hyperref}}

```

```

245 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
246 \def\Hy@Info{\@PackageInfo{hyperref}}
247 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
248 \def\Hy@Message#1{%
249   \GenericWarning{%
250     (hyperref)\@spaces\@spaces\@spaces\@spaces
251   }{%
252     Package hyperref Message: #1\ltx@gobble
253   }%
254 }

```

4.2 Version check

\Hy@VersionChecked

```

255 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

256 \def\Hy@VersionCheck#1{%
257   \begingroup
258   \ltx@ifundefined{ver@hyperref.sty}{%
259     \Hy@Error{%
260       This should not happen!\MessageBreak
261       Missing hyperref version%
262     }\@ehd
263   }{%
264     \ltx@ifundefined{ver@#1}{%
265       \Hy@Error{%
266         This should not happen!\MessageBreak
267         Missing version of `#1'%
268       }\@ehd
269     }{%
270       \def\x##1##2##3{%
271         \expandafter\expandafter\expandafter\Hy@@VersionCheck
272         \expandafter\expandafter\expandafter##2%
273         \csname ver@##3\endcsname##1##1\@nil
274       }%
275       \x{ }\y{hyperref.sty}%
276       \x{ }\z{#1}%
277       \ifx\y\z
278       \else
279         \edef\a{#1}%
280         \edef\b{\HyOpt@CustomDriver.def}%
281         \ifx\a\b
282           \Hy@WarningNoLine{%
283             Version mismatch (custom driver)!\MessageBreak
284             * \y: hyperref.sty\MessageBreak
285             * \z: \a
286           }%
287         \else
288           \Hy@Error{%
289             Version mismatch!\MessageBreak
290             * \y: hyperref.sty\MessageBreak
291             * \z: \a
292           }\@ehd

```

```

293     \fi
294     \fi
295   }%
296 }%
297 \endgroup
298 \chardef\Hy@@VersionChecked=1 %
299 }

```

\Hy@@VersionCheck

```

300 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
301   \def#1{#2 #3}%
302 }

```

4.3 Checks with regular expressions

```

303 \ltx@ifundefined{pdfmatch}{%
304   \def\Hy@Match#1#2#3#4#5{%
305   }{%
306     \def\Hy@Match#1#2#3{%
307       \begingroup
308       \edef\~{\ltx@backslashchar\string~}%
309       \edef\.\{\ltx@backslashchar.}%
310       \edef\[\{\ltx@backslashchar[]}%
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\ltx@leftbracechar}%
319       \edef\}\{\ltx@rightbracechar}%
320       \edef\\{\ltx@backslashchar\ltx@backslashchar}%
321       \let\ \ltx@space
322       \ifcase\pdfmatch#2{#3}{#1} %
323         \endgroup
324         \expandafter\ltx@secondoftwo
325       \or
326         \endgroup
327         \expandafter\ltx@firstoftwo
328       \else
329         \Hy@Warning{%
330           Internal error: Wrong pattern!\MessageBreak
331           --> #3 <--\MessageBreak
332           Pattern check ignored%
333         }%
334         \endgroup
335         \expandafter\ltx@firstoftwo
336       \fi
337     }%
338 }

```

4.4 Compatibility with format dumps

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

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

```
339 \@ifundefined{AfterBeginDocument}{%
340   \def\AfterBeginDocument{\AtBeginDocument}%
341 }{}%
```

`\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.

```
342 \def\Hy@AtBeginDocument{%
343   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
344 }
```

`\Hy@AtEndOfPackage`

```
345 \def\Hy@AtEndOfPackage{%
346   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
347 }
```

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

```
350 \AtEndOfPackage{%
351   \Hy@AtEndOfPackageHook
352   \let\Hy@AtEndOfPackageHook\@undefined
353   \AfterBeginDocument{%
354     \Hy@AtBeginDocumentHook}%
355   \let\Hy@AtBeginDocumentHook\@undefined
356   }%
357 }
```

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

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

4.5 Switches

```
359 \newif\ifHy@stoppedearly
360 \newif\ifHy@typexml
361 \newif\ifHy@activeanchor
362 \newif\ifHy@backref
363 \newif\ifHy@bookmarks
```



```

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

```

Defaults for the switches are now set.

```

409 \Hy@backreffalse
410 \Hy@bookmarksnumberedfalse
411 \Hy@bookmarksopenfalse
412 \Hy@bookmarkstrue
413 \Hy@breaklinksfalse
414 \Hy@pdfcenterwindowfalse
415 \Hy@CJKbookmarksfalse
416 \Hy@destlabelfalse

```

```

417 \Hy@pdfescapeformfalse
418 \Hy@hyperfiguresfalse
419 \Hy@pdffitwindowfalse
420 \Hy@hyperfootnotesttrue
421 \Hy@hyperindextrue
422 \Hy@hypertextnamestrue
423 \Hy@implicittrue
424 \Hy@linktocpagefalse
425 \Hy@localanchornamefalse
426 \Hy@pdfmenubartrue
427 \Hy@naturalnamesfalse
428 \Hy@nestingfalse
429 \Hy@pdfnewwindowsetfalse
430 \Hy@pdfnewwindowfalse
431 \Hy@pageanchortrue
432 \Hy@pdfpagelabelstrue
433 \Hy@pdfstringfalse
434 \Hy@plainpagesfalse
435 \Hy@raiselinksfalse
436 \Hy@setpagesizetrue
437 \Hy@texhtfalse
438 \Hy@psdextrafalse
439 \Hy@pdftoolbartrue
440 \Hy@typexmlfalse
441 \Hy@unicodetrue
442 \Hy@pdfusetitlefalse
443 \Hy@verbosefalse
444 \Hy@pdfwindowuitrue
445 \Hy@pdfdisplaydoctitlefalse
446 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

449 \newdimen\@linkdim
450 \let\Hy@driver\ltx@empty
451 \let\MaybeStopEarly\relax
452 \newcount\Hy@linkcounter
453 \newcount\Hy@pagecounter
454 \Hy@linkcounter0
455 \Hy@pagecounter0

```

5.1 Macros for recursions

```

456 \let\Hy@ReturnEnd\@empty
457 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
458 \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.

```
459 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
460 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}
```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

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

`\hypercalsbp`

```
461 \begingroup\expandafter\expandafter\expandafter\endgroup
462 \expandafter\ifx\csname dimexpr\endcsname\relax
463   \def\hypercalsbpdef#1#2{%
464     \begingroup
465       \toks@{}%
466       \HyCal@scan#2\hypercalsbp\@nil
467     \expandafter\endgroup
468     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
469   }%
470 \def\HyCal@scan#1\hypercalsbp#2\@nil{%
471   \toks@\expandafter{\the\toks@ #1}%
472   \ifx\#2\%
473     \else
474       \ltx@ReturnAfterFi{%
```

```

475     \HyCal@do#2\@nil
476   }%
477   \fi
478 }%
479 \def\HyCal@do#1#2\@nil{%
480   \@ifpackageloaded{calc}{\}%
481   \Hy@Warning{%
482     For calculations \string\hypercalcbp\space needs\MessageBreak
483     package calc or e-TeX%
484   }%
485 }%
486 \setlength{\dimen@}{#1}%
487 \setlength{\dimen@}{0.99626401\dimen@}%
488 \edef\x{%
489   \toks@{%
490     \the\toks@
491     \strip@pt\dimen@
492   }%
493 } \x
494 \HyCal@scan#2\@nil
495 }%
496 \else
497 \def\hypercalcbp#1{%
498   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
499 }%
500 \def\hypercalcbpdef{\def}%
501 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
503 \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.

```
504 \escapechar`\%
```

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

```
505 \edef\0{\string\0}%
506 \edef\1{\string\1}%
507 \edef\2{\string\2}%
508 \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.

```
509 \ifHy@unicode
510 \edef\8{\string\8}%
511 \edef\9{\string\9}%
512 \fontencoding{PU}%
513 \HyPsd@UTFviii
514 \def\ifpdfstringunicode###1##2{##1}%
515 \else
516 \fontencoding{PD1}%
517 \def\ifpdfstringunicode###1##2{##2}%
518 \fi
519 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
520 \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).

```
521 \@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).

```
522 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
523 \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) <https://github.com/latex3/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

524 \let\{\textbraceleft
525 \let\}\textbraceright
526 \let\\\textbackslash
527 \let\#\textnumbersign
528 \let\$\textdollar
529 \let\%\textpercent
530 \let\&\textampersand
531 % \let~\textasciitilde
532 \let\_ \textunderscore
533 \let\P\textparagraph
534 \let\ldots\textellipsis
535 \let\dots\textellipsis
536 \ltx@ifundefined{textEncodingNoboundary}%
537 {}{\let\noboundary\textEncodingNoboundary}%

```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\\textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\\textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\\empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```

538 \def\{\pdfstringdefWarn\}%
539 \def\newline{\pdfstringdefWarn\newline}%

```

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

```

540 \def\TeX{\TeX}%
541 \def\LaTeX{La\TeX}%
542 \def\LaTeXe{%
543   \LaTeX2%
544   \ifHy@unicode\83\265\else e\fi
545 }%
546 \def\eTeX{%
547   \ifHy@unicode\83\265\else e\fi
548   -\TeX%
549 }%
550 \def\SliTeX{Sli\TeX}%
551 \def\MF{Metafont}%
552 \def\MP{Metapost}%

```

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

```

553 \let\fontencoding\@gobble
554 \let\fontfamily\@gobble
555 \let\fontseries\@gobble
556 \let\fontshape\@gobble
557 \let\fontsize\@gobbletwo
558 \let\selectfont\@empty
559 \let\usefont\@gobblefour
560 \let\emph\@firstofone
561 \let\textnormal\@firstofone
562 \let\textrm\@firstofone
563 \let\textsf\@firstofone
564 \let\texttt\@firstofone
565 \let\textbf\@firstofone
566 \let\textmd\@firstofone
567 \let\textit\@firstofone
568 \let\textsc\@firstofone
569 \let\textsl\@firstofone
570 \let\textup\@firstofone
571 \let\normalfont\@empty
572 \let\rmfamily\@empty
573 \let\sffamily\@empty
574 \let\ttfamily\@empty
575 \let\bfseries\@empty
576 \let\mdseries\@empty
577 \let\itshape\@empty
578 \let\scshape\@empty
579 \let\slshape\@empty
580 \let\upshape\@empty
581 \let\em\@empty
582 \let\rm\@empty
583 \let\Huge\@empty
584 \let\LARGE\@empty
585 \let\Large\@empty
586 \let\footnotesize\@empty
587 \let\huge\@empty
588 \let\large\@empty
589 \let\normalsize\@empty
590 \let\scriptsize\@empty
591 \let\small\@empty
592 \let\tiny\@empty
593 \let\mathversion\@gobble
594 \let\phantom\@gobble
595 \let\vphantom\@gobble
596 \let\hphantom\@gobble

```

Package pifont.

```

597 \let\ding\HyPsd@ding
598 \let\Cube\HyPsd@DieFace
599 %* \HyPsd@DieFace -> \epsdice (epsdice)
600 %* \HyPsd@DieFace -> \fcdice (hhcount)

```


Environments.

```
601 \def\begin##1{\csname##1\endcsname}%
602 \def\end##1{\csname end##1\endcsname}%
```

Package color.

```
603 \def\textcolor##1##{\@secondoftwo}%
```

Upper- and lowercase.

```
604 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
605 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%
```

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

```
606 \ifHy@psdextra
607 \ifHy@unicode
608 \csname psdmapshortnames\endcsname
609 \csname psdaliasnames\endcsname
610 \fi
611 \fi
```

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

```
612 \let\foreignlanguage\@secondoftwo
613 \let\textlatin\@firstofone
614 \ltx@ifundefined{language@group}{-}{%
615 \let\bbl@info\@gobble
616 \csname HyPsd@babel@\language@group\endcsname
617 }%
618 \HyPsd@SpanishPatch
619 \let\@safe@activetrue\relax
620 \let\@safe@activesfalse\relax
```

Disable \cyr, used in russianb.ldf.

```
621 \let\cyr\relax
```

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

```
622 \let\es@roman\@Roman
```

Package german.

```
623 \let\glqq\textglqq
624 \let\grqq\textgrqq
625 \let\glq\textglq
626 \let\grq\textgrq
627 \let\flqq\textflqq
628 \let\frqq\textfrqq
629 \let\flq\textflq
630 \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}
```

```
631 \let\if@mid@expandable\@firstoftwo
```

AMS classes.

```
632 \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.

```
633 \let\hspace\HyPsd@hspace
```

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

```
634 \let\label\@gobble
635 \let\index\@gobble
636 \let\glossary\@gobble
637 \let\href\HyPsd@href
638 \let\@mkboth\@gobbletwo
```

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

```
639 \let\ref\HyPsd@ref
640 \let\pageref\HyPsd@pageref
641 \let\nameref\HyPsd@nameref
642 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
643 \let\leavevmode\@empty
644 \let\mbox\@empty
```

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

```
645 \def\halign{\pdfstringdefWarn\halign\@gobble}%
646 \let\ignorespaces\HyPsd@ignorespaces
647 \let\Hy@SectionAnchorHref\@gobble
648 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
649 \HyPsd@CJKhook
```

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

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

```
650 \Hy@pdfstringtrue
651 \pdfstringdefPreHook
```

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

```

652 \HyPsd@LetUnexpandableSpace\space
653 \HyPsd@LetUnexpandableSpace\ %
654 \HyPsd@LetUnexpandableSpace~%
655 \HyPsd@LetUnexpandableSpace\nobreakspace

```

Package xspace.

```

656 \ltx@ifundefined{@xspace}{%
657 \let\xspace\HyPsd@ITALCORR
658 }{%
659 \let\xspace\HyPsd@XSPACE
660 }%
661 \let\/\HyPsd@ITALCORR
662 \let\bgroup\/%
663 \let\egroup\/%

```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```

664 \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:

```

665 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
666 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
667 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
668 \let\@protected@testopt\HyPsd@protected@testopt

```

Support for package 'xargs':

```

669 \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 be 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).

```
670 \begingroup
671 \let\GenericError\@gobblefour
672 \let\GenericWarning\@gobbletwo
673 \let\GenericInfo\@gobbletwo
```

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

```
674 \ifx\nofrenchguillemets\undefined
675 \else
676 \nofrenchguillemets
677 \fi
```

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

```
678 \let\Hy@temp\xdef
679 \let\def\HyPsd@DefCommand
680 \let\gdef\HyPsd@DefCommand
681 \let\edef\HyPsd@DefCommand
682 \let\xdef\HyPsd@DefCommand
683 \let\futurelet\HyPsd@LetCommand
684 \let\let\HyPsd@LetCommand
685 \Hy@temp#1{#2}%
686 \endgroup
```

6.2.3 Postprocessing

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

```
687 \ifx#1\@empty
688 \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 take the following item into account, that 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 found 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 a marker for the xspace support.
- \TeX silently removes the outermost 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.

```
689 \HyPsd@ProtectSpaces#1%
690 \let\HyPsd@String\@empty
691 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
692 \global\let#1\HyPsd@String
```

Check tokens. After removing the spaces and the grouping characters the string now should only consist 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 $\text{\HyPsd@CheckCatcodes}$ 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 $\text{\HyPsd@CheckCatcodes}$ is called.

Because of internal local assignments and tabulars group braces are used.

```
693 \let\HyPsd@SPACEOPTI\relax
694 {%
```

```

695 \let\HyPsd@String\@empty
696 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
697 \global\let#1\HyPsd@String
698 }%
699 \expandafter\HyPsd@RemoveMask\expandafter
700 \expandafter\@empty#1\HyPsd@End#1%

```

\HyPsd@CheckCatcodes should not have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause too 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.

```

701 \expandafter
702 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
703 \let\HyPsd@String\@empty
704 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
705 \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.

```
706 \HyPsd@StringSubst{\}{\textbackslash}#1%
```

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

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

```

707 \ifHy@unicode
708 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
709 \HyPsd@SPACEOPTI#1%
710 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
711 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
712 {\HyPsd@SPACEOPTI\80\273}#1%
713 \else
714 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
715 \expandafter\HyPsd@Subst\expandafter{%
716 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
717 \string\273}\HyPsd@SPACEOPTI\273}#1%
718 \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.

```

719 \ifHy@unicode
720 \HyPsd@StringSubst{\)}{\80\051}#1%
721 \HyPsd@Subst){\80\051}#1%
722 \let\HyPsd@empty\relax
723 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
724 {\HyPsd@empty\80\051}#1%
725 \else
726 \HyPsd@StringSubst{\)}{\051}#1%
727 \HyPsd@Subst){\051}#1%
728 \let\HyPsd@empty\relax
729 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
730 \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`.

```

731 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
732 \ltx@ifundefined{@xspace}{%
733 }{%
734 \let\HyPsd@xspace\relax
735 \expandafter\HyPsd@Subst\expandafter
736 {\HyPsd@XSPACE}\HyPsd@xspace#1%
737 \let\HyPsd@xspace\HyPsd@doxspace
738 }%
739 \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.

```

740 \HyPsd@Subst{---}\textemdash#1%
741 \HyPsd@Subst{--}\textendash#1%
742 % \HyPsd@Subst{fi}\textfi#1%
743 % \HyPsd@Subst{fl}\textfl#1%
744 \HyPsd@Subst{!`}\textexclamdown#1%
745 \HyPsd@Subst{?`}\textquestiondown#1%

```

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

```

746 \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.

```

747 \ifHy@unicode
748 \HyPsd@StringSubst\(\textparenleft#1%
749 \HyPsd@Subst(\textparenleft#1%
750 \else
751 \HyPsd@StringSubst\({\050}#1%
752 \HyPsd@Subst({\050}#1%
753 \HyPsd@StringSubst{\050}\string\{)#1%
754 \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.

```

755 \ifHy@unicode
756 \edef\HyPsd@SPACEOPTI{\80\040}%
757 \else
758 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
759 \fi
760 \xdef#1{#1\@empty}%
761 \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.

```

762 \endgroup
763 \begingroup
764 \ifHy@unicode
765 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

766 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
767 \ltx@ifundefined{StringEncodingConvertTest}{%
768 }{%
769 \EdefUnescapeString\HyPsd@temp#1%
770 \iftutex

```



```

771 \let\HyPsd@UnescapedString\HyPsd@temp
772 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
773 {utf16be}{ascii-print}{%
774 \EdefEscapeString\HyPsd@temp\HyPsd@temp
775 \global\let#1\HyPsd@temp
776 \HyPsd@EscapeTeX#1%
777 \Hy@unicodedefalse
778 }{%
779 \HyPsd@EscapeTeX#1%
780 }%
781 \else
782 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
783 {utf16be}{pdfdoc}{%
784 \EdefEscapeString\HyPsd@temp\HyPsd@temp
785 \global\let#1\HyPsd@temp
786 \HyPsd@EscapeTeX#1%
787 \Hy@unicodedefalse
788 }{}%
789 \fi
790 }%
791 \fi
792 \fi

```

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

```

793 \pdfstringdefPostHook#1%
794 \endgroup
795 }

```

`\Hy@pdfstringdef`

```

796 \def\Hy@pdfstringdef#1#2{%
797 \pdfstringdef\Hy@gtemp{#2}%
798 \let#1\Hy@gtemp
799 }

```

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

```

800 \@ifpackageloaded{linguex}{%
801 \let\HyLinguex@OrgB\b
802 \let\HyLinguex@OrgC\c
803 \let\HyLinguex@OrgD\d
804 \def\HyLinguex@Restore{%
805 \let\b\HyLinguex@OrgB
806 \let\c\HyLinguex@OrgC
807 \let\d\HyLinguex@OrgD
808 }%

```

```

809 \Hy@AtEndOfPackage{%
810   \pdfstringdefDisableCommands{%
811     \ltx@ifundefined{oldb}{\let\b\oldb}%
812     \ltx@ifundefined{oldc}{\let\c\oldc}%
813     \ltx@ifundefined{oldd}{\let\d\oldd}%
814   }%
815 }%
816 }{%
817   \let\HyLinguex@Restore\relax
818 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

819 \def\Hy@SaveCatcodeSettings#1{%
820   \expandafter\edef\csname Hy@cat@#1\endcsname{%
821     \endlinechar=\the\endlinechar\relax
822     \catcode32 \the\catcode32\relax % (space)
823     \catcode34 \the\catcode34\relax % "
824     \catcode35 \the\catcode35\relax % #
825     \catcode37 \the\catcode37\relax % (percent)
826     \catcode40 \the\catcode40\relax % (
827     \catcode41 \the\catcode41\relax % )
828     \catcode42 \the\catcode42\relax % *
829     \catcode46 \the\catcode46\relax % .
830     \catcode58 \the\catcode58\relax % :
831     \catcode60 \the\catcode60\relax % <
832     \catcode61 \the\catcode61\relax % =
833     \catcode62 \the\catcode62\relax % >
834     \catcode64 \the\catcode64\relax % @
835     \catcode91 \the\catcode91\relax % [
836     \catcode92 \the\catcode92\relax % (backslash)
837     \catcode93 \the\catcode93\relax % ]
838     \catcode123 \the\catcode123\relax % {
839     \catcode124 \the\catcode124\relax % |
840     \catcode125 \the\catcode125\relax % }
841   }%
842   \endlinechar=-1 %
843   \catcode32 10 % (space)
844   \catcode34 12 % "
845   \catcode35 6 % #
846   \catcode37 14 % (percent)
847   \catcode40 12 % (
848   \catcode41 12 % )
849   \catcode42 12 % *
850   \catcode46 12 % .
851   \catcode58 12 % :
852   \catcode60 12 % <
853   \catcode61 12 % =
854   \catcode62 12 % >
855   \catcode91 12 % [
856   \catcode92 0 % (backslash)
857   \catcode93 12 % ]
858   \catcode123 1 % {
859   \catcode124 12 % |

```

```

860 \catcode125 2 % }
861 \makeatletter
862 }

```

`\Hy@RestoreCatcodeSettings`

```

863 \def\Hy@RestoreCatcodeSettings#1{%
864 \csname Hy@cat@#1\endcsname
865 \expandafter\let\csname Hy@cat@#1\endcsname\relax
866 }

```

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.

```

867 \@ifundefined{T@PD1}{%
868 \Hy@SaveCatcodeSettings{pd1}%
869 \input{pd1enc.def}%
870 \Hy@RestoreCatcodeSettings{pd1}%
871 \HyLinguex@Restore
872 }{}
873 \DeclareFontFamily{PD1}{pdf}{}
874 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
875 \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`.

```

876 \def\HyPsd@LoadUnicode{%
877 \@ifundefined{T@PU}{%
878 \Hy@SaveCatcodeSettings{pu}%
879 \input{puenc.def}%
880 \Hy@RestoreCatcodeSettings{pu}%
881 \HyLinguex@Restore
882 }{}%
883 \DeclareFontFamily{PU}{pdf}{}%
884 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
885 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
886 \HyPsd@LoadExtra
887 \let\HyPsd@LoadUnicode\relax
888 }

```

`\HyPsd@LoadExtra`

```

889 \def\HyPsd@LoadExtra{%
890   \ifHy@psdextra
891     \ltx@iffileloaded{puenc.def}{%
892       \Hy@SaveCatcodeSettings{psdextra}%
893       \input{psdextra.def}%
894       \Hy@RestoreCatcodeSettings{psdextra}%
895       \let\HyPsd@LoadExtra\relax
896     }{}%
897   \fi
898 }
```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by \TeX 's stomach, the second contains the replacement for PDF strings.

```

899 \def\texorpdfstring{%
900   \ifHy@pdfstring
901     \expandafter\@secondoftwo
902   \else
903     \expandafter\@firstoftwo
904   \fi
905 }
```

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`.

```

906 \@ifundefined{pdfstringdefPreHook}{%
907   \let\pdfstringdefPreHook\@empty
908 }{}
909 \@ifundefined{pdfstringdefPostHook}{%
910   \let\pdfstringdefPostHook\@gobble
911 }{}

```

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

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

```

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

```

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

```
912 \def\pdfstringdefDisableCommands{%
913   \begingroup
914   \makeatletter
915   \HyPsd@DisableCommands
916 }
```

`\HyPsd@DisableCommands`

```
917 \long\def\HyPsd@DisableCommands#1{%
918   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
919   \endgroup
920 }
```

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

```
921 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
922 \AtBeginDocument{%
923   \ifundefined{pdfstringdefDisableCommands}{%
924     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
925   }{}%
926 }
```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>-` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

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

```
927 \def\pdfstringdefWarn#1{%
928   \expandafter\noexpand\csname<>-string#1\endcsname
929 }
```

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.

```
930 \begingroup
931   \catcode0=12 %
932   \def\x{\endgroup
933     \def\HyPsd@ignorespaces{%
934       \romannumeral\expandafter`\expandafter^^@%
935       \romannumeral`^^@%
```

```

936 }%
937 }%
938 \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.

```

939 \newif\ifHy@next
940 \input{hyperref-langpatches.def}
941 \end{package}
942 \end{lang}

```

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 (<<, >>).

```

943 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
944 \def\HyPsd@babel@spanish{%
945 \declare@shorthand{spanish}{<<}{\guillemotleft}%
946 \declare@shorthand{spanish}{>>}{\guillemotright}%
947 \declare@shorthand{spanish}{=}{{-}}%
948 \declare@shorthand{spanish}{~}{-}%
949 \declare@shorthand{spanish}{!}{\textexclamdown}%
950 \declare@shorthand{spanish}{?}{\textquestiondown}%
951 }%
952 }

953 \def\HyPsd@SpanishPatch{%
954 \ltx@ifundefined{es@save@dot}{-}{%
955 }{%
956 \let\.\es@save@dot
957 }%
958 }

959 \end{lang}
960 \end{package}

```

6.5.3 CJK patch

```

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

\HyPsd@CJKhook

962 \def\HyPsd@CJKhook{%
963   \ltx@ifpackageloaded{CJK}{%
964     \let\CJK@kern\relax
965     \let\CJKkern\relax
966     \let\CJK@CJK\relax
967     \ifHy@CJKbookmarks
968       \HyPsd@CJKhook@bookmarks
969     \fi
970     \HyPsd@CJKhook@unicode
971   }{%
972 }

```

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 ($\geq 0x40$).

```

973 \begingroup
974   \catcode"7F=\active
975   \toks@{%
976     \let\CJK@ignorespaces\empty
977     \def\CJK@char#1{\@gobbletwo}%
978     \let\CJK@charx\@gobblefour
979     \let\CJK@punctchar\@gobblefour
980     \def\CJK@punctcharx#1{\@gobblefour}%
981     \catcode"7F=\active
982     \def^^7f#1^^7f#2^^7f{%
983       \string #1\HyPsd@DecimalToOctal{#2}%
984     }%
985     % ... ?
986     \ifHy@unicode
987       \def\Hy@cjkpu{\80}%
988     \else
989       \let\Hy@cjkpu\@empty
990     \fi
991     \HyPsd@CJKActiveChars
992   }%
993   \count@=127 %
994   \@whilenum\count@<255 \do{%
995     \advance\count@ by 1 %
996     \lccode`~=\count@
997     \lowercase{%
998       \toks@\expandafter{\the\toks@ ~}%

```

```

999  }%
1000 }%
1001 \toks@\expandafter{\the\toks@ !}%
1002 \xdef\HyPsd@CJKhook@bookmarks{%
1003   \the\toks@
1004 }%
1005 \endgroup

```

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

```

1006 \def\HyPsd@CJKActiveChars#1{%
1007   \ifx#1!%
1008     \let\HyPsd@CJKActiveChars\relax
1009   \else
1010     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1011   \fi
1012   \HyPsd@CJKActiveChars
1013 }

```

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

```

1014 \def\HyPsd@DecimalToOctal#1{%
1015   \ifcase #1 %
1016     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1017     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1018     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1019     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1020     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1021     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1022     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1023     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1024     \or @\or A\or B\or C\or D\or E\or F\or G%
1025     \or H\or I\or J\or K\or L\or M\or N\or O%
1026     \or P\or Q\or R\or S\or T\or U\or V\or W%
1027     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1028     \or \140\or a\or b\or c\or d\or e\or f\or g%
1029     \or h\or i\or j\or k\or l\or m\or n\or o%
1030     \or p\or q\or r\or s\or t\or u\or v\or w%
1031     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1032     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1033     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1034     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1035     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1036     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1037     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1038     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1039     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1040     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1041     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1042     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1043     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1044     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1045     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1046     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1047     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%

```



```

1048 \fi
1049 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1050 \def\HyPsd@CJKhook@unicode{%
1051 \let\Unicode\HyPsd@CJK@Unicode
1052 \let\CJKnumber\HyPsd@CJKnumber
1053 \let\CJKdigits\HyPsd@CJKdigits
1054 }

```

\HyPsd@CJK@Unicode

```

1055 \def\HyPsd@CJK@Unicode#1#2{%
1056 \ifnum#1<256 %
1057 \HyPsd@DecimalToOctalFirst{#1}%
1058 \HyPsd@DecimalToOctalSecond{#2}%
1059 \else
1060 \933%
1061 \expandafter\expandafter\expandafter\HyPsd@HighA
1062 \intcalcDiv{#1}{4}!%
1063 \933%
1064 \ifcase\intcalcMod{#1}{4} %
1065 4\or 5\or 6\or 7%
1066 \fi
1067 \HyPsd@DecimalToOctalSecond{#2}%
1068 \fi
1069 }

1070 \def\HyPsd@HighA#1!{%
1071 \expandafter\expandafter\expandafter\HyPsd@HighB
1072 \IntCalcDiv#1!64!!%
1073 \expandafter\expandafter\expandafter\HyPsd@HighD
1074 \IntCalcMod#1!64!!%
1075 }
1076 \def\HyPsd@HighB#1!{%
1077 \expandafter\expandafter\expandafter\HyPsd@HighC
1078 \IntCalcDec#1!!%
1079 }
1080 \def\HyPsd@HighC#1!{%
1081 \IntCalcDiv#1!4!%
1082 \@backslashchar
1083 \IntCalcMod#1!4!%
1084 }
1085 \def\HyPsd@HighD#1!{%
1086 \ifcase\IntCalcDiv#1!8! %
1087 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1088 \fi
1089 \ifcase\IntCalcMod#1!8! %
1090 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1091 \fi
1092 }
1093 \def\HyPsd@DecimalToOctalFirst#1{%
1094 \9%

```

```

1095 \ifcase#1 %
1096     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1097     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1098     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1099     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1100     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1101     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1102     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1103     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1104     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1105     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1106     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1107     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1108     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1109     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1110     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1111     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1112     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1113     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1114     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1115     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1116     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1117     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1118     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1119     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1120     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1121     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1122     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1123     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1124     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1125     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1126     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1127     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1128 \fi
1129 }
1130 \def\HyPsd@DecimalToOctalSecond#1{%
1131     \ifcase #1 %
1132         \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1133         \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1134         \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1135         \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1136         \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1137         \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1138         \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1139         \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1140         \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1141         \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1142         \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1143         \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1144         \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1145         \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1146         \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1147         \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1148         \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%

```

```

1149 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1150 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1151 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1152 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1153 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1154 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1155 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1156 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1157 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1158 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1159 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1160 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1161 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1162 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1163 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1164 \fi
1165 }

1166 \def\HyPsd@CJKnumber#1{%
1167 \ifnum#1<\z@
1168 \CJK@minus
1169 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1170 \else
1171 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1172 \fi
1173 }

1174 \def\HyPsd@@CJKnumber#1{%
1175 \ifcase#1 %
1176 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1177 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1178 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1179 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1180 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1181 \CJK@ten\CJK@nine
1182 \else
1183 \ifnum#1<10000 %
1184 \HyPsd@CJKnumberFour#1!\@empty{20}%
1185 \@empty
1186 \else
1187 \ifnum#1<100000000 %
1188 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1189 \IntCalcDiv#1!10000!%
1190 !{}{20}%
1191 \CJK@tenthousand
1192 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1193 \IntCalcMod#1!10000!%
1194 !\CJK@zero{10}%
1195 \@empty
1196 \else
1197 \expandafter\HyPsd@CJKnumberLarge
1198 \number\IntCalcDiv#1!100000000!\expandafter!%
1199 \number\IntCalcMod#1!100000000!!%
1200 \fi
1201 \fi
1202 \fi

```

```

1203 }
1204 \def\HyPsd@CJKnumberLarge#1!#2!{%
1205 \HyPsd@CJKnumberFour#1!#{20}%
1206 \CJK@hundredmillion
1207 \ifnum#2=\z@
1208 \else
1209 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1210 \IntCalcDiv#2!10000!%
1211 !\CJK@zero{10}%
1212 \CJK@tenthousand
1213 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1214 \IntCalcMod#2!10000!%
1215 !\CJK@zero{10}%
1216 \@empty
1217 \fi
1218 }
1219 \def\HyPsd@CJKnumberFour#1!#2#3{%
1220 \ifnum#1=\z@
1221 \expandafter\@gobble
1222 \else
1223 \ifnum#1<1000 %
1224 #2%
1225 \HyPsd@CJKnumberThree#1!#{3}%
1226 \else
1227 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1228 \CJK@thousand
1229 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1230 \IntCalcMod#1!1000!%
1231 !\CJK@zero{10}%
1232 \fi
1233 \fi
1234 }
1235 \def\HyPsd@CJKnumberThree#1!#2#3{%
1236 \ifnum#1=\z@
1237 \else
1238 \ifnum#1<100 %
1239 #2%
1240 \HyPsd@CJKnumberTwo#1!#{3}%
1241 \else
1242 \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1243 \CJK@hundred
1244 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1245 \IntCalcMod#1!100!%
1246 !\CJK@zero{10}%
1247 \fi
1248 \fi
1249 }
1250 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1251 \ifnum#1=\z@
1252 \else
1253 \ifnum#1<#3 %
1254 #2%
1255 \HyPsd@@@CJKnumber{#1}%
1256 \else

```

```

1257 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1258 \CJK@ten
1259 \ifnum\IntCalcMod#1!10!=\z@
1260 \else
1261 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1262 \fi
1263 \fi
1264 \fi
1265 }

1266 \def\HyPsd@CJKdigits#1{%
1267 \ifx*#1\relax
1268 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1269 \else
1270 \HyPsd@@CJKdigits\CJK@null{#1}%
1271 \fi
1272 }

1273 \def\HyPsd@@CJKdigits#1#2{%
1274 \ifx\#2\%
1275 \else
1276 \HyPsd@@@CJKdigits#1#2\@nil
1277 \fi
1278 }%

1279 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1280 \HyPsd@CJKdigit#1{#2}%
1281 \ifx\#3\%
1282 \expandafter\@gobble
1283 \else
1284 \expandafter\@firstofone
1285 \fi
1286 {%
1287 \HyPsd@@@CJKdigits#1#3\@nil
1288 }%
1289 }

1290 \def\HyPsd@CJKdigit#1#2{%
1291 \ifcase#2 %
1292 #1\or
1293 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1294 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1295 \fi
1296 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

\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}

1297 \def\HyPsd@inmathwarn#1#2{%
1298   \ifx#2\expandafter
1299     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1300       \HyPsd@GLYPHERR
1301       \expandafter\@gobble\string#1%
1302       >%
1303       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1304     \else
1305       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1306     \fi
1307   \else
1308     \expandafter#2%
1309   \fi
1310 }
1311 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1312 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent
1313 \def\HyPsd@add@accent#1#2{%
1314   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1315   #2%
1316 }%

```

6.5.7 Unexpandable spaces

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

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

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

```
1317 \def\HyPsd@LetUnexpandableSpace#1{%
1318   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1319 }
```

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

```
1320 \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.

```
1321 \edef\HyPsd@XSPACE{\string#\string X}
1322 \edef\HyPsd@ITALCORR{\string#\string I}
1323 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1324 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1325 \def\HyPsd@@hspace#1*#2\END{%
1326   \ifx\#2\%
1327     \HyPsd@hspacetest{#1}%
1328   \else
1329     \expandafter\HyPsd@hspacetest
1330   \fi
1331 }
```

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

```
1332 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1333 \ltx@ifundefined{tocsection}{%
1334   \let\HyPsd@AMSclassfix\relax
1335 }{%
1336   \def\HyPsd@AMSclassfix{%
```

```

1337 \let\tocpart\HyPsd@tocsection
1338 \let\tocchapter\HyPsd@tocsection
1339 \let\tocappendix\HyPsd@tocsection
1340 \let\tocsection\HyPsd@tocsection
1341 \let\tocsubsection\HyPsd@tocsection
1342 \let\tocsubsubsection\HyPsd@tocsection
1343 \let\tocparagraph\HyPsd@tocsection
1344 }%
1345 \def\HyPsd@tocsection#1#2#3{%
1346 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1347 #3%
1348 }%
1349 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1350 \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.

```

1351 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1352 \def\HyPsd@@ref#1*#2\END{%
1353 \ifx\#2\%
1354 \HyPsd@@@ref{#1}%
1355 \else
1356 \expandafter\HyPsd@@@ref
1357 \fi
1358 }%

```

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

```

1359 \def\HyPsd@@@ref#1{%
1360 \expandafter\ifx\csname r@#1\endcsname\relax
1361 ??%
1362 \else
1363 \expandafter\expandafter\expandafter
1364 \@car\csname r@#1\endcsname\@nil
1365 \fi
1366 }

```

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

```

1367 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1368 \def\HyPsd@@pageref#1*#2\END{%
1369 \ifx\#2\%
1370 \HyPsd@@@pageref{#1}%
1371 \else
1372 \expandafter\HyPsd@@@pageref
1373 \fi
1374 }

```


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

```

1375 \def\HyPsd@@@pageref#1{%
1376   \expandafter\ifx\csname r@#1\endcsname\relax
1377     ??%
1378   \else
1379     \expandafter\expandafter\expandafter\expandafter
1380     \expandafter\expandafter\expandafter\@car
1381     \expandafter\expandafter\expandafter\@gobble
1382     \csname r@#1\endcsname{}\@nil
1383   \fi
1384 }
```

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

```

1385 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```

1386 \def\HyPsd@@nameref#1*#2\END{%
1387   \ifx\#2\%
1388     \HyPsd@@@nameref{#1}%
1389   \else
1390     \expandafter\HyPsd@@@nameref
1391   \fi
1392 }
```

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

```

1393 \def\HyPsd@@@nameref#1{%
1394   \expandafter\ifx\csname r@#1\endcsname\relax
1395     ??%
1396   \else
1397     \expandafter\expandafter\expandafter\expandafter
1398     \expandafter\expandafter\expandafter\@car
1399     \expandafter\expandafter\expandafter\@gobbletwo
1400     \csname r@#1\endcsname{}\@nil
1401   \fi
1402 }
```

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

```

1403 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```

1404 \def\HyPsd@@autoref#1*#2\END{%
1405   \ifx\#2\%
1406     \HyPsd@@@autoref{#1}%
1407   \else
1408     \expandafter\HyPsd@@@autoref
1409   \fi
1410 }
```

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

```

1411 \def\HyPsd@@@autoref#1{%
1412   \expandafter\ifx\csname r@#1\endcsname\relax
```

```

1413 ??%
1414 \else
1415 \expandafter\expandafter\expandafter\HyPsd@autorefname
1416 \csname r@#1\endcsname\}\}\}\@nil
1417 \expandafter\expandafter\expandafter
1418 \@car\csname r@#1\endcsname\@nil
1419 \fi
1420 }

```

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

```

1421 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1422 \ifx\#4\%
1423 \else
1424 \HyPsd@@autorefname#4.\@nil
1425 \fi
1426 }

```

`\HyPsd@@autorefname`

```

1427 \def\HyPsd@@autorefname#1.#2\@nil{%
1428 \ltx@ifundefined{#1autorefname}{%
1429 \ltx@ifundefined{#1name}{%
1430 }{%
1431 \csname#1name\endcsname\space
1432 }%
1433 }{%
1434 \csname#1autorefname\endcsname\space
1435 }%
1436 }

```

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 `\HyPsdLetCommand` 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 1437 \begingroup
1438 \def\x#1#2{%
1439 \endgroup
1440 \let#1\def
1441 \def\HyPsd@DefCommand##1##2###{%
1442 #1%
1443 \expandafter\noexpand
1444 \csname\expandafter\@gobble\string##1\@empty\endcsname
1445 \@gobble
1446 }%
1447 \let#2\let
1448 \def\HyPsd@@LetCommand##1{%
1449 \expandafter\ifx\csname##1\expandafter\endcsname
1450 \csname iftrue\endcsname
1451 \pdfstringdefWarn\let
1452 \expandafter\@gobble
1453 \else
1454 \expandafter\ifx\csname##1\expandafter\endcsname
1455 \csname iffalse\endcsname
1456 \pdfstringdefWarn\let
1457 \expandafter\expandafter\expandafter\@gobble
1458 \else
1459 #2%
1460 \expandafter\noexpand
1461 \csname##1\expandafter\expandafter\expandafter\endcsname
1462 \fi
1463 \fi
1464 }%
1465 }%
1466 \expandafter\x\csname <def>-command\expandafter\endcsname
1467 \csname <let>-command\endcsname
1468 \def\HyPsd@LetCommand#1{%
1469 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1470 \expandafter\expandafter\expandafter{%
1471 \expandafter\@gobble\string#1\@empty
1472 }%
1473 }
```

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).

```

1474 \def\HyPsd@ifnextchar#1{%
1475   \pdfstringdefWarn#1%
1476   \expandafter\@gobbletwo\@gobble
1477 }

```

6.5.14 `\@protected@testoptifnextchar`

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

```

1478 \def\HyPsd@protected@testopt#1{%
1479   \pdfstringdefWarn#1%
1480   \@gobbletwo
1481 }

```

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:

```

1482 \def\HyPsd@Warning#1{%
1483   \begingroup
1484   \let\space\ltx@space
1485   \Hy@Warning{#1}%
1486   \endgroup
1487 }

```

6.6.2 Protecting spaces

```

1488 \RequirePackage{etexcmds}[2007/09/09]
1489 \ifetex@unexpanded
1490   \expandafter\@secondoftwo
1491 \else
1492   \expandafter\@firstoftwo
1493 \fi
1494 {%

```

`\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`.

```

1495   \def\HyPsd@ProtectSpaces#1{%
1496     \iftrue

```

```

1497 \expandafter\HyPsd@@ProtectSpacesFi
1498 \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1499 \fi
1500 }%

```

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

```

1501 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1502 \fi
1503 \ifx\scrollmode#2\scrollmode
1504 \HyPsd@RemoveMask#1\HyPsd@End#3%
1505 \else
1506 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1507 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1508 \fi
1509 }%

```

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.

```

1510 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1511 \toks@\expandafter{#1}%
1512 \xdef#2{\the\toks@}%
1513 }%

1514 }{%
1515 \let\HyPsd@fi\fi
1516 \def\HyPsd@ProtectSpaces#1{%
1517 \xdef#1{%
1518 \iftrue
1519 \expandafter\HyPsd@@ProtectSpacesFi
1520 \expandafter|\expandafter\@empty#1| %
1521 \HyPsd@fi
1522 }%
1523 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1524 }%
1525 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1526 \fi
1527 \etex@unexpanded{#1}%
1528 \ifx\scrollmode#2\scrollmode
1529 \else
1530 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1531 \HyPsd@fi
1532 }%
1533 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1534 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1535 }%
1536 }

```

6.6.3 Remove grouping braces

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

```

1537 \def\HyPsd@RemoveBraces#1{%
1538   \ifx\scrollmode#1\scrollmode
1539   \else
1540     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1541   \fi
1542 }
```

`\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`.

```

1543 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1544   \fi
1545   \def\Hy@temp@A{#1#2}%
1546   \def\Hy@temp@B{#3}%
1547   \ifx\Hy@temp@A\Hy@temp@B
1548     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1549       \HyPsd@String#1%
1550     }%
1551     \ifx\scrollmode#2\scrollmode
1552     \else
1553       \Hy@ReturnAfterFiFiEnd{%
1554         \HyPsd@RemoveBraces{#2}%
1555       }%
1556     \fi
1557   \else
1558     \def\Hy@temp@A{#1}%
1559     \HyPsd@AppendItalcorr\HyPsd@String
1560     \ifx\Hy@temp@A\@empty
1561       \Hy@ReturnAfterElseFiFiEnd{%
1562         \HyPsd@RemoveBraces{#2}%
1563       }%
1564     \else
1565       \HyPsd@ProtectSpaces\Hy@temp@A
1566       \HyPsd@AppendItalcorr\Hy@temp@A
1567       \Hy@ReturnAfterFiFiEnd{%
1568         \expandafter\HyPsd@RemoveBraces\expandafter
1569           {\Hy@temp@A#2}%
1570       }%
1571     \fi
1572   \fi
1573   \Hy@ReturnEnd
1574 }
```

`\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`.

```

1575 \def\HyPsd@AppendItalcorr#1{%
1576   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/}#1%
1577 }
1578 \def\HyPsd@@AppendItalcorr#1#2{%
1579   \expandafter\def\expandafter#2\expandafter{#2#1}%
1580 }

```

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>.

```

1581 \ltx@ifundefined{directlua}{%
1582 }{%
1583   \expandafter\ifx\csname\endcsname\relax\fi
1584 }

```

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`.

```

1585 \begingroup
1586   \catcode`\Q=\active
1587   \let Q\ltx@empty
1588   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1589     \global\let\HyPsd@Rest\relax
1590     \ifcat\relax\noexpand#1\relax
1591       \ifx#1\protect
1592       \else
1593         \ifx#1\penalty
1594           \setbox\z@=\hbox{%
1595             \afterassignment\HyPsd@AfterCountRemove
1596             \count@=#2\HyPsd@end
1597           }%
1598         \else
1599           \ifx#1\kern
1600             \setbox\z@=\hbox{%
1601               \afterassignment\HyPsd@AfterDimenRemove
1602               \dimen@=#2\HyPsd@end
1603             }%

```

```

1604         \else
1605         \ifx#1\hskip
1606         \setbox\z@=\hbox{%
1607         \afterassignment\HyPsd@AfterSkipRemove
1608         \skip@=#2\HyPsd@end
1609         }%
1610         \else
1611         \HyPsd@CatcodeWarning{#1}%
1612         \fi
1613     \fi
1614 \fi
1615 \fi
1616 \else
1617 \ifcat\noexpand#1\noexpandQ% active character
1618 \expandafter\expandafter\expandafter\def
1619 \expandafter\expandafter\expandafter\HyPsd@String
1620 \expandafter\expandafter\expandafter{%
1621 \expandafter\HyPsd@String\string#1%
1622 }%
1623 \else
1624 \ifcat#1A% letter
1625 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1626 \HyPsd@String#1%
1627 }%
1628 \else
1629 \ifcat#1 % SPACE
1630 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1631 \HyPsd@String\HyPsd@SPACEOPTI
1632 }%
1633 \else
1634 \ifcat$#1%
1635 \HyPsd@CatcodeWarning{math shift}%
1636 \else
1637 \ifcat&#1%
1638 \HyPsd@CatcodeWarning{alignment tab}%
1639 \else
1640 \ifcat^#1%
1641 \HyPsd@CatcodeWarning{superscript}%
1642 \else
1643 \ifcat_#1%
1644 \HyPsd@CatcodeWarning{subscript}%
1645 \else
1646 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1647 \HyPsd@String#1%
1648 }%
1649 \fi
1650 \fi
1651 \fi
1652 \fi
1653 \fi
1654 \fi
1655 \fi
1656 \fi
1657 \ifx\HyPsd@Rest\relax

```



```

1658 \ifx\scrollmode#2\scrollmode
1659 \else
1660 \Hy@ReturnAfterFiFiEnd{%
1661 \HyPsd@CheckCatcodes#2\HyPsd@End
1662 }%
1663 \fi
1664 \else
1665 \ifx\HyPsd@Rest\@empty
1666 \else
1667 \Hy@ReturnAfterFiFiEnd{%
1668 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1669 }%
1670 \fi
1671 \fi
1672 \Hy@ReturnEnd
1673 }%
1674 \endgroup

```

Remove counts, dimens, skips.

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

```

1675 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1676 \gdef\HyPsd@Rest{#1}%
1677 }

```

`\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.

```

1678 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1679 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1680 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1681 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1682 \else
1683 \ifdim\dimen@=\z@
1684 \else
1685 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1686 \fi
1687 \gdef\HyPsd@Rest{#1}%
1688 \fi
1689 }

```

`\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).

```

1690 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1691 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1692 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1693 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1694 \else
1695 \ifdim\skip@=\z@
1696 \else
1697 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1698 \fi

```

```

1699 \gdef\HyPsd@Rest{#1}%
1700 \fi
1701 }

```

Catcode warnings.

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

```

1702 \def\HyPsd@CatcodeWarning#1{%
1703 \HyPsd@Warning{%
1704   Token not allowed in a PDF string (%)
1705   \ifHy@unicode
1706     Unicode%
1707   \else
1708     PDFDocEncoding%
1709   \fi
1710   }:%
1711   \MessageBreak removing `\'HyPsd@RemoveCmdPrefix#1'%
1712 }%
1713 }
1714 \begingroup
1715 \catcode`\|=0 %
1716 \catcode`\|=12 %
1717 |gdef|HyPsd@RemoveCmdPrefix#1{%
1718   |expandafter|HyPsd@@RemoveCmdPrefix
1719   |string#1|@empty\<>-|@empty|@empty
1720 }%
1721 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1722 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1723 \def\HyPsd@RemoveSpaceWarning#1{%
1724 \HyPsd@Warning{%
1725   Token not allowed in a PDF string (%)
1726   \ifHy@unicode
1727     Unicode%
1728   \else
1729     PDFDocEncoding%
1730   \fi
1731   }:%
1732   \MessageBreak #1\MessageBreak
1733   removed%
1734 }%
1735 }

```

\HyPsd@ReplaceSpaceWarning

```

1736 \def\HyPsd@ReplaceSpaceWarning#1{%
1737 \HyPsd@Warning{%
1738   Token not allowed in a PDF string (%)
1739   \ifHy@unicode
1740     Unicode%
1741   \else
1742     PDFDocEncoding%
1743   \fi
1744   }:%

```

```

1745 \MessageBreak #1\MessageBreak
1746 replaced by space%
1747 }%
1748 }

```

6.6.5 Check for wrong glyphs

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

```

1749 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1750 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1751 \HyPsd@String#1%
1752 }%
1753 \ifx\\#2\\%
1754 \else
1755 \ltx@ReturnAfterFi{%
1756 \HyPsd@GlyphProcessWarning#2\@empty
1757 }%
1758 \fi
1759 }
1760 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1761 \HyPsd@@@GlyphProcessWarning#1++>%
1762 \HyPsd@GlyphProcess#2\@empty
1763 }
1764 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1765 \ifx\\#2\\%
1766 \HyPsd@Warning{%
1767 Glyph not defined in %
1768 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1769 removing ` \@backslashchar#1'%
1770 }%
1771 \else
1772 \HyPsd@Warning{%
1773 Composite letter ` \@backslashchar#1+#2'\MessageBreak
1774 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1775 \MessageBreak
1776 removing ` \@backslashchar#1'%
1777 }%
1778 \fi
1779 }

```

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`.

```

1780 \def\HyPsd@spaceopti#1{ % first space
1781 \ifx\HyPsd@spaceopti#1%
1782 \040%
1783 \else
1784 #1%
1785 \fi

```

```
1786 }%
```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is a 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.
1787 \def\HyPsd@Subst#1#2#3{%
1788   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1789     \fi
1790     ##1%
1791     \ifx\scrollmode##2\scrollmode
1792     \else
1793       #2%
1794     \HyPsd@@ReplaceFi##2\END
1795     \fi
1796   }%
1797   \xdef#3{%
1798     \iftrue
1799       \expandafter\HyPsd@@ReplaceFi#3#1\END
1800     \fi
1801   }%
1802 }
```

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

```
1803 \def\HyPsd@StringSubst#1{%
1804   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1805 }
```

`\HyPsd@EscapeTeX`

```
1806 \begingroup
1807   \lccode`\!=`\\%%
1808   \lccode`\|=`\\%%
1809   \lccode`\(=`\{%
1810   \lccode`\)=`\}%
1811   \lccode`0=\ltx@zero
1812   \lccode`1=\ltx@zero
1813   \lccode`3=\ltx@zero
1814   \lccode`4=\ltx@zero
1815   \lccode`5=\ltx@zero
1816   \lccode`7=\ltx@zero
1817 \lowercase{\endgroup
1818   \def\HyPsd@EscapeTeX#1{%
1819     \HyPsd@Subst!{|045}#1%
1820     \HyPsd@Subst({|173}#1%
1821     \HyPsd@Subst){|175}#1%
1822   }%
1823 }
```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

1824 \def\HyPsd@doxspace#1{%
1825   \ifx#1\relax\else
1826     \ifx#1.\else
1827       \ifx#1:\else
1828         \ifx#1,\else
1829           \ifx#1;\else
1830             \ifx#1!\else
1831               \ifx#1?\else
1832                 \ifx#1/\else
1833                   \ifx#1-\else
1834                     \ifx#1'\else
1835                       \HyPsd@SPACEOPTI
1836                     \fi
1837                   \fi
1838                 \fi
1839               \fi
1840             \fi
1841           \fi
1842         \fi
1843       \fi
1844     \fi
1845   \fi
1846   #1%
1847 }%
```

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.

```

1848 \begingroup
1849   \catcode`\|=0 %
1850   \catcode`\|=12 %
```

`\HyPsd@ConvertToUnicode`

```

1851 |gdef|HyPsd@ConvertToUnicode#1{%
1852   |xdef#1{%
1853     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1854   }%
1855   |ifx#1|@empty
1856   |else
1857     |xdef#1{%
1858       \376\377%
1859       #1%
1860     }%
1861   |fi
1862 }%
```

\HyPsd@DoConvert

```

1863 |gdef|HyPsd@DoConvert#1{%
1864   |ifx#1|@empty
1865   |else
1866     |ltx@ReturnAfterFi{%
1867       |ifx#1\%%
1868       \%%
1869       |expandafter|HyPsd@DoEscape
1870     |else
1871       |HyPsd@Char{#1}%
1872       |expandafter|HyPsd@DoConvert
1873     |fi
1874   }%
1875 |fi
1876 }%

```

\HyPsd@DoEscape

```

1877 |gdef|HyPsd@DoEscape#1{%
1878   |ifx#19%
1879   |expandafter|HyPsd@GetTwoBytes
1880   |else
1881     |ltx@ReturnAfterFi{%
1882       |ifx#18%
1883       00%
1884       |expandafter|HyPsd@GetTwoBytes
1885     |else
1886       #1%
1887       |expandafter|HyPsd@GetOneByte
1888     |fi
1889   }%
1890 |fi
1891 }%

```

\HyPsd@GetTwoBytes

```

1892 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1893   #1\#2#3#4%
1894   |HyPsd@DoConvert
1895 }%

```

\HyPsd@GetOneByte

```

1896 |gdef|HyPsd@GetOneByte#1#2{%
1897   #1#2%
1898   |HyPsd@DoConvert
1899 }%
1900 |endgroup

```

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

```

1901 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1902   \xdef#4{#4#1#2}%
1903   \HyPsd@@ConvertToUnicode#3\END#4%
1904 }

```

\HyPsd@Char

```
1905 \begingroup
1906 \catcode0=9 %
1907 \catcode`\^=7 %
1908 \catcode`\^^=12 %
1909 \def\x{~~~~0000}%
1910 \expandafter\endgroup
1911 \ifx\x\@empty
1912 \def\HyPsd@Char#1{%
1913 \ifnum`#1<128 %
1914 \catcode\char 000#1%
1915 \else
1916 \ifnum`#1<65536 %
1917 \expandafter\HyPsd@CharTwoByte\number`#1%
1918 \else
1919 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1920 \intcalcSub{`#1}{65536}!%
1921 \fi
1922 \fi
1923 }%
1924 \def\HyPsd@CharTwoByte#1{%
1925 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1926 \IntCalcDiv#1!256!%
1927 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1928 \IntCalcMod#1!256!%
1929 }%
1930 \def\HyPsd@CharOctByte#1{%
1931 \catcode\char
1932 \IntCalcDiv#1!64!%
1933 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1934 \IntCalcMod#1!8!%
1935 }%
1936 \def\HyPsd@CharSurrogate#1{%
1937 \catcode\char 33%
1938 \IntCalcDiv#1!262144!%
1939 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1940 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1941 \catcode\char 33%
1942 \expandafter\expandafter\expandafter\IntCalcAdd
1943 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1944 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1945 \IntCalcMod#1!256!%
1946 }%
1947 \else
1948 \def\HyPsd@Char#1{%
1949 \catcode\char 000#1%
1950 }%
1951 \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`

```

1952 \begingroup\expandafter\expandafter\expandafter\endgroup
1953 \expandafter\ifx\csname numexpr\endcsname\relax
1954   \let\HyPsd@UTFviii\relax
1955 \else
1956   \begingroup
1957     \lccode`\~=\^^f4\relax
1958   \lowercase{\endgroup
1959     \def\HyPsd@UTFviii{%
1960       \let\UTFviii@two@octets\HyPsd@UTFviii@two
1961       \let\UTFviii@three@octets\HyPsd@UTFviii@three
1962       \let\UTFviii@four@octets\HyPsd@UTFviii@four
1963       \ifx~\HyPsd@UTFviii@ccxliv@undef
1964         \let~\HyPsd@UTFviii@ccxliv@def
1965       \fi
1966       \let\unichar\HyPsd@unichar
1967     }%
1968   }%
1969   \def\HyPsd@UTFviii@ccxliv@undef{\@inpc@undefined@{utf8}}%
1970   \edef\HyPsd@UTFviii@ccxliv@def{%
1971     \noexpand\UTFviii@four@octets\string ~^f4%
1972   }%

```

The two octet form of UTF-8 110aaabb (A) and 10ccdd (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.

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

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

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

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

$$(5)$$

```

1973 \def\HyPsd@UTFviii@two#1#2{%
1974   \expandafter\HyPsd@UTFviii@two
1975   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|%
1976   \number`#1\expandafter|%
1977   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|%
1978   \number`#2 \@nil
1979 }%
1980 \def\HyPsd@UTFviii@two#1|#2|#3|#4\@nil{%
1981   \expandafter\8%
1982   \number\numexpr #1-48\expandafter\relax
1983   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1984   \number\numexpr #3-8*%
1985     \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1986   \number\numexpr #4-8*#3\relax

```


1987 }%

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

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

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

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

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

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

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

$$(12)$$

```

1988 \def\HyPsd@UTFviii@three#1#2#3{%
1989 \expandafter\HyPsd@UTFviii@@three
1990 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1991 \number`#1\expandafter|
1992 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
1993 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
1994 \number`#2\expandafter|
1995 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
1996 \number`#3 \@nil
1997 }%
1998 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1999 \expandafter\9%
2000 \number\numexpr #1-56\expandafter\relax
2001 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2002 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2003 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2004 \number\numexpr #6-16\expandafter\relax
2005 \number\numexpr #7-8*#6\relax
2006 }%
```

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
```

```

2007 \def\HyPsd@UTFviii@four#1#2{%
2008 \expandafter\HyPsd@@UTFviii@four\number
2009 \numexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2010 \expandafter|\number
2011 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
2012 }%
2013 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2014 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2015 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2016 \ifodd#2 %
2017 \number\numexpr(#2-1)/2\relax
2018 \else
2019 \number\numexpr#2/2\relax
```

```

2020 \fi
2021 \number\numexpr\ifodd#2 4+\fi
2022 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2023 \933%
2024 \expandafter\HyPsd@@@UTFviii@four\number
2025 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2026 }%
2027 \def\HyPsd@@@UTFviii@four#1|#2{%
2028 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2029 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2030 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2031 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2032 }%

```

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

```

2033 \def\HyPsd@unichar#1{%
2034 \ifHy@unicode
2035 \ifnum#1>"10FFFF %
2036 \HyPsd@UnicodeReplacementCharacter % illegal
2037 \else
2038 \ifnum#1>"FFFF %

```

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

```

2039 \expandafter\HyPsd@unichar\expandafter{%
2040 \number\numexpr 55296+%
2041 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2042 \relax\relax\relax
2043 }%

```

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

```

2044 \expandafter\HyPsd@unichar\expandafter{%
2045 \number\numexpr#1-9216%
2046 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2047 \relax\relax\relax
2048 }%
2049 \else
2050 \ifnum#1>"7FFF %
2051 \9%
2052 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2053 \number
2054 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2055 }%
2056 \else
2057 \8%
2058 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2059 \fi
2060 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2061 \number
2062 \numexpr#1-256*\number
2063 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2064 }%
2065 \fi
2066 \fi
2067 \else

```

```

2068      .% unsupported (Unicode -> PDF Doc Encoding)
2069      \fi
2070  }%
2071  \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2072  \def\HyPsd@unichar@first@byte#1{%
2073    \number\dimexpr.015625\dimexpr#1sp\relax\relax
2074    \expandafter\HyPsd@unichar@octtwo\expandafter{%
2075      \number
2076      \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2077      \relax\relax\relax
2078    }%
2079  }%
2080  \def\HyPsd@unichar@second@byte#1{%
2081    \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2082    \expandafter\HyPsd@unichar@octtwo\expandafter{%
2083      \number
2084      \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2085      \relax\relax\relax
2086    }%
2087  }%
2088  \def\HyPsd@unichar@octtwo#1{%
2089    \number\dimexpr.125\dimexpr#1sp\relax\relax
2090    \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2091    \relax\relax\relax
2092  }%
2093  \fi

```

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

```

2094 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2095   \ifx\@gobble#1%
2096   \else
2097     [Please insert \textbackslash PrerenderUnicode%
2098     \textbraceleft#1\textbraceright\space
2099     into preamble]%
2100   \fi
2101 }%

```

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.

```

2102 \def\HyPsd@DieFace#1{%
2103   \ifHy@unicode
2104     \ifnum#1<1 %
2105       \HyPsd@UnicodeReplacementCharacter

```

```

2106 \else
2107 \ifnum#1>6 %
2108 \9046\205%
2109 \expandafter\expandafter\expandafter
2110 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2111 \else
2112 \9046\20\intcalcDec{#1}%
2113 \fi
2114 \fi
2115 \else
2116 .% Die faces are not part of PDFDocEncoding
2117 \fi
2118 }

```

\HyPsd@DieFaceLarge

```

2119 \def\HyPsd@DieFaceLarge#1{%
2120 \ifnum#1>6 %
2121 \expandafter\ltx@firstoftwo
2122 \else
2123 \expandafter\ltx@secondoftwo
2124 \fi
2125 {%
2126 \9046\205%
2127 \expandafter\expandafter\expandafter
2128 \HyPsd@DieFaceLarge\IntCalcSub#1{6}!!%
2129 }{%
2130 \9046\20\IntCalcDec#1!%
2131 }%
2132 }

```

6.6.11 Support for moon phases of package china2e

```

2133 \def\HyPsd@MoonPha#1{%
2134 \ifcase\intcalcNum{#1} %
2135 \HyPsd@UnicodeReplacementCharacter
2136 \or % 1
2137 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2138 \9330\074\9337\032%
2139 \or % 2
2140 \HyPsd@UnicodeReplacementCharacter
2141 \or % 3
2142 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2143 \9330\074\9337\035%
2144 \or % 4
2145 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2146 \9330\074\9337\034%
2147 \else
2148 \HyPsd@UnicodeReplacementCharacter
2149 \fi
2150 }
2151 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2152 \def\HyPsd@ding#1{%
2153   \ifHy@unicode
2154     \ifnum#1<32 %
2155       \HyPsd@UnicodeReplacementCharacter
2156     \else
2157       \ifnum#1>254 %
2158         \HyPsd@UnicodeReplacementCharacter
2159       \else
2160         \ifnum#1<127 %
2161           \expandafter\expandafter\expandafter
2162             \HyPsd@@ding\intcalcNum{#1}!%
2163         \else
2164           \ifnum#1>160 %
2165             \expandafter\expandafter\expandafter
2166               \HyPsd@@ding\intcalcNum{#1}!%
2167           \else
2168             \HyPsd@UnicodeReplacementCharacter
2169           \fi
2170         \fi
2171       \fi
2172     \fi
2173   \else
2174     .% Dingbats are not part of PDFDocEncoding
2175   \fi
2176 }

```

\HyPsd@@ding

```

2177 \def\HyPsd@@ding#1!{%
2178   \ltx@ifundefined{HyPsd@ding@#1}{%
2179     \ifnum#1<127 %
2180       \9047%
2181       \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2182     \else
2183       \ifnum#1<168 %
2184         \9047\14\IntCalcSub#1!160!%
2185       \else
2186         \ifnum#1>181 %
2187           \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2188         \else
2189           % 172..181 -> U+2460..U+2469
2190           \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2191         \fi
2192       \fi
2193     \fi
2194   }{%
2195     \csname HyPsd@ding@#1\endcsname
2196   }%
2197 }

2198 \@namedef{HyPsd@ding@32}{\space}
2199 % U+260E BLACK TELEPHONE
2200 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2201 % U+261B BLACK RIGHT POINTING INDEX
2202 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B

```

```

2203 % U+261E WHITE RIGHT POINTING INDEX
2204 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2205 % U+2605 BLACK STAR
2206 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2207 % U+25CF BLACK CIRCLE
2208 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2209 % U+25A0 BLACK SQUARE
2210 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2211 % U+25B2 BLACK UP-POINTING TRIANGLE
2212 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2213 % U+25BC BLACK DOWN-POINTING TRIANGLE
2214 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2215 % U+25C6 BLACK DIAMOND
2216 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2217 % U+25D7 RIGHT HALF BLACK CIRCLE
2218 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2219 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2220 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2221 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2222 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2223 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2224 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2225 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2226 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2227 \@ifclassloaded{memoir}{%
2228 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2229 }{}

```

7.2 Package subfigure

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

```

2230 \@ifpackageloaded{subfigure}{%
2231 \ltx@ifundefined{sub@label}{%
2232 \Hy@hypertextnamesfalse
2233 }{%
2234 \renewcommand*{\sub@label}[1]{%
2235 \@bsphack
2236 \subfig@oldlabel{#1}%
2237 \if@filesw
2238 \begingroup
2239 \edef\@currentlabstr{%
2240 \expandafter\strip@prefix\meaning\@currentlabelname
2241 }%
2242 \protected@write\@auxout{}{%
2243 \string\newlabel{sub@#1}{%
2244 {\@nameuse{\@thesub\@capttype}}%
2245 {\thepage}}%
2246 {%
2247 \expandafter\strip@period\@currentlabstr

```

```

2248         \relax.\relax\@@@%
2249     }%
2250     {\@currentHref}%
2251     {}%
2252 }%
2253 }%
2254 \endgroup
2255 \fi
2256 \@esphack
2257 }%
2258 \@ifpackagelater{subfigure}{2002/03/26}{\%
2259     \providecommand*\@toclevel@subfigure{1}%
2260     \providecommand*\@toclevel@subtable{1}%
2261 }%
2262 }%
2263 }{}

```

7.3 Package xr and xr-hyper

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

```

2264 \ltx@ifundefined{XR@addURL}{%
2265 }{%

```

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.

```

2266 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2267 \def\xr@dURL#1#2#3#4#5\\{%
2268     {#1}{#2}%
2269     \if!#4!%
2270     \else
2271         {#3}{#4}{\xr@URL}%
2272     \fi
2273 }%
2274 }

2275 \def\Hy@true{true}
2276 \def\Hy@false{false}

    Providing dummy definitions.
2277 \let\literalps@out\@gobble
2278 \newcommand\pdfbookmark[3][]{%
2279 \def\Acrobatmenu#1#2{\leavevmode#2}
2280 \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

```
2281 \let\HyperRaiseLinkHook\@empty
2282 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2283 \newcount\Hy@SavedSpaceFactor
2284 \def\Hy@SaveSpaceFactor{%
2285   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2286 }
2287 \def\Hy@RestoreSpaceFactor{%
2288   \relax
2289   \ifhmode
2290     \ifnum\Hy@SavedSpaceFactor>\z@
2291       \spacefactor=\Hy@SavedSpaceFactor
2292     \fi
2293   \fi
2294 }
2295 \def\Hy@SaveSavedSpaceFactor{%
2296   \edef\Hy@RestoreSavedSpaceFactor{%
2297     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2298   }%
2299 }
2300 \def\Hy@raisedlink#1{%
2301   \ifvmode
2302     #1%
2303   \else
2304     \Hy@SaveSpaceFactor
2305     \penalty\@M
2306     \smash{%
2307       \begingroup
2308         \let\HyperRaiseLinkLength\@tempdima
2309         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2310         \HyperRaiseLinkHook
2311       \expandafter\endgroup
2312       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2313         \Hy@RestoreSpaceFactor
2314         #1%
2315         \Hy@SaveSpaceFactor
2316       }%
2317     }%
2318     \Hy@RestoreSpaceFactor
2319   \fi
2320 }
```

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

```
2321 \def\Hy@SaveLastskip{%
2322   \let\Hy@RestoreLastskip\relax
2323   \ifvmode
2324     \ifdim\lastskip=\z@
2325       \let\Hy@RestoreLastskip\nobreak
2326     \else
```



```

2327 \begingroup
2328 \skip@=-\lastskip
2329 \edef\x{%
2330 \endgroup
2331 \def\noexpand\Hy@RestoreLastskip{%
2332 \noexpand\ifvmode
2333 \noexpand\nobreak
2334 \vskip\the\skip@
2335 \vskip\the\lastskip\relax
2336 \noexpand\fi
2337 }%
2338 }%
2339 \x
2340 \fi
2341 \else
2342 \ifhmode
2343 \ifdim\lastskip=\z@
2344 \let\Hy@RestoreLastskip\nobreak
2345 \else
2346 \begingroup
2347 \skip@=-\lastskip
2348 \edef\x{%
2349 \endgroup
2350 \def\noexpand\Hy@RestoreLastskip{%
2351 \noexpand\ifhmode
2352 \noexpand\nobreak
2353 \hskip\the\skip@
2354 \hskip\the\lastskip\relax
2355 \noexpand\fi
2356 }%
2357 }%
2358 \x
2359 \fi
2360 \fi
2361 \fi
2362 }%

```

9 Options

```

2363 \SetupKeyvalOptions{%
2364 family=Hyp,%
2365 prefix=HyOpt%
2366 }

```

9.1 Help macros

\IfHyperBooleanExists

```

2367 \def\IfHyperBooleanExists#1{%
2368 \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2369 \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2370 }%
2371 }

2372 \@namedef{KV@Hyp@stoppeearly@default}{\}

```

\IfHyperBoolean

```
2373 \def\IfHyperBoolean#1{%
2374   \IfHyperBooleanExists{#1}{%
2375     \csname ifHy@#1\endcsname
2376     \expandafter\ltx@firstoftwo
2377   \else
2378     \expandafter\ltx@secondoftwo
2379   \fi
2380 } \ltx@secondoftwo
2381 }
```

\Hy@boolkey

```
2382 \def\Hy@boolkey#1#2{%
2383   \edef\Hy@tempa{#2}%
2384   \lowercase\expandafter{%
2385     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2386   }%
2387   \ifx\Hy@tempa\@empty
2388     \let\Hy@tempa\Hy@true
2389   \fi
2390   \ifx\Hy@tempa\Hy@true
2391   \else
2392     \ifx\Hy@tempa\Hy@false
2393     \else
2394       \let\Hy@tempa\relax
2395     \fi
2396   \fi
2397   \ifx\Hy@tempa\relax
2398     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2399   \else
2400     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2401     \csname Hy@#1\Hy@tempa\endcsname
2402   \fi
2403 }
```

\Hy@WarnOptionValue

```
2404 \def\Hy@WarnOptionValue#1#2#3{%
2405   \Hy@Warning{%
2406     Unexpected value `#1'\MessageBreak
2407     of option `#2' instead of\MessageBreak
2408     #3%
2409   }%
2410 }
```

\Hy@DisableOption

```
2411 \def\Hy@DisableOption#1{%
2412   \ltx@ifundefined{KV@Hyp@#1@default}{%
2413     \define@key{Hyp}{#1}%
2414   }{%
2415     \define@key{Hyp}{#1}[]%
2416   }%
2417   {\Hy@WarnOptionDisabled{#1}}%
2418 }
2419
```

`\Hy@WarnOptionDisabled`

```
2420 \def\Hy@WarnOptionDisabled#1{%
2421   \Hy@Warning{%
2422     Option `#1' has already been used,\MessageBreak
2423     setting the option has no effect%
2424   }%
2425 }
```

`\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`.

```
2426 \def\Hy@CheckOptionValue#1#2#3{%
2427   \begingroup
2428   \edef\x{#1}%
2429   \@onelevel@sanitize\x
2430   \let\y=y%
2431   \def\do##1##2{%
2432     \def\z{##1}%
2433     \@onelevel@sanitize\z
2434     \ifx\x\z
2435       \let\y=n%
2436       \let\do\@gobbletwo
2437     \fi
2438   }%
2439   #3%
2440   \ifx\y y%
2441     \def\do##1##2{%
2442       * `##1'%
2443       \ifx\##2\else\space(##2)\fi
2444       \MessageBreak
2445     }%
2446     \Hy@Warning{%
2447       Values of option `#2':\MessageBreak
2448       #3%
2449       * An empty value disables the option.\MessageBreak
2450       Unknown value `x'%
2451     }%
2452   \fi
2453   \endgroup
2454 }
```

`\Hy@DefNameKey` `#1`: option name

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

```
2455 \def\Hy@DefNameKey#1{%
2456   \expandafter\Hy@@@DefNameKey\cname @#1\endcsname{#1}%
2457 }
```

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

`#2`: option name

`#3`: `\do` list with known values.

```
2458 \def\Hy@@@DefNameKey#1#2#3{%
2459   \define@key{Hyp}{#2}{%
```

```

2460 \edef#1{##1}%
2461 \ifx#1\@empty
2462 \else
2463 \Hy@CheckOptionValue{##1}{#2}{#3}%
2464 \fi
2465 }%
2466 \let#1\@empty
2467 }

```

\Hy@UseNameKey

```

2468 \def\Hy@UseNameKey#1#2{%
2469 \ifx#2\@empty
2470 \else
2471 /#1/#2%
2472 \fi
2473 }

```

9.2 Defining the options

```

2474 \define@key{Hyp}{implicit}[true]{%
2475 \Hy@boolkey{implicit}{#1}%
2476 }
2477 \define@key{Hyp}{draft}[true]{%
2478 \Hy@boolkey{draft}{#1}%
2479 }
2480 \define@key{Hyp}{final}[true]{%
2481 \Hy@boolkey{final}{#1}%
2482 }
2483 \let\KV@Hyp@nolinks\KV@Hyp@draft
2484 \def\Hy@ObsoletePaperOption#1{%
2485 \Hy@WarningNoLine{%
2486 Option `#1' is no longer used%
2487 }%
2488 \define@key{Hyp}{#1}[true]{}%
2489 }
2490 \def\Hy@temp#1{%
2491 \define@key{Hyp}{#1}[true]{%
2492 \Hy@ObsoletePaperOption{#1}%
2493 }%
2494 }
2495 \Hy@temp{a4paper}
2496 \Hy@temp{a5paper}
2497 \Hy@temp{b5paper}
2498 \Hy@temp{letterpaper}
2499 \Hy@temp{legalpaper}
2500 \Hy@temp{executivepaper}
2501 \define@key{Hyp}{setpagesize}[true]{%
2502 \Hy@boolkey{setpagesize}{#1}%
2503 }
2504 \define@key{Hyp}{debug}[true]{%
2505 \Hy@boolkey{debug}{#1}%
2506 }
2507 \define@key{Hyp}{linktocpage}[true]{%

```

```

2508 \Hy@boolkey{linktocpage}{#1}%
2509 \ifHy@linktocpage
2510   \let\Hy@linktoc\Hy@linktoc@page
2511 \else
2512   \let\Hy@linktoc\Hy@linktoc@section
2513 \fi
2514 }
2515 \chardef\Hy@linktoc@none=0 %
2516 \chardef\Hy@linktoc@section=1 %
2517 \chardef\Hy@linktoc@page=2 %
2518 \chardef\Hy@linktoc@all=3 %
2519 \ifHy@linktocpage
2520   \let\Hy@linktoc\Hy@linktoc@page
2521 \else
2522   \let\Hy@linktoc\Hy@linktoc@section
2523 \fi
2524 \define@key{Hyp}{linktoc}{%
2525   \@ifundefined{Hy@linktoc@#1}{%
2526     \Hy@Warning{%
2527       Unexpected value `#1' of\MessageBreak
2528       option `linktoc' instead of `none',\MessageBreak
2529       `section', `page' or `all'%
2530     }%
2531   }{%
2532     \expandafter\let\expandafter\Hy@linktoc
2533     \csname Hy@linktoc@#1\endcsname
2534   }%
2535 }
2536 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2537 \let\XR@ext\relax
2538 \define@key{Hyp}{verbose}[true]{%
2539   \Hy@boolkey{verbose}{#1}%
2540 }
2541 \define@key{Hyp}{typexml}[true]{%
2542   \Hy@boolkey{typexml}{#1}%
2543 }

```

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.

```

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

```

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

```

2547 \def\Hy@setbreaklinks#1{%
2548   \csname breaklinks#1\endcsname
2549 }
2550 \def\Hy@breaklinks@unsupported{%
2551   \ifx\Hy@setbreaklinks\@gobble
2552     \ifHy@breaklinks
2553       \Hy@WarningNoLine{%
2554         You have enabled option `breaklinks'.\MessageBreak
2555         But driver `\'Hy@driver.def' does not support this.\MessageBreak

```

```

2556     Expect trouble with the link areas of broken links%
2557   }%
2558   \fi
2559 \fi
2560 }

2561 \define@key{Hyp}{breaklinks}[true]{%
2562   \Hy@boolkey{breaklinks}{#1}%
2563   \let\Hy@setbreaklinks\@gobble
2564 }

```

```

2565 \define@key{Hyp}{localanchorname}[true]{%
2566   \Hy@boolkey{localanchorname}{#1}%
2567 }

```

Determines whether an automatic anchor is put on each page

```

2568 \define@key{Hyp}{pageanchor}[true]{%
2569   \Hy@boolkey{pageanchor}{#1}%
2570 }

```

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.

```

2571 \define@key{Hyp}{plainpages}[true]{%
2572   \Hy@boolkey{plainpages}{#1}%
2573 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what `LaTeX` provides?

```

2574 \define@key{Hyp}{naturalnames}[true]{%
2575   \Hy@boolkey{naturalnames}{#1}%
2576 }

```

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

```

2577 \define@key{Hyp}{hypertextnames}[true]{%
2578   \Hy@boolkey{hypertextnames}{#1}%
2579 }

```

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

```

2580 \define@key{Hyp}{nesting}[true]{%
2581   \Hy@boolkey{nesting}{#1}%
2582 }

```

```

2583 \define@key{Hyp}{destlabel}[true]{%
2584   \Hy@boolkey{destlabel}{#1}%
2585 }

```

```

2586 \define@key{Hyp}{unicode}[true]{%
2587   \Hy@boolkey{unicode}{#1}%
2588   \ifHy@unicode
2589     \def\HyPsd@pdfencoding{unicode}%
2590     \HyPsd@LoadUnicode
2591   \else
2592     \def\HyPsd@pdfencoding{pdfdoc}%
2593   \fi
2594 }

2595 \Hy@AtBeginDocument{%
2596   \ifx\HyPsd@LoadUnicode\relax

```

```

2597 \else
2598 \def\HyPsd@LoadUnicode{%
2599 \Hy@Error{%
2600 Unicode support for bookmarks is not available.\MessageBreak
2601 Activate unicode support by using one of the options\MessageBreak
2602 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2603 in the preamble%
2604 } \@ehc
2605 \global\let\HyPsd@LoadUnicode\relax
2606 \global\Hy@unicodetrue
2607 \global\let\Hy@unicodetrue\Hy@unicodetrue
2608 }%
2609 \fi
2610 }

2611 \define@key{Hyp}{pdfencoding}{%
2612 \edef\HyPsd@temp{#1}%
2613 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2614 \let\HyPsd@pdfencoding\HyPsd@temp
2615 \Hy@unicodetrue
2616 \else
2617 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2618 \z@
2619 \else
2620 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2621 \z@
2622 \else
2623 \@ne
2624 \fi
2625 \fi
2626 \let\HyPsd@pdfencoding\HyPsd@temp
2627 \hypersetup{unicode}%
2628 \ifHy@unicode
2629 \def\HyPsd@pdfencoding{#1}%
2630 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2631 \HyPsd@LoadStringEnc
2632 \fi
2633 \else
2634 \Hy@Warning{Cannot switch to unicode bookmarks}%
2635 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2636 \fi
2637 \else
2638 \@onelevel@sanitize\HyPsd@temp
2639 \Hy@Warning{%
2640 Values of option `pdfencoding':\MessageBreak
2641 `pdfdoc', `unicode', `auto'.\MessageBreak
2642 Ignoring unknown value ``\HyPsd@temp'%
2643 }%
2644 \fi
2645 \fi
2646 }

2647 \def\HyPsd@pdfencoding@auto{auto}
2648 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2649 \def\HyPsd@pdfencoding@unicode{unicode}

```

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

```

2650 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2651 \def\HyPsd@LoadStringEnc{%
2652   \RequirePackage{stringenc}[2009/12/15]%
2653   \let\HyPsd@LoadStringEnc\relax
2654 }
2655 \Hy@AtBeginDocument{%
2656   \ifpackageloaded{stringenc}{%
2657     \let\HyPsd@LoadStringEnc\relax
2658   }{%
2659     \def\HyPsd@LoadStringEnc{%
2660       \Hy@WarningNoLine{%
2661         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
2662         in the preamble or load the package there%
2663       }%
2664     }%
2665   }%
2666 }
2667 \define@key{Hyp}{psdextra}[true]{%
2668   \Hy@boolkey{psdextra}{#1}%
2669   \HyPsd@LoadExtra
2670 }
2671 \def\hypersetup{\kvsetkeys{Hyp}}
2672 \newif\ifHy@setpdfversion
2673 \define@key{Hyp}{pdfversion}{%
2674   \@ifundefined{Hy@pdfversion@#1}{%
2675     \PackageWarning{hyperref}{%
2676       Unsupported PDF version `#1'.\MessageBreak
2677       Valid values: 1.2-1.7, 2.0%
2678     }%
2679   }{%
2680     \Hy@setpdfversiontrue
2681     \@nameuse{Hy@pdfversion@#1}%
2682   }%
2683 }
\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or
\pdfvariable majorversion} so introduce new names here.
2684 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{2}}%
2685 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{3}}%
2686 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{4}}%
2687 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{5}}%
2688 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{6}}%
2689 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{7}}%
2690 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
  norversion{0}}%
2691 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```


Legacy name, earlier releases assumed 1.x

```
2692 \let\Hy@pdfversion\Hy@pdf@minorversion
2693 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
    norversion\relax}
2694 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
    norversion\relax}
if pdfminorversion is defined, make sure pdfmajorversion is too.
2695 \@ifundefined{pdfminorversion}{-}{%
2696 \@ifundefined{pdfmajorversion}{-}{%
2697 \newcount\pdfmajorversion
2698 \pdfmajorversion=1
2699 }-}%
2700 }
2701 \ifx\pdfmajorversion\@undefined\else
2702 \def\Hy@pdfmajorversion{\pdfmajorversion}
2703 \fi
```

10 Options for different drivers

```
2704 \newif\ifHy@DviMode
2705 \let\Hy@DviErrMsg\ltx@empty
2706 \ifpdf
2707 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2708 \else
2709 \ifxetex
2710 \def\Hy@DviErrMsg{XeTeX is running}%
2711 \else
2712 \ifvtex
2713 \ifnum\OpMode=\z@
2714 \Hy@DviModetrue
2715 \else
2716 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2717 \fi
2718 \else
2719 \Hy@DviModetrue
2720 \fi
2721 \fi
2722 \fi
2723 \def\HyOpt@CheckDvi#1{%
2724 \ifHy@DviMode
2725 \expandafter\ltx@firstofone
2726 \else
2727 \Hy@Error{%
2728 Wrong DVI mode driver option `#1',\MessageBreak
2729 because \Hy@DviErrMsg
2730 }\@ehc
2731 \expandafter\ltx@gobble
2732 \fi
2733 }
2734 \DeclareVoidOption{tex4ht}{%
2735 \Hy@texhttrue
2736 \kvsetkeys{Hyp}{colorlinks=true}%
2737 \def\BeforeTeXIVht{\RequirePackage{color}}%
2738 \def\Hy@driver{htex4ht}%
```

```

2739 \def\MaybeStopEarly{%
2740   \Hy@Message{Stopped early}%
2741   \Hy@AtBeginDocument{%
2742     \PDF@FinishDoc
2743     \gdef\PDF@FinishDoc{}%
2744   }%
2745   \endinput
2746 }%
2747 }
2748 \DeclareVoidOption{pdftex}{%
2749   \ifpdf
2750     \def\Hy@driver{hpdftex}%
2751     \PassOptionsToPackage{pdftex}{color}%
2752   \else
2753     \Hy@Error{%
2754       Wrong driver option `pdftex',\MessageBreak
2755       because pdfTeX in PDF mode is not detected%
2756     }\@ehc
2757   \fi
2758 }
2759 \DeclareVoidOption{luatex}{%
2760   \ifpdf
2761     \ifx\pdfextension\@undefined
2762       \def\Hy@driver{hpdftex}%
2763       \PassOptionsToPackage{pdftex}{color}%
2764     \else
2765       \def\Hy@driver{hluatex}%
2766       \PassOptionsToPackage{luatex}{color}%
2767     \fi
2768   \else
2769     \Hy@Error{%
2770       Wrong driver option `luatex',\MessageBreak
2771       because luaTeX in PDF mode is not detected%
2772     }\@ehc
2773   \fi
2774 }
2775 \DeclareVoidOption{nativepdf}{%
2776   \HyOpt@CheckDvi{nativepdf}{%
2777     \def\Hy@driver{hdvips}%
2778     \PassOptionsToPackage{dvips}{color}%
2779   }%
2780 }
2781 \DeclareVoidOption{dviPDFm}{%
2782   \HyOpt@CheckDvi{dviPDFm}{%
2783     \def\Hy@driver{hdvipdfm}%
2784   }%
2785 }
2786 \DeclareVoidOption{dviPDFmx}{%
2787   \HyOpt@CheckDvi{dviPDFmx}{%
2788     \def\Hy@driver{hdvipdfm}%
2789     \PassOptionsToPackage{dviPDFmx}{color}%
2790   }%
2791 }
2792 \define@key{Hyp}{dviPDFmx-outline-open}[true]{%

```

```

2793 \expandafter\ifx\csname if#1\expandafter\endcsname
2794     \csname iftrue\endcsname
2795     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2796 \else
2797     \chardef\SpecialDvipdfmxOutlineOpen\z@
2798 \fi
2799 }
2800 \DeclareVoidOption{xetex}{%
2801     \ifxetex
2802         \def\Hy@driver{hxetex}%
2803     \else
2804         \Hy@Error{%
2805             Wrong driver option `xetex',\MessageBreak
2806             because XeTeX is not detected%
2807         }\@ehc
2808     \fi
2809 }
2810 \DeclareVoidOption{pdfmark}{%
2811     \HyOpt@CheckDvi{pdfmark}{%
2812         \def\Hy@driver{hdvips}%
2813     }%
2814 }
2815 \DeclareVoidOption{dvips}{%
2816     \HyOpt@CheckDvi{dvips}{%
2817         \def\Hy@driver{hdvips}%
2818         \PassOptionsToPackage{dvips}{color}%
2819     }%
2820 }
2821 \DeclareVoidOption{hypertex}{%
2822     \HyOpt@CheckDvi{hypertex}{%
2823         \def\Hy@driver{hypertex}%
2824     }%
2825 }
2826 \let\Hy@MaybeStopNow\relax
2827 \DeclareVoidOption{vtex}{%
2828     \ifvtex
2829         \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2830         \def\Hy@driver{hvtex}%
2831     \else
2832         \ifnum\OpMode=10\relax
2833             \def\Hy@driver{hvtexhtm}%
2834             \def\MaybeStopEarly{%
2835                 \Hy@Message{Stopped early}%
2836                 \Hy@AtBeginDocument{%
2837                     \PDF@FinishDoc
2838                     \gdef\PDF@FinishDoc{}%
2839                 }%
2840             \endinput
2841         }%
2842     \else
2843         \Hy@Error{%
2844             Wrong driver option `vtex',\MessageBreak
2845             because of wrong OpMode (\the\OpMode)%
2846         }\@ehc

```

```

2847 \fi
2848 \fi
2849 \else
2850 \Hy@Error{%
2851   Wrong driver option `vtex',\MessageBreak
2852   because VTeX is not running%
2853 } \@ehc
2854 \fi
2855 }
2856 \DeclareVoidOption{vtxpdfmark}{%
2857 \ifvtex
2858 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2859 \def\Hy@driver{hvtexmrk}%
2860 \else
2861 \Hy@Error{%
2862   Wrong driver option `vtxpdfmark',\MessageBreak
2863   because of wrong OpMode (\the\OpMode)%
2864 } \@ehc
2865 \fi
2866 \else
2867 \Hy@Error{%
2868   Wrong driver option `vtxpdfmark',\MessageBreak
2869   because VTeX is not running%
2870 } \@ehc
2871 \fi
2872 }
2873 \DeclareVoidOption{dviwindo}{%
2874 \HyOpt@CheckDvi{dviwindo}{%
2875 \def\Hy@driver{hdviwind}%
2876 \kvsetkeys{Hyp}{colorlinks}%
2877 \PassOptionsToPackage{dviwindo}{color}%
2878 }%
2879 }
2880 \DeclareVoidOption{dvipsone}{%
2881 \HyOpt@CheckDvi{dvipsone}{%
2882 \def\Hy@driver{hdvipson}%
2883 \PassOptionsToPackage{dvipsone}{color}%
2884 }%
2885 }
2886 \DeclareVoidOption{textures}{%
2887 \HyOpt@CheckDvi{textures}{%
2888 \def\Hy@driver{httexture}%
2889 }%
2890 }
2891 \DeclareVoidOption{latex2html}{%
2892 \HyOpt@CheckDvi{latex2html}{%
2893 \Hy@AtBeginDocument{\@@latextohtmlX}%
2894 }%
2895 }

```

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

```

2896 \DeclareVoidOption{ps2pdf}{%
2897 \HyOpt@CheckDvi{ps2pdf}{%
2898 \def\Hy@driver{hdvips}%
2899 \PassOptionsToPackage{dvips}{color}%

```

```

2900 }%
2901 }
2902 \let\HyOpt@DriverFallback\ltx@empty
2903 \define@key{Hyp}{driverfallback}{%
2904   \ifHy@DviMode
2905     \def\HyOpt@DriverFallback{#1}%
2906     \Hy@Match\HyOpt@DriverFallback}{{%
2907       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2908       latex2html|tex4ht)$%
2909     }}{%
2910     \Hy@Warning{%
2911       Invalid driver `#1' for option\MessageBreak
2912       `driverfallback'%
2913     }%
2914     \let\HyOpt@DriverFallback\ltx@empty
2915   }%
2916 \fi
2917 }
2918 \let\HyOpt@CustomDriver\ltx@empty
2919 \define@key{Hyp}{customdriver}{%
2920   \IfFileExists{#1.def}{%
2921     \def\HyOpt@CustomDriver{#1}%
2922   }{%
2923     \Hy@Warning{%
2924       Missing driver file `#1.def',\MessageBreak
2925       ignoring custom driver%
2926     }%
2927   }%
2928 }

```

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.

```

2929 \define@key{Hyp}{hyperfigures}[true]{%
2930   \Hy@boolkey{hyperfigures}{#1}%
2931 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2932 \define@key{Hyp}{hyperfootnotes}[true]{%
2933   \Hy@boolkey{hyperfootnotes}{#1}%
2934 }

```

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

```

2935 \def\back@none{none}
2936 \def\back@section{section}
2937 \def\back@page{page}
2938 \def\back@slide{slide}
2939 \define@key{Hyp}{backref}[section]{%
2940   \lowercase{\def\Hy@tempa{#1}}%
2941   \ifx\Hy@tempa\@empty
2942     \let\Hy@tempa\back@section
2943   \fi
2944   \ifx\Hy@tempa\Hy@false

```

```

2945 \let\Hy@tempa\back@none
2946 \fi
2947 \ifx\Hy@tempa\back@slide
2948 \let\Hy@tempa\back@section
2949 \fi
2950 \ifx\Hy@tempa\back@page
2951 \PassOptionsToPackage{hyperpageref}{backref}%
2952 \Hy@backreftrue
2953 \else
2954 \ifx\Hy@tempa\back@section
2955 \PassOptionsToPackage{hyperref}{backref}%
2956 \Hy@backreftrue
2957 \else
2958 \ifx\Hy@tempa\back@none
2959 \Hy@backreffalse
2960 \else
2961 \Hy@WarnOptionValue{#1}{backref}{%
2962 `section', `slide', `page', `none',\MessageBreak
2963 or `false'}%
2964 \fi
2965 \fi
2966 \fi
2967 }
2968 \define@key{Hyp}{pagebackref}[true]{%
2969 \edef\Hy@tempa{#1}%
2970 \lowercase\expandafter{%
2971 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2972 }%
2973 \ifx\Hy@tempa\@empty
2974 \let\Hy@tempa\Hy@true
2975 \fi
2976 \ifx\Hy@tempa\Hy@true
2977 \PassOptionsToPackage{hyperpageref}{backref}%
2978 \Hy@backreftrue
2979 \else
2980 \ifx\Hy@tempa\Hy@false
2981 \Hy@backreffalse
2982 \else
2983 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2984 \fi
2985 \fi
2986 }

```

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

```

2987 \define@key{Hyp}{hyperindex}[true]{%
2988 \Hy@boolkey{hyperindex}{#1}%
2989 }

```

Configuration of encap char.

```

2990 \define@key{Hyp}{encap}[|]{%
2991 \def\HyInd@EncapChar{#1}%
2992 }

```

12 Language options

The `\autoref` feature depends on the language.

```
2993 \def\HyLang@afrikaans{%
2994   \def\equationautorefname{Vergelyking}%
2995   \def\footnoteautorefname{Voetnota}%
2996   \def\itemautorefname{Item}%
2997   \def\figureautorefname{Figuur}%
2998   \def\tableautorefname{Tabel}%
2999   \def\partautorefname{Deel}%
3000   \def\appendixautorefname{Bylae}%
3001   \def\chapterautorefname{Hoofstuk}%
3002   \def\sectionautorefname{Afdeling}%
3003   \def\subsectionautorefname{Subafdeling}%
3004   \def\subsubsectionautorefname{Subsubafdeling}%
3005   \def\paragraphautorefname{Paragraaf}%
3006   \def\subparagraphautorefname{Subparagraaf}%
3007   \def\FancyVerbLineautorefname{Lyn}%
3008   \def\theoremautorefname{Teorema}%
3009   \def\pageautorefname{Bladsy}%
3010 }
3011 \def\HyLang@english{%
3012   \def\equationautorefname{Equation}%
3013   \def\footnoteautorefname{footnote}%
3014   \def\itemautorefname{item}%
3015   \def\figureautorefname{Figure}%
3016   \def\tableautorefname{Table}%
3017   \def\partautorefname{Part}%
3018   \def\appendixautorefname{Appendix}%
3019   \def\chapterautorefname{chapter}%
3020   \def\sectionautorefname{section}%
3021   \def\subsectionautorefname{subsection}%
3022   \def\subsubsectionautorefname{subsubsection}%
3023   \def\paragraphautorefname{paragraph}%
3024   \def\subparagraphautorefname{subparagraph}%
3025   \def\FancyVerbLineautorefname{line}%
3026   \def\theoremautorefname{Theorem}%
3027   \def\pageautorefname{page}%
3028 }
3029 \def\HyLang@french{%
3030   \def\equationautorefname{'equation}%
3031   \def\footnoteautorefname{note}%
3032   \def\itemautorefname{item}%
3033   \def\figureautorefname{figure}%
3034   \def\tableautorefname{tableau}%
3035   \def\partautorefname{partie}%
3036   \def\appendixautorefname{annexe}%
3037   \def\chapterautorefname{chapitre}%
3038   \def\sectionautorefname{section}%
3039   \def\subsectionautorefname{sous-section}%
3040   \def\subsubsectionautorefname{sous-sous-section}%
3041   \def\paragraphautorefname{paragraphe}%
3042   \def\subparagraphautorefname{sous-paragraphe}%
3043   \def\FancyVerbLineautorefname{ligne}%
```

```

3044 \def\theoremautorefname{th\`eor\`eme}%
3045 \def\pageautorefname{page}%
3046 }
3047 \def\HyLang@german{%
3048 \def\equationautorefname{Gleichung}%
3049 \def\footnoteautorefname{Fu\`ss note}%
3050 \def\itemautorefname{Punkt}%
3051 \def\figureautorefname{Abbildung}%
3052 \def\tableautorefname{Tabelle}%
3053 \def\partautorefname{Teil}%
3054 \def\appendixautorefname{Anhang}%
3055 \def\chapterautorefname{Kapitel}%
3056 \def\sectionautorefname{Abschnitt}%
3057 \def\subsectionautorefname{Unterabschnitt}%
3058 \def\subsubsectionautorefname{Unterunterabschnitt}%
3059 \def\paragraphautorefname{Absatz}%
3060 \def\subparagraphautorefname{Unterabsatz}%
3061 \def\FancyVerbLineautorefname{Zeile}%
3062 \def\theoremautorefname{Theorem}%
3063 \def\pageautorefname{Seite}%
3064 }
3065 \def\HyLang@italian{%
3066 \def\equationautorefname{Equazione}%
3067 \def\footnoteautorefname{nota}%
3068 \def\itemautorefname{punto}%
3069 \def\figureautorefname{Figura}%
3070 \def\tableautorefname{Tabella}%
3071 \def\partautorefname{Parte}%
3072 \def\appendixautorefname{Appendice}%
3073 \def\chapterautorefname{Capitolo}%
3074 \def\sectionautorefname{sezione}%
3075 \def\subsectionautorefname{sottosezione}%
3076 \def\subsubsectionautorefname{sottosottosezione}%
3077 \def\paragraphautorefname{paragrafo}%
3078 \def\subparagraphautorefname{sottoparagrafo}%
3079 \def\FancyVerbLineautorefname{linea}%
3080 \def\theoremautorefname{Teorema}%
3081 \def\pageautorefname{Pag.\`@}%
3082 }
3083 \def\HyLang@magyar{%
3084 \def\equationautorefname{Egyenlet}%
3085 \def\footnoteautorefname{l\`abjegyzet}%
3086 \def\itemautorefname{Elem}%
3087 \def\figureautorefname{\`A bra}%
3088 \def\tableautorefname{T\`abl\`azat}%
3089 \def\partautorefname{R\`esz}%
3090 \def\appendixautorefname{F\`uggel\`ek}%
3091 \def\chapterautorefname{fejezet}%
3092 \def\sectionautorefname{szakasz}%
3093 \def\subsectionautorefname{alszakasz}%
3094 \def\subsubsectionautorefname{alalszakasz}%
3095 \def\paragraphautorefname{bekezd\`es}%
3096 \def\subparagraphautorefname{albekezd\`es}%
3097 \def\FancyVerbLineautorefname{sor}%

```


3130 % }%

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

3131 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%

3132 % \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.

3133 \def\itemautorefname{\cyr\cyrp.}%

3134 % \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.

3135 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%

3136 \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.

3137 \def\partautorefname{\cyr\cyrch.}%

3138 \def\chapterautorefname{\cyr\cyrg\cyrl.}%

3139 \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.

3140 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%

3141 % \def\appendixautorefname{%

3142 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre

3143 % }%

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.

3144 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

3145 \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.

3146 \def\paragraphautorefname{\cyr\cyrp.}%

3147 \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.

3148 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

3149 % \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.

3150 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

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

```
3151 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3152 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3153 % \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 ...

```
3154 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3155 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3156 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3157 \def\pageautorefname{\cyr\cyrs.}%
3158 }
```

```
3159 \def\HyLang@spanish{%
3160 \def\equationautorefname{Ecuaci'on}%
3161 \def\footnoteautorefname{Nota a pie de p'agina}%
3162 \def\itemautorefname{Elemento}%
3163 \def\figureautorefname{Figura}%
3164 \def\tableautorefname{Tabla}%
3165 \def\partautorefname{Parte}%
3166 \def\appendixautorefname{Ap'endice}%
3167 \def\chapterautorefname{Cap'itulo}%
3168 \def\sectionautorefname{Secci'on}%
3169 \def\subsectionautorefname{Subsecci'on}%
3170 \def\subsubsectionautorefname{Subsubsecci'on}%
3171 \def\paragraphautorefname{P'arrafo}%
3172 \def\subparagraphautorefname{Subp'arrafo}%
3173 \def\FancyVerbLineautorefname{L'inea}%
3174 \def\theoremautorefname{Teorema}%
3175 \def\pageautorefname{P'agina}%
3176 }
```

```
3177 \def\HyLang@catalan{%
3178 \def\equationautorefname{Equaci'o}%
3179 \def\footnoteautorefname{Nota al peu de p'agina}%
3180 \def\itemautorefname{Element}%
3181 \def\figureautorefname{Figura}%
3182 \def\tableautorefname{Taula}%
3183 \def\partautorefname{Part}%
3184 \def\appendixautorefname{Ap'endix}%
3185 \def\chapterautorefname{Cap'itol}%
3186 \def\sectionautorefname{Secci'o}%
3187 \def\subsectionautorefname{Subsecci'o}%
3188 \def\subsubsectionautorefname{Subsubsecci'o}%
3189 \def\paragraphautorefname{Par'agraf}%
3190 \def\subparagraphautorefname{Subpar'agraf}%
3191 \def\FancyVerbLineautorefname{L'inia}%
```

```

3192 \def\theoremautorefname{Teorema}%
3193 \def\pageautorefname{P\`agina}%
3194 }

3195 \def\HyLang@vietnamese{%
3196   \def\equationautorefname{Ph\`uhorn{\`ohorn{}}ng tr\`inh}%
3197   \def\footnoteautorefname{Ch\`u th\`ich}%
3198   \def\itemautorefname{m\`d{u}c}%
3199   \def\figureautorefname{H\`inh}%
3200   \def\tableautorefname{B\`h{a}ng}%
3201   \def\partautorefname{Ph\`{\`acircumflex{}}n}%
3202   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3203   \def\chapterautorefname{ch\`uhorn{\`ohorn{}}ng}%
3204   \def\sectionautorefname{m\`d{u}c}%
3205   \def\subsectionautorefname{m\`d{u}c}%
3206   \def\subsubsectionautorefname{m\`d{u}c}%
3207   \def\paragraphautorefname{{\`dj{}}o\`d{a}n}%
3208   \def\subparagraphautorefname{{\`dj{}}o\`d{a}n}%
3209   \def\FancyVerbLineautorefname{d\`ong}%
3210   \def\theoremautorefname{Dj{\`d{i}nh l\`y}%
3211   \def\pageautorefname{Trang}%
3212 }

```

Greek, see github issue 52

```

3213 \def\HyLang@greek{%
3214   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3215   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3216   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3217   \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3218   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3219   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3220   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3221   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3222   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3223   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3224   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron\textupsilon\textpi\textomicron\textepsilon\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3225   \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3226   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3227   \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acconos\texteta}%
3228   \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\textrho\texteta\textmu\textalpha}%

```

```

3229 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\textalpha}%
3230 }

3231 \def\HyLang@dutch{%
3232 \def\equationautorefname{Vergelijking}%
3233 \def\footnoteautorefname{voetnoot}%
3234 \def\itemautorefname{punt}%
3235 \def\figureautorefname{Figuur}%
3236 \def\tableautorefname{Tabel}%
3237 \def\partautorefname{Deel}%
3238 \def\appendixautorefname{Bijlage}%
3239 \def\chapterautorefname{hoofdstuk}%
3240 \def\sectionautorefname{paragraaf}%
3241 \def\subsectionautorefname{deelparagraaf}%
3242 \def\subsubsectionautorefname{deel-deelparagraaf}%
3243 \def\paragraphautorefname{alinea}%
3244 \def\subparagraphautorefname{deelalinea}%
3245 \def\FancyVerbLineautorefname{regel}%
3246 \def\theoremautorefname{Stelling}%
3247 \def\pageautorefname{pagina}%
3248 }

3249 \def\HyLang@norsk{%
3250 \def\equationautorefname{Ligning}%
3251 \def\footnoteautorefname{fotnote}%
3252 \def\itemautorefname{element}%
3253 \def\figureautorefname{Figur}%
3254 \def\tableautorefname{Tabell}%
3255 \def\partautorefname{Del}%
3256 \def\appendixautorefname{Tillegg}%
3257 \def\chapterautorefname{kapittel}%
3258 \def\sectionautorefname{seksjon}%
3259 \def\subsectionautorefname{underseksjon}%
3260 \def\subsubsectionautorefname{under-underseksjon}%
3261 \def\paragraphautorefname{avsnitt}%
3262 \def\subparagraphautorefname{underavsnitt}%
3263 \def\FancyVerbLineautorefname{Linje}%
3264 \def\theoremautorefname{Teorem}%
3265 \def\pageautorefname{side}%
3266 }

3267 \def\HyLang@danish{%
3268 \def\equationautorefname{Ligning}%
3269 \def\footnoteautorefname{fodnote}%
3270 \def\itemautorefname{element}%
3271 \def\figureautorefname{Figur}%
3272 \def\tableautorefname{Tabel}%
3273 \def\partautorefname{Del}%
3274 \def\appendixautorefname{Bilag}%
3275 \def\chapterautorefname{kapitel}%
3276 \def\sectionautorefname{sektion}%
3277 \def\subsectionautorefname{under-sektion}%
3278 \def\subsubsectionautorefname{under-under-sektion}%
3279 \def\paragraphautorefname{afsnit}%
3280 \def\subparagraphautorefname{underafsnit}%
3281 \def\FancyVerbLineautorefname{linje}%

```

```

3282 \def\theoremautorefname{Teorem}%
3283 \def\pageautorefname{side}%
3284 }

```

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

```

3285 \def\HyLang@addto#1#2{%
3286   #2%
3287   \@temptokena{#2}%
3288   \ifx#1\relax
3289     \let#1\@empty
3290   \fi
3291   \ifx#1\@undefined
3292     \edef#1{\the\@temptokena}%
3293   \else
3294     \toks@\expandafter{#1}%
3295     \edef#1{\the\toks@\the\@temptokena}%
3296   \fi
3297   \@temptokena{}\toks@\@temptokena
3298 }

3299 \def\HyLang@DeclareLang#1#2#3{%
3300   \@ifpackagewith{babel}{#1}{%
3301     \expandafter\HyLang@addto
3302       \csname extras#1\expandafter\endcsname
3303       \csname HyLang@#2\endcsname
3304     \begingroup
3305       \edef\x{\endgroup
3306         #3%
3307       }%
3308     \x
3309     \@namedef{HyLang@#1@done}{}%
3310   }{}%
3311   \begingroup
3312     \edef\x##1#2{%
3313       \noexpand\ifx##2\relax
3314         \errmessage{No definitions for language #2' found!}%
3315       \noexpand\fi
3316     \endgroup
3317     \noexpand\define@key{Hyp}{#1}[]{%
3318       \noexpand\@ifundefined{HyLang@#1@done}{%
3319         \noexpand\HyLang@addto{\noexpand##1}{\noexpand#2}%
3320         #3%
3321         \noexpand\@namedef{HyLang@#1@done}{}%
3322       }{}%
3323     }%
3324   }%
3325   \expandafter\x\csname extras#1\expandafter\endcsname
3326   \csname HyLang@#2\endcsname
3327 }

3328 \HyLang@DeclareLang{english}{english}{}
3329 \HyLang@DeclareLang{UKenglish}{english}{}
3330 \HyLang@DeclareLang{british}{english}{}
3331 \HyLang@DeclareLang{USenglish}{english}{}
3332 \HyLang@DeclareLang{american}{english}{}

```

```

3333 \HyLang@DeclareLang{german}{german}{}
3334 \HyLang@DeclareLang{austrian}{german}{}
3335 \HyLang@DeclareLang{ngerman}{german}{}
3336 \HyLang@DeclareLang{naustrian}{german}{}
3337 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3338 \HyLang@DeclareLang{brazil}{portuges}{}
3339 \HyLang@DeclareLang{brazilian}{portuges}{}
3340 \HyLang@DeclareLang{portuguese}{portuges}{}
3341 \HyLang@DeclareLang{spanish}{spanish}{}
3342 \HyLang@DeclareLang{catalan}{catalan}{}
3343 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3344 \HyLang@DeclareLang{french}{french}{}
3345 \HyLang@DeclareLang{frenchb}{french}{}
3346 \HyLang@DeclareLang{francais}{french}{}
3347 \HyLang@DeclareLang{acadian}{french}{}
3348 \HyLang@DeclareLang{canadien}{french}{}
3349 \HyLang@DeclareLang{italian}{italian}{}
3350 \HyLang@DeclareLang{magyar}{magyar}{}
3351 \HyLang@DeclareLang{hungarian}{magyar}{}
3352 \HyLang@DeclareLang{greek}{greek}{}
3353 \HyLang@DeclareLang{dutch}{dutch}{}
3354 \HyLang@DeclareLang{norsk}{norsk}{}
3355 \HyLang@DeclareLang{norwegian}{norsk}{}
3356 \HyLang@DeclareLang{danish}{danish}{}

```

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

```

3357 \DeclareVoidOption{vietnamese}{%
3358   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3359   \Hy@AtEndOfPackage{%
3360     \ifundefined{T@PU}{-}{%
3361       \input{puvnenc.def}%
3362     }%
3363   }%
3364 }
3365 \DeclareVoidOption{vietnam}{%
3366   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3367   \Hy@AtEndOfPackage{%
3368     \ifundefined{T@PU}{-}{%
3369       \input{puvnenc.def}%
3370     }%
3371   }%
3372 }

```

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

```

3373 \DeclareVoidOption{arabic}{%
3374   \Hy@AtEndOfPackage{%
3375     \ifundefined{T@PU}{-}{%
3376       \input{puarenc.def}%
3377     }%
3378   }%
3379 }

```

13 Options to change appearance of links

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

```
3380 \define@key{Hyp}{colorlinks}[true]{%
3381   \Hy@boolkey{colorlinks}{#1}%
3382 }
3383 \DeclareVoidOption{hidelinks}{%
3384   \Hy@colorlinksfalse
3385   \Hy@ocgcolorlinksfalse
3386   \Hy@frenchlinksfalse
3387   \def\Hy@colorlink##1{\begingroup}%
3388   \def\Hy@endcolorlink{\endgroup}%
3389   \def\@pdfborder{0 0 0}%
3390   \let\@pdfborderstyle\ltx@empty
3391 }
3392 \define@key{Hyp}{ocgcolorlinks}[true]{%
3393   \Hy@boolkey{ocgcolorlinks}{#1}%
3394 }
3395 \Hy@AtBeginDocument{%
3396   \begingroup
3397   \ifundefined{OBJ@OCG@view}{%
3398     \ifHy@ocgcolorlinks
3399       \Hy@Warning{%
3400         Driver does not support `ocgcolorlinks',\MessageBreak
3401         using `colorlinks' instead%
3402       }%
3403     \fi
3404   }{}%
3405   \endgroup
3406 }
3407 \define@key{Hyp}{frenchlinks}[true]{%
3408   \Hy@boolkey{frenchlinks}{#1}%
3409 }
```

14 Bookmarking

```
3410 \begingroup\expandafter\expandafter\expandafter\endgroup
3411 \expandafter\ifx\csname chapter\endcsname\relax
3412   \def\toclevel@part{0}%
3413 \else
3414   \def\toclevel@part{-1}%
3415 \fi
3416 \def\toclevel@chapter{0}
3417 \def\toclevel@section{1}
3418 \def\toclevel@subsection{2}
3419 \def\toclevel@subsubsection{3}
3420 \def\toclevel@paragraph{4}
3421 \def\toclevel@subparagraph{5}
3422 \def\toclevel@figure{0}
3423 \def\toclevel@table{0}
3424 \@ifpackageloaded{listings}{%
3425   \providecommand*\theHlstlisting{\thelstlisting}%
3426   \providecommand*\toclevel@lstlisting{0}%
}
```



```

3427 }{}
3428 \@ifpackageloaded{listing}{%
3429   \providecommand*\theHlisting{\thelisting}%
3430   \providecommand*\toclevel@listing{0}%
3431 }{}

3432 \define@key{Hyp}{bookmarks}[true]{%
3433   \Hy@boolkey{bookmarks}{#1}%
3434 }

3435 \define@key{Hyp}{bookmarksopen}[true]{%
3436   \Hy@boolkey{bookmarksopen}{#1}%
3437 }

```

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.

```

3438 \let\Hy@bookmarksdepth\c@tocdepth
3439 \define@key{Hyp}{bookmarksdepth}[]{%
3440   \begingroup
3441     \edef\x{#1}%
3442     \ifx\x\empty
3443       \global\let\Hy@bookmarksdepth\c@tocdepth
3444     \else
3445       \@ifundefined{toclevel@\x}{%
3446         \@onelevel@sanitize\x
3447         \edef\y{\expandafter\@car\x\@nil}%
3448         \ifcase 0\expandafter\ifx\y-1\fi
3449           \expandafter\ifnum\expandafter`\y>47 %
3450             \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3451         \Hy@Warning{Unknown document division name (\x)}%
3452       \else
3453         \setbox\z@=\hbox{%
3454           \count@=\x
3455           \xdef\Hy@bookmarksdepth{\the\count@}%
3456         }%
3457       \fi
3458     }{%
3459       \setbox\z@=\hbox{%
3460         \count@=\csname toclevel@\x\endcsname
3461         \xdef\Hy@bookmarksdepth{\the\count@}%
3462       }%
3463     }%
3464   \fi
3465 \endgroup
3466 }

```

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

```

3467 \define@key{Hyp}{bookmarksopenlevel}{%
3468   \def\@bookmarksopenlevel{#1}%
3469 }
3470 \def\@bookmarksopenlevel{\maxdimen}
3471 % `bookmarkstype' to specify which `toc' file to mimic
3472 \define@key{Hyp}{bookmarkstype}{%
3473   \def\Hy@bookmarkstype{#1}%
3474 }
3475 \def\Hy@bookmarkstype{toc}

```

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

```

3476 \define@key{Hyp}{bookmarksnumbered}[true]{%
3477   \Hy@boolkey{bookmarksnumbered}{#1}%
3478 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3479 \define@key{Hyp}{CJKbookmarks}[true]{%
3480   \Hy@boolkey{CJKbookmarks}{#1}%
3481 }

3482 \def\Hy@temp#1{%
3483   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3484 }
3485 \def\Hy@@temp#1#2#3{%
3486   \define@key{Hyp}{#2color}{%
3487     \HyColor@HyperrefColor{##1}#1%
3488   }%
3489   \def#1{#3}%
3490 }
3491 \Hy@temp{link}{red}
3492 \Hy@temp{anchor}{black}
3493 \Hy@temp{cite}{green}
3494 \Hy@temp{file}{cyan}
3495 \Hy@temp{url}{magenta}
3496 \Hy@temp{menu}{red}
3497 \Hy@temp{run}{\@filecolor}
3498 \define@key{Hyp}{pagecolor}{%
3499   \Hy@WarningPageColor
3500 }
3501 \def\Hy@WarningPageColor{%
3502   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3503   \global\let\Hy@WarningPageColor\relax
3504 }
3505 \define@key{Hyp}{allcolors}{%
3506   \HyColor@HyperrefColor{#1}\@linkcolor
3507   \HyColor@HyperrefColor{#1}\@anchorcolor
3508   \HyColor@HyperrefColor{#1}\@citecolor
3509   \HyColor@HyperrefColor{#1}\@filecolor
3510   \HyColor@HyperrefColor{#1}\@urlcolor
3511   \HyColor@HyperrefColor{#1}\@menucolor
3512   \HyColor@HyperrefColor{#1}\@runcolor
3513 }

3514 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3515 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}

```

```

3516 \let\@baseurl\@empty
3517 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3518 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3519 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

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

```

3520 \let\@pdfpagetransition\relax
3521 \define@key{Hyp}{pdfpagetransition}{%
3522   \def\@pdfpagetransition{#1}%
3523 }

```

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

```

3524 \let\@pdfpageduration\relax
3525 \define@key{Hyp}{pdfpageduration}{%
3526   \def\@pdfpageduration{#1}%
3527   \Hy@Match\@pdfpageduration{ }{%
3528     ~([ [0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3529   } }{%
3530     \Hy@Warning{%
3531       Invalid value `'\@pdfpageduration'\MessageBreak
3532       of option `pdfpageduration'\MessageBreak
3533       is replaced by an empty value%
3534     }%
3535     \let\@pdfpageduration\ltx@empty
3536   }%
3537 }

```

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).

```

3538 \def\Hy@ColorList{cite,file,link,menu,run,url}
3539 \@for\Hy@temp:=\Hy@ColorList\do{%
3540   \edef\Hy@temp{%
3541     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3542       \noexpand\HyColor@HyperrefBorderColor
3543       {##1}%
3544       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3545       {hyperref}}%
3546     {\Hy@temp bordercolor}%
3547   }%
3548 }%

```

```

3549 \Hy@temp
3550 }
3551 \define@key{Hyp}{pagebordercolor}{%
3552 \Hy@WarningPageBorderColor
3553 }
3554 \def\Hy@WarningPageBorderColor{%
3555 \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3556 \global\let\Hy@WarningPageBorderColor\relax
3557 }
3558 \define@key{Hyp}{allbordercolors}{%
3559 \def\Hy@temp###1##2{%
3560 \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3561 }%
3562 \Hy@temp\@citebordercolor{cite}%
3563 \Hy@temp\@filebordercolor{file}%
3564 \Hy@temp\@linkbordercolor{link}%
3565 \Hy@temp\@menubordercolor{menu}%
3566 \Hy@temp\@runbordercolor{run}%
3567 \Hy@temp\@urlbordercolor{url}%
3568 }

3569 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3570 \Hy@DefNameKey{pdfhighlight}{%
3571 \do{/I}{Invert}%
3572 \do{/N}{None}%
3573 \do{/O}{Outline}%
3574 \do{/P}{Push}%
3575 }
3576 \def\Hy@setpdfhighlight{%
3577 \ifx\@pdfhighlight\@empty
3578 \else
3579 /H\@pdfhighlight
3580 \fi
3581 }
3582 \define@key{Hyp}{pdfborder}{%
3583 \let\Hy@temp\@pdfborder
3584 \def\@pdfborder{#1}%
3585 \Hy@Match\@pdfborder{}{%
3586 ~\HyPat@NonNegativeReal/ %
3587 \HyPat@NonNegativeReal/ %
3588 \HyPat@NonNegativeReal/%
3589 ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3590 }-}{%
3591 \Hy@Warning{%
3592 Invalid value ` \@pdfborder'\MessageBreak
3593 for option `pdfborder'.\MessageBreak
3594 Option setting is ignored%
3595 }%
3596 \let\@pdfborder\Hy@temp
3597 }%
3598 }
3599 \define@key{Hyp}{pdfborderstyle}{%
3600 \let\Hy@temp\@pdfborderstyle
3601 \def\@pdfborderstyle{#1}%
3602 \Hy@Match\@pdfborderstyle{}{%

```

```

3603 ~%
3604 ( */Type */Border%
3605 | */W +\HyPat@NonNegativeReal/%
3606 | */S */[SDBIU]%
3607 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?]%
3608 )* *$%
3609 }{}{%
3610 \Hy@Warning{%
3611     Invalid value `@\pdfborderstyle'\MessageBreak
3612     for option `pdfborderstyle'.\MessageBreak
3613     Option setting is ignored%
3614 }%
3615 \let\@pdfborderstyle\Hy@temp
3616 }%
3617 }
3618 \def\Hy@setpdfborder{%
3619 \ifx\@pdfborder\@empty
3620 \else
3621 /Border[\@pdfborder]%
3622 \fi
3623 \ifx\@pdfborderstyle\@empty
3624 \else
3625 /BS<<\@pdfborderstyle>>%
3626 \fi
3627 }
3628 \Hy@DefNameKey{pdfpagemode}{%
3629 \do{UseNone}{}%
3630 \do{UseOutlines}{}%
3631 \do{UseThumbs}{}%
3632 \do{FullScreen}{}%
3633 \do{UseOC}{PDF 1.5}%
3634 \do{UseAttachments}{PDF 1.6}%
3635 }
3636 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3637 \do{UseNone}{}%
3638 \do{UseOutlines}{}%
3639 \do{UseThumbs}{}%
3640 \do{FullScreen}{}%
3641 \do{UseOC}{PDF 1.5}%
3642 \do{UseAttachments}{PDF 1.6}%
3643 }
3644 \Hy@DefNameKey{pdfdirection}{%
3645 \do{L2R}{Left to right}%
3646 \do{R2L}{Right to left}%
3647 }
3648 \Hy@DefNameKey{pdfviewarea}{%
3649 \do{MediaBox}{}%
3650 \do{CropBox}{}%
3651 \do{BleedBox}{}%
3652 \do{TrimBox}{}%
3653 \do{ArtBox}{}%
3654 }
3655 \Hy@DefNameKey{pdfviewclip}{%
3656 \do{MediaBox}{}%

```

```

3657 \do{CropBox}{}%
3658 \do{BleedBox}{}%
3659 \do{TrimBox}{}%
3660 \do{ArtBox}{}%
3661 }
3662 \Hy@DefNameKey{pdfprintarea}{%
3663 \do{MediaBox}{}%
3664 \do{CropBox}{}%
3665 \do{BleedBox}{}%
3666 \do{TrimBox}{}%
3667 \do{ArtBox}{}%
3668 }
3669 \Hy@DefNameKey{pdfprintclip}{%
3670 \do{MediaBox}{}%
3671 \do{CropBox}{}%
3672 \do{BleedBox}{}%
3673 \do{TrimBox}{}%
3674 \do{ArtBox}{}%
3675 }
3676 \Hy@DefNameKey{pdfprintscaling}{%
3677 \do{AppDefault}{}%
3678 \do{None}{}%
3679 }
3680 \Hy@DefNameKey{pdfduplex}{%
3681 \do{Simplex}{}%
3682 \do{DuplexFlipShortEdge}{}%
3683 \do{DuplexFlipLongEdge}{}%
3684 }
3685 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3686 \do{true}{}%
3687 \do{false}{}%
3688 }
3689 \define@key{Hyp}{pdfprintpagerange}{%
3690 \def\@pdfprintpagerange{#1}%
3691 }
3692 \Hy@DefNameKey{pdfnumcopies}{%
3693 \do{2}{two copies}%
3694 \do{3}{three copies}%
3695 \do{4}{four copies}%
3696 \do{5}{five copies}%
3697 }
3698 \define@key{Hyp}{pdfusetitle}[true]{%
3699 \Hy@boolkey{pdfusetitle}{#1}%
3700 }
3701 \def\HyXeTeX@CheckUnicode{%
3702 \ifxetex
3703 \ifHy@unicode
3704 \else
3705 \Hy@WarningNoLine{%
3706 XeTeX driver only supports unicode.\MessageBreak
3707 Enabling option `unicode'%
3708 }%
3709 \kvsetkeys{Hyp}{unicode}%
3710 \fi

```

```

3711 \else
3712   \let\HyXeTeX@CheckUnicode\relax
3713 \fi
3714 }
3715 \def\HyPsd@PrerenderUnicode#1{%
3716   \begingroup
3717   \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3718   \else
3719     \sbox0{%
3720       \let\GenericInfo\@gobbletwo
3721       \let\GenericWarning\@gobbletwo
3722       \let\GenericError\@gobblefour
3723       \PrerenderUnicode{#1}%
3724     }%
3725   \fi
3726   \endgroup
3727 }
3728 \define@key{Hyp}{pdftitle}{%
3729   \HyXeTeX@CheckUnicode
3730   \HyPsd@PrerenderUnicode{#1}%
3731   \pdfstringdef\@pdftitle{#1}%
3732 }
3733 \define@key{Hyp}{pdfauthor}{%
3734   \HyXeTeX@CheckUnicode
3735   \HyPsd@PrerenderUnicode{#1}%
3736   \pdfstringdef\@pdfauthor{#1}%
3737 }
3738 \define@key{Hyp}{pdfproducer}{%
3739   \HyXeTeX@CheckUnicode
3740   \HyPsd@PrerenderUnicode{#1}%
3741   \pdfstringdef\@pdfproducer{#1}%
3742 }
3743 \define@key{Hyp}{pdfcreator}{%
3744   \HyXeTeX@CheckUnicode
3745   \HyPsd@PrerenderUnicode{#1}%
3746   \pdfstringdef\@pdfcreator{#1}%
3747 }
3748 \define@key{Hyp}{addtopdfcreator}{%
3749   \HyXeTeX@CheckUnicode
3750   \HyPsd@PrerenderUnicode{#1}%
3751   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3752 }
3753 \define@key{Hyp}{pdfcreationdate}{%
3754   \begingroup
3755   \Hy@unicodedefalse
3756   \pdfstringdef\@pdfcreationdate{#1}%
3757   \endgroup
3758 }
3759 \define@key{Hyp}{pdfmoddate}{%
3760   \begingroup
3761   \Hy@unicodedefalse
3762   \pdfstringdef\@pdfmoddate{#1}%
3763   \endgroup
3764 }

```

```

3765 \define@key{Hyp}{pdfsubject}{%
3766   \HyXeTeX@CheckUnicode
3767   \HyPsd@PrerenderUnicode{#1}%
3768   \pdfstringdef\@pdfsubject{#1}%
3769 }
3770 \define@key{Hyp}{pdfkeywords}{%
3771   \HyXeTeX@CheckUnicode
3772   \HyPsd@PrerenderUnicode{#1}%
3773   \pdfstringdef\@pdfkeywords{#1}%
3774 }
3775 \define@key{Hyp}{pdftrapped}{%
3776   \lowercase{\edef\Hy@temp{#1}}%
3777   \ifx\Hy@temp\HyInfo@trapped@true
3778     \def\@pdftrapped{True}%
3779   \else
3780     \ifx\Hy@temp\HyInfo@trapped@false
3781       \def\@pdftrapped{False}%
3782     \else
3783       \ifx\Hy@temp\HyInfo@trapped@unknown
3784         \def\@pdftrapped{Unknown}%
3785       \else
3786         \ifx\Hy@temp\@empty
3787           \else
3788             \Hy@Warning{%
3789               Unsupported value `#1'\MessageBreak
3790               for option `pdftrapped'%
3791             }%
3792           \fi
3793         \def\@pdftrapped{}%
3794       \fi
3795     \fi
3796   \fi
3797 }
3798 \def\HyInfo@trapped@true{true}
3799 \def\HyInfo@trapped@false{false}
3800 \def\HyInfo@trapped@unknown{unknown}
3801 \def\HyInfo@TrappedUnsupported{%
3802   \ifx\@pdftrapped\@empty
3803   \else
3804     \Hy@WarningNoLine{\`pdftrapped' is not supported by this driver}%
3805     \gdef\HyInfo@TrappedUnsupported{}%
3806   \fi
3807 }
3808 \define@key{Hyp}{pdfinfo}{%
3809   \kvsetkeys{pdfinfo}{#1}%
3810 }
3811 \def\Hy@temp#1{%
3812   \lowercase{\Hy@temp@A{#1}}{#1}%
3813 }
3814 \def\Hy@temp@A#1#2{%
3815   \define@key{pdfinfo}{#2}{%
3816     \hypersetup{pdf#1={#1}}%
3817   }%
3818 }

```



```

3819 \Hy@temp{Title}
3820 \Hy@temp{Author}
3821 \Hy@temp{Keywords}
3822 \Hy@temp{Subject}
3823 \Hy@temp{Creator}
3824 \Hy@temp{Producer}
3825 \Hy@temp{CreationDate}
3826 \Hy@temp{ModDate}
3827 \Hy@temp{Trapped}
3828 \newif\ifHyInfo@AddonUnsupported
3829 \kv@set@family@handler{pdfinfo}{%
3830   \HyInfo@AddonHandler{#1}{#2}%
3831 }
3832 \let\HyInfo@do\relax
3833 \def\HyInfo@AddonHandler#1#2{%
3834   \ifx\kv@value\relax
3835     \Hy@Warning{%
3836       Option `pdfinfo': ignoring key `\'kv@key' without value%
3837     }%
3838   \else
3839     \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
3840     \EdefUnescapeName\HyInfo@Key{\'HyInfo@KeyEscaped}%
3841     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3842     \ifHyInfo@AddonUnsupported
3843       \Hy@Warning{%
3844         This driver does not support additional\MessageBreak
3845         information entries, therefore\MessageBreak
3846         `\'kv@key' is ignored%
3847       }%
3848     \else
3849       \def\HyInfo@tmp##1{%
3850         \kv@define@key{pdfinfo}{##1}{%
3851           \HyXeTeX@CheckUnicode
3852           \HyPsd@PrerenderUnicode{####1}%
3853           \pdfstringdef\HyInfo@Value{####1}%
3854           \global\expandafter
3855           \let\csname HyInfo@Value@##1\endcsname
3856             \HyInfo@Value
3857         }%
3858       }%
3859       \expandafter\HyInfo@tmp\expandafter{\'HyInfo@Key}%
3860       \global\expandafter
3861       \let\csname KV@pdfinfo@\HyInfo@Key\endcsname
3862         \csname KV@pdfinfo@\HyInfo@Key\endcsname
3863       \xdef\HyInfo@AddonList{%
3864         \HyInfo@AddonList
3865         \HyInfo@do{\'HyInfo@Key}%
3866       }%
3867       \kv@parse@normalized{%
3868         \HyInfo@Key={#2}%
3869       }{%
3870         \kv@processor@default{pdfinfo}%
3871       }%
3872     \fi

```

```

3873 \else
3874 \kv@parse@normalized{%
3875 \HyInfo@Key={#2}%
3876 }{%
3877 \kv@processor@default{pdfinfo}%
3878 }%
3879 \fi
3880 \fi
3881 }
3882 \def\HyInfo@GenerateAddons{%
3883 \ifHyInfo@AddonUnsupported
3884 \def\HyInfo@Addons{}%
3885 \else
3886 \begingroup
3887 \toks@{}%
3888 \def\HyInfo@do##1{%
3889 \EdefEscapeName\HyInfo@Key{##1}%
3890 \edef\x{%
3891 \toks@{%
3892 \the\toks@
3893 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3894 }%
3895 }%
3896 \x
3897 }%
3898 \HyInfo@AddonList
3899 \edef\x{\endgroup
3900 \def\noexpand\HyInfo@Addons{\the\toks@}%
3901 }%
3902 \x
3903 \fi
3904 }
3905 \global\let\HyInfo@AddonList\ltx@empty
3906 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3907 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
3908 \let\setpdflinkmargin\gobble
3909 \def\calculate@pdfview#1 #2\{%
3910 \def\@pdfview{#1}%
3911 \ifx\#2\%
3912 \def\@pdfviewparams{-32768}%
3913 \else
3914 \def\@pdfviewparams{ #2}%
3915 \fi
3916 }
3917 \begingroup\expandafter\expandafter\expandafter\endgroup
3918 \expandafter\ifx\csname numexpr\endcsname\relax
3919 \def\Hy@number#1{%
3920 \expandafter\@firstofone\expandafter{\number#1}%
3921 }%
3922 \else
3923 \def\Hy@number#1{%
3924 \the\numexpr#1\relax
3925 }%
3926 \fi

```

```

3927 \define@key{Hyp}{pdfstartpage}{%
3928   \ifx\|#1\%
3929     \let\@pdfstartpage\ltx@empty
3930   \else
3931     \edef\@pdfstartpage{\Hy@number{#1}}%
3932   \fi
3933 }%
3934 \define@key{Hyp}{pdfstartview}{%
3935   \ifx\|#1\%
3936     \let\@pdfstartview\ltx@empty
3937   \else
3938     \hypercalcbpdef\@pdfstartview{/#1}%
3939   \fi
3940 }
3941 \def\HyPat@NonNegativeReal/{%
3942   \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3943 }
3944 \define@key{Hyp}{pdfremotestartview}{%
3945   \ifx\|#1\%
3946     \def\@pdfremotestartview{/Fit}%
3947   \else
3948     \hypercalcbpdef\@pdfremotestartview{#1}%
3949     \edef\@pdfremotestartview{\@pdfremotestartview}%
3950     \Hy@Match\@pdfremotestartview{}{%
3951       ^XYZ(%
3952         ()| %
3953         (null|-\HyPat@NonNegativeReal/) %
3954         (null|-\HyPat@NonNegativeReal/) %
3955         (null|\HyPat@NonNegativeReal/)%
3956       )| % end of "XYZ"
3957       Fit(%
3958         ()| %
3959         B| %
3960         (H|V|BH|BV)(%
3961           ()| %
3962           (null|\HyPat@NonNegativeReal/)%
3963         )| %
3964         R %
3965         \HyPat@NonNegativeReal/ %
3966         \HyPat@NonNegativeReal/ %
3967         \HyPat@NonNegativeReal/ %
3968         \HyPat@NonNegativeReal/%
3969       )% end of "Fit"
3970     )$%
3971   }{}{%
3972     \Hy@Warning{%
3973       Invalid value ` \@pdfremotestartview'\MessageBreak
3974       of `pdfremotestartview'\MessageBreak
3975       is replaced by `Fit'%
3976     }%
3977     \let\@pdfremotestartview\@empty
3978   }%
3979   \ifx\@pdfremotestartview\@empty
3980     \def\@pdfremotestartview{/Fit}%

```

```

3981 \else
3982 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3983 \fi
3984 \fi
3985 }
3986 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3987 \define@key{Hyp}{pdftoolbar}[true]{%
3988 \Hy@boolkey{pdftoolbar}{#1}%
3989 }
3990 \define@key{Hyp}{pdfmenubar}[true]{%
3991 \Hy@boolkey{pdfmenubar}{#1}%
3992 }
3993 \define@key{Hyp}{pdfwindowui}[true]{%
3994 \Hy@boolkey{pdfwindowui}{#1}%
3995 }
3996 \define@key{Hyp}{pdffitwindow}[true]{%
3997 \Hy@boolkey{pdffitwindow}{#1}%
3998 }
3999 \define@key{Hyp}{pdfcenterwindow}[true]{%
4000 \Hy@boolkey{pdfcenterwindow}{#1}%
4001 }
4002 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4003 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4004 }
4005 \define@key{Hyp}{pdfa}[true]{%
4006 \Hy@boolkey{pdfa}{#1}%
4007 }
4008 \define@key{Hyp}{pdfnewwindow}[true]{%
4009 \def\Hy@temp{#1}%
4010 \ifx\Hy@temp\@empty
4011 \Hy@pdfnewwindowsetfalse
4012 \else
4013 \Hy@pdfnewwindowsettrue
4014 \Hy@boolkey{pdfnewwindow}{#1}%
4015 \fi
4016 }
4017 \def\Hy@SetNewWindow{%
4018 \ifHy@pdfnewwindowset
4019 /NewWindow %
4020 \ifHy@pdfnewwindow true\else false\fi
4021 \fi
4022 }
4023 \Hy@DefNameKey{pdfpagelayout}{%
4024 \do{SinglePage}{}%
4025 \do{OneColumn}{}%
4026 \do{TwoColumnLeft}{}%
4027 \do{TwoColumnRight}{}%
4028 \do{TwoPageLeft}{PDF 1.5}%
4029 \do{TwoPageRight}{PDF 1.5}%
4030 }
4031 \define@key{Hyp}{pdflang}{%
4032 \edef\@pdflang{#1}%
4033 \def\Hy@temp{\relax}%
4034 \ifx\@pdflang\Hy@temp

```

```

4035 \let\@pdflang\relax
4036 \fi
4037 \ifx\@pdflang\relax
4038 \else
4039 \ifx\@pdflang\ltx@empty
4040 \else

```

Test according to ABNF of RFC 3066.

```

4041 \Hy@Match\@pdflang{icase}{%
4042 ~%
4043 [a-z]{1,8}%
4044 (-[a-z0-9]{1,8})*%
4045 $%
4046 }{%

```

Test according to ABNF of RFC 5646.

```

4047 \Hy@Match\@pdflang{icase}{%
4048 ~%
4049 (%
4050 % langtag
4051 (% language
4052 [a-z]{2,3}%
4053 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4054 |[a-z]{4}% reserved for future use
4055 |[a-z]{5,8}% registered language subtag
4056 )%
4057 (-[a-z]{4})?% script
4058 (-([a-z]{2}|[0-9]{3}))?% region
4059 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4060 (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4061 (-x(-[a-z0-9]{1,8})+)?% privateuse
4062 % privateuse
4063 |x-([a-z0-9]{1,8})+%
4064 % grandfathered/irregular
4065 |en-GB-oed%
4066 |i-(ami|bnn|default|enochian|hak|klinton|lux|
4067 mingo|navajo|pwn|tao|tay|tsu)%
4068 |sgn-(BE-FR|BE-NL|CH-DE)%
4069 % grandfathered/regular
4070 |art-lojban%
4071 |cel-gaulish%
4072 |no-(bok|nyn)%
4073 |zh-(guoyu|hakka|min|min-nan|xiang)%
4074 )%
4075 $%
4076 }{%

```

Test for unique extensions.

```

4077 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4078 \Hy@Match\@pdflang{icase}{~x-}{%
4079 % remove privateuse
4080 \edef\Hy@temp{-\@pdflang}%
4081 \Hy@Match\Hy@temp{icase}{%
4082 ~%
4083 (%

```

```

4084      (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4085      )%
4086      -x-%
4087    }{%
4088      \edef\Hy@temp{%
4089        \expandafter\strip@prefix\pdfastmatch1%
4090      }%
4091    }{%}%
4092    \Hy@Match\Hy@temp{icase}{%
4093      (-[a-wyz0-9]-).*\ltx@backslashchar1%
4094    }{%
4095      \Hy@Warning{%
4096        Invalid language identifier `#1'\MessageBreak
4097        for option `pdfang', because it violates\MessageBreak
4098        well-formedness defined in RFC 4646\MessageBreak
4099        by duplicate singleton subtags%
4100      }%
4101      \let\@pdfang\relax
4102    }{%}%
4103  }%
4104 }{%}%

```

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

```

4105   \ifx\@pdfang\relax
4106   \else
4107     \Hy@Match\@pdfang{icase}{%
4108       ~%
4109       [a-zA-Z]{2}-%
4110       (%
4111         aa|AA|%
4112         [qQ][m-zA-Z]|%
4113         [xX][a-zA-Z]|%
4114         zz|ZZ%
4115       )%
4116       (-|%)%
4117     }{%
4118       \Hy@Warning{%
4119         Invalid language identifier `#1'\MessageBreak
4120         for option `pdfang' because of invalid country code%
4121         \MessageBreak
4122         in second subtag (RFC 3066)%
4123       }%
4124       \let\@pdfang\relax
4125     }{%}%
4126   \fi
4127 }{%
4128   \Hy@Warning{%
4129     Invalid language identifier `#1'\MessageBreak
4130     for option `pdfang', because it violates\MessageBreak
4131     well-formedness defined in RFC 5646%
4132   }%
4133   \let\@pdfang\relax
4134 }%
4135 }{%
4136   \Hy@Warning{%

```

```

4137     Invalid language identifier `#1'\MessageBreak
4138     for option `pdflang' (RFC 3066)%
4139     }%
4140     \let\@pdflang\relax
4141     }%
4142     \fi
4143     \fi
4144 }
4145 \define@key{Hyp}{pdfpagelabels}[true]{%
4146   \Hy@boolkey{pdfpagelabels}{#1}%
4147 }
4148 \define@key{Hyp}{pdfescapeform}[true]{%
4149   \Hy@boolkey{pdfescapeform}{#1}%
4150 }

```

Default values:

```

4151 \def\@linkbordercolor{1 0 0}
4152 \def\@urlbordercolor{0 1 1}
4153 \def\@menubordercolor{1 0 0}
4154 \def\@filebordercolor{0 .5 .5}
4155 \def\@runbordercolor{0 .7 .7}
4156 \def\@citebordercolor{0 1 0}
4157 \def\@pdfhighlight{/I}
4158 \let\@pdftitle\ltx@empty
4159 \let\@pdfauthor\ltx@empty
4160 \let\@pdfproducer\relax
4161 \def\@pdfcreator{LaTeX with hyperref}
4162 \let\@pdfcreationdate\ltx@empty
4163 \let\@pdfmoddate\ltx@empty
4164 \let\@pdfsubject\ltx@empty
4165 \let\@pdfkeywords\ltx@empty
4166 \let\@pdftrapped\ltx@empty
4167 \let\@pdfpagescrop\ltx@empty
4168 \def\@pdfstartview{/Fit}
4169 \def\@pdfremotestartview{/Fit}
4170 \def\@pdfstartpage{1}
4171 \let\@pdfprintpagerange\ltx@empty
4172 \let\@pdflang\relax
4173 \let\PDF@SetupDoc\@empty
4174 \let\PDF@FinishDoc\@empty
4175 \let\phantomsection\@empty
4176 \let\special@paper\@empty
4177 \def\HyperDestNameFilter#1{#1}
4178 \Hy@AtBeginDocument{%
4179   \begingroup
4180     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4181     \dimen@=\x\relax
4182     \ifdim\dimen@>\z@
4183       \else
4184         \dimen@=11in\relax
4185         \Hy@WarningNoLine{%
4186           Height of page (\expandafter\string\x) %
4187           is invalid (\the\x),\MessageBreak
4188           using 11in%
4189         }%

```

```

4190 \fi
4191 \dimen@=0.99626401\dimen@
4192 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4193 \endgroup
4194 }
4195 \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.

```

4196 \let\hyper@normalise\ExecuteOptions
4197 \let\ExecuteOptions\hypersetup
4198 \Hy@RestoreCatcodes
4199 \InputIfFileExists{hyperref.cfg}{-}{-}
4200 \Hy@SetCatcodes
4201 \let\ExecuteOptions\hyper@normalise
4202 \ifx\Hy@MaybeStopNow\relax
4203 \else
4204 \Hy@stoppedearlytrue
4205 \expandafter\Hy@MaybeStopNow
4206 \fi
4207 \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.

```

4208 \SetupKeyvalOptions{family=Hyp}
4209 \DeclareLocalOptions{%
4210 a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4211 }

```

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

```

4212 \@ifpackagewith{hyperref}{tex4ht}{%
4213 }{%
4214 \@ifpackageloaded{tex4ht}{%
4215 \PassOptionsToPackage{tex4ht}{hyperref}%
4216 }{%
4217 \ltx@ifundefined{HCode}{%
4218 }{%
4219 \begingroup
4220 \def\Hy@pkg{tex4ht}%
4221 \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4222 \def\Hy@param{#2#3}%
4223 \ifx\Hy@param\ltx@empty
4224 \expandafter\ltx@gobble
4225 \else
4226 \def\Hy@param{#3}%
4227 \ifx\Hy@param\Hy@pkg
4228 \PassOptionsToPackage{#2}{tex4ht}%
4229 \expandafter\expandafter\expandafter\@gobble
4230 \else
4231 \expandafter\expandafter\expandafter\ltx@firstofone
4232 \fi
4233 \fi
4234 {\Hy@temp@A#4\Hy@NIL}%
4235 }%

```



```

4236 \expandafter
4237 \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4238 \endgroup
4239 \PassOptionsToPackage{tex4ht}{hyperref}%
4240 }%
4241 }%
4242 }

4243 \let\ReadBookmarks\relax
4244 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Load unicode support

```

4245 \ifHy@unicode
4246 \HyPsd@LoadUnicode
4247 \fi

```

15.2 Package xspace support

```

4248 \def\Hy@xspace@end{}
4249 \ltx@ifundefined{xspaceaddexceptions}{%
4250 \Hy@AtBeginDocument{%
4251 \ltx@ifundefined{xspaceaddexceptions}{%
4252 }{%
4253 \def\Hy@xspace@end{%
4254 \ltx@gobble{end for xspace}%
4255 }%
4256 \xspaceaddexceptions{%
4257 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4258 }%
4259 }%
4260 }%
4261 }{%
4262 \def\Hy@xspace@end{%
4263 \ltx@gobble{end for xspace}%
4264 }%
4265 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4266 }

```

15.3 Option draft

```

4267 \Hy@AtBeginDocument{%
4268 \ifHy@draft
4269 \let\hyper@@anchor\@gobble
4270 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4271 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4272 \def\hyper@anchorend{\Hy@xspace@end}%
4273 \let\hyper@linkstart\@gobbletwo
4274 \def\hyper@linkend{\Hy@xspace@end}%
4275 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4276 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4277 \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4278 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4279 \let\PDF@SetupDoc\@empty

```

```

4280 \let\PDF@FinishDoc\@empty
4281 \let\@fifthoffive\@secondoftwo
4282 \let\@secondoffive\@secondoftwo
4283 \let\ReadBookmarks\relax
4284 \let\WriteBookmarks\relax
4285 \Hy@WarningNoLine{Draft mode on}%
4286 \fi
4287 \Hy@DisableOption{draft}%
4288 \Hy@DisableOption{nolinks}%
4289 \Hy@DisableOption{final}%
4290 }

```

15.4 PDF/A

```

4291 \Hy@DisableOption{pdfa}
4292 \ifHy@pdfa
4293 \ifnum \Hy@pdf@majorminor@version< 104
4294 \kvsetkeys{Hyp}{pdfversion=1.4}%
4295 \fi
4296 \Hy@DisableOption{pdfversion}%
4297 \def\Hy@Acrobatmenu#1#2{%
4298 \leavevmode
4299 \begingroup
4300 \edef\x{#1}%
4301 \@onelevel@sanitize\x
4302 \ifx\x\Hy@NextPage
4303 \let\y=Y%
4304 \else
4305 \ifx\x\Hy@PrevPage
4306 \let\y=Y%
4307 \else
4308 \ifx\x\Hy@FirstPage
4309 \let\y=Y%
4310 \else
4311 \ifx\x\Hy@LastPage
4312 \let\y=Y%
4313 \else
4314 \let\y=N%
4315 \fi
4316 \fi
4317 \fi
4318 \fi
4319 \expandafter\endgroup
4320 \ifx\y Y%
4321 \else
4322 \Hy@Error{%
4323 PDF/A: Named action `#1' is not permitted%
4324 }\@ehc
4325 {#2}%
4326 \expandafter\@gobble
4327 \fi
4328 }%
4329 \def\Hy@temp#1{%
4330 \expandafter\def\csname Hy@#1\endcsname{#1}%
4331 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname

```

```

4332 }%
4333 \Hy@temp{NextPage}%
4334 \Hy@temp{PrevPage}%
4335 \Hy@temp{FirstPage}%
4336 \Hy@temp{LastPage}%
4337 \else
4338 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4339 \fi

```

15.5 Patch for babel's \texttilde

Babel does not define `\texttilde` in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, `\texttilde` is defined in babel manner.

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.

```

4340 \def\Hy@wrapper@babel#1#2{%
4341 \begingroup
4342 \Hy@safe@activetrue
4343 \set@display@protect
4344 \edef\x{#2}%
4345 \@onelevel@sanitize\x
4346 \toks@{#1}%
4347 \edef\x{\endgroup\the\toks@{\x}}%
4348 \x
4349 }
4350 \def\Hy@WrapperDef#1{%
4351 \begingroup
4352 \escapechar=\m@ne
4353 \xdef\Hy@gtemp{%
4354 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4355 }%
4356 \endgroup
4357 \edef#1{%
4358 \noexpand\Hy@wrapper@babel
4359 \expandafter\noexpand\Hy@gtemp
4360 }%
4361 \expandafter\def\Hy@gtemp
4362 }

4363 \ifHy@hyperfigures
4364 \Hy@Info{Hyper figures ON}%
4365 \else
4366 \Hy@Info{Hyper figures OFF}%
4367 \fi
4368 \ifHy@nesting
4369 \Hy@Info{Link nesting ON}%
4370 \else
4371 \Hy@Info{Link nesting OFF}%
4372 \fi
4373 \ifHy@hyperindex
4374 \Hy@Info{Hyper index ON}%
4375 \else
4376 \Hy@Info{Hyper index OFF}%
4377 \fi

```

```

4378 \ifHy@plainpages
4379 \Hy@Info{Plain pages ON}%
4380 \else
4381 \Hy@Info{Plain pages OFF}%
4382 \fi
4383 \ifHy@backref
4384 \Hy@Info{Backreferencing ON}%
4385 \else
4386 \Hy@Info{Backreferencing OFF}%
4387 \fi
4388 \ifHy@typexml
4389 \Hy@AtEndOfPackage{%
4390 \RequirePackage{color}%
4391 \RequirePackage{nameref}[2012/07/28]%
4392 }%
4393 \fi
4394 \Hy@DisableOption{typexml}
4395 \ifHy@implicit
4396 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4397 \else
4398 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4399 \def\MaybeStopEarly{%
4400 \Hy@Message{Stopped early}}%
4401 \Hy@AtBeginDocument{%
4402 \PDF@FinishDoc
4403 \gdef\PDF@FinishDoc{}}%
4404 }%
4405 \endinput
4406 }%
4407 \Hy@AtBeginDocument{%
4408 \let\autoref\ref
4409 \let\autopageref\pageref
4410 \ifx\@pdfpagemode\@empty
4411 \gdef\@pdfpagemode{UseNone}%
4412 \fi
4413 \global\Hy@backreffalse
4414 }%
4415 \Hy@AtEndOfPackage{%
4416 \global\let\ReadBookmarks\relax
4417 \global\let\WriteBookmarks\relax
4418 }%
4419 \fi
4420 \Hy@DisableOption{implicit}

```

15.5.1 Driver loading

```

4421 \Hy@AtEndOfPackage{%
4422 \@ifpackageloaded{tex4ht}{%
4423 \def\Hy@driver{htex4ht}%
4424 \Hy@texhttrue
4425 }{}%

```

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.

```

4426 \ifx\Hy@driver\@empty

```

```

4427 \else
4428   \ifx\pdfextension\@undefined
4429     \def\Hy@temp{hpdfTeX}%
4430   \else
4431     \def\Hy@temp{hluatex}%
4432   \fi
4433 \ifpdf
4434   \ifx\Hy@driver\Hy@temp
4435   \else
4436     \Hy@WarningNoLine{%
4437       Wrong driver ``\Hy@driver.def';\MessageBreak
4438       pdfTeX is running in PDF mode.\MessageBreak
4439       Forcing driver ``\Hy@temp.def'%
4440     }%
4441     \let\Hy@driver\Hy@temp
4442   \fi
4443 \else
4444   \ifx\Hy@driver\Hy@temp
4445     \Hy@WarningNoLine{%
4446       Wrong driver ``\Hy@driver.def';\MessageBreak
4447       pdfTeX is not running in PDF mode.\MessageBreak
4448       Using default driver%
4449     }%
4450     \let\Hy@driver\@empty
4451   \fi
4452 \fi
4453 \fi
4454 \ifHy@texht
4455 \else
4456   \ifx\Hy@driver\@empty
4457   \else
4458     \def\Hy@temp{hXeTeX}%
4459   \ifxetex
4460     \ifx\Hy@driver\Hy@temp
4461     \else
4462       \Hy@WarningNoLine{%
4463         Wrong driver ``\Hy@driver.def';\MessageBreak
4464         XeTeX is running.\MessageBreak
4465         Forcing driver ``\Hy@temp.def' for XeTeX%
4466       }%
4467       \let\Hy@driver\Hy@temp
4468     \fi
4469   \fi
4470 \fi
4471 \fi
4472 \ifx\Hy@driver\@empty
4473 \else
4474   \def\Hy@temp{hVTeX}%
4475   \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4476   \ifx\Hy@driver\Hy@temp
4477   \else
4478     \Hy@WarningNoLine{%
4479       Wrong driver ``\Hy@driver.def';\MessageBreak
4480       VTeX is running in HTML mode.\MessageBreak

```

```

4481     Forcing driver ``Hy@temp.def'%
4482   }%
4483   \let\Hy@driver\Hy@temp
4484 \fi
4485 \else
4486   \ifx\Hy@driver\Hy@temp
4487     \Hy@WarningNoLine{%
4488       Wrong driver ``Hy@driver.def';\MessageBreak
4489       VTeX is not running in HTML mode.\MessageBreak
4490       Using default driver%
4491     }%
4492     \let\Hy@driver\@empty
4493   \fi
4494 \fi
4495 \fi

```

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

```

4496 \let\HyOpt@DriverType\ltx@empty
4497 \ifx\HyOpt@CustomDriver\ltx@empty
4498   \ifx\Hy@driver\@empty
4499     \def\HyOpt@DriverType{ (autodetected)}%
4500     \providecommand*{\Hy@defaultdriver}{hdvips}%
4501     \ifpdf
4502       \ifx\pdfextension\@undefined
4503         \def\Hy@driver{hpdfTeX}%
4504       \else
4505         \def\Hy@driver{hluatex}%
4506       \fi
4507     \else
4508       \ifxetex
4509         \def\Hy@driver{hxetex}%
4510       \else
4511         \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4512           \def\Hy@driver{hvtexhtm}%
4513         \def\MaybeStopEarly{%
4514           \Hy@Message{Stopped early}%
4515           \Hy@AtBeginDocument{%
4516             \PDF@FinishDoc
4517             \gdef\PDF@FinishDoc{}}%
4518           }%
4519         \endinput
4520       }%
4521     \else
4522       \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4523         \def\Hy@driver{hvtex}%
4524       \else
4525         \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4526         \def\Hy@driver{hvtex}%
4527       \else
4528         \ifx\HyOpt@DriverFallback\ltx@empty
4529           \let\Hy@driver\Hy@defaultdriver
4530         \def\HyOpt@DriverType{ (default)}%
4531       \else
4532         \begingroup
4533         \toks@\expandafter{\HyOpt@DriverFallback}%

```

```

4534         \edef\x{\endgroup
4535             \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4536         }%
4537     \x
4538     \ifx\Hy@driver\ltx@empty
4539         \let\Hy@driver\Hy@defaultdriver
4540         \def\HyOpt@DriverType{ (default)}%
4541     \else
4542         \def\HyOpt@DriverType{ (fallback)}%
4543     \fi
4544 \fi
4545 \fi
4546 \fi
4547 \fi
4548 \fi
4549 \fi
4550 \ifx\Hy@driver\Hy@defaultdriver
4551     \def\Hy@temp{hdvwind}%
4552     \ifx\Hy@temp\Hy@driver
4553         \kvsetkeys{Hyp}{colorlinks}%
4554         \PassOptionsToPackage{dviwindo}{color}%
4555     \fi
4556 \fi
4557 \fi
4558 \else
4559     \def\HyOpt@DriverType{ (custom)}%
4560     \let\Hy@driver\HyOpt@CustomDriver
4561 \fi
4562 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4563 \chardef\Hy@VersionChecked=0 %
4564 \input{\Hy@driver.def}%
4565 \ifcase\Hy@VersionChecked
4566     \Hy@VersionCheck{\Hy@driver.def}%
4567 \fi
4568 \let\@unprocessedoptions\relax
4569 \Hy@RestoreCatcodes
4570 \Hy@DisableOption{tex4ht}%
4571 \Hy@DisableOption{pdftex}%
4572 \Hy@DisableOption{nativepdf}%
4573 \Hy@DisableOption{dvipdfm}%
4574 \Hy@DisableOption{dvipdfmx}%
4575 \Hy@DisableOption{dvipdfmx-outline-open}%
4576 \Hy@DisableOption{pdfmark}%
4577 \Hy@DisableOption{dvips}%
4578 \Hy@DisableOption{hypertex}%
4579 \Hy@DisableOption{vtex}%
4580 \Hy@DisableOption{vtexpdfmark}%
4581 \Hy@DisableOption{dviwindo}%
4582 \Hy@DisableOption{dvipsone}%
4583 \Hy@DisableOption{textures}%
4584 \Hy@DisableOption{latex2html}%
4585 \Hy@DisableOption{ps2pdf}%
4586 \Hy@DisableOption{xetex}%
4587 \Hy@DisableOption{driverfallback}%

```

```

4588 \Hy@DisableOption{customdriver}%
4589 \Hy@DisableOption{pdfversion}%
4590 }

```

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.

```

4591 \newif\ifHy@DvipdfmxOutlineOpen
4592 \ifxetex
4593 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4594 \else
4595 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4596 \Hy@DvipdfmxOutlineOpenttrue
4597 \fi
4598 \fi
4599 \begingroup\expandafter\expandafter\expandafter\endgroup
4600 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4601 \else
4602 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4603 \Hy@DvipdfmxOutlineOpenttrue
4604 \fi
4605 \fi

```

15.5.2 Bookmarks

```

4606 \def\WriteBookmarks{0}
4607 \def\@bookmarkopenstatus#1{%
4608 \ifHy@bookmarksopen

```

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

```

4609 \ifnum#1<\expandafter\@firstofone\expandafter
4610 \{\number\@bookmarksopenlevel\} % explicit space
4611 \else
4612 -%
4613 \fi
4614 \else
4615 -%
4616 \fi
4617 }
4618 \ifHy@bookmarks
4619 \Hy@Info{Bookmarks ON}%
4620 \ifx\@pdfpagemode\@empty
4621 \def\@pdfpagemode{UseOutlines}%
4622 \fi
4623 \else
4624 \let\@bookmarkopenstatus\ltx@gobble
4625 \Hy@Info{Bookmarks OFF}%
4626 \Hy@AtEndOfPackage{%
4627 \global\let\ReadBookmarks\relax
4628 \global\let\WriteBookmarks\relax
4629 }%
4630 \ifx\@pdfpagemode\@empty
4631 \def\@pdfpagemode{UseNone}%
4632 \fi
4633 \fi

```



```

4634 \Hy@DisableOption{bookmarks}

    Add wrapper for setting standard catcodes (babel's shorthands).
4635 \def\Hy@CatcodeWrapper#1{%
4636   \let\Hy@endWrap\ltx@empty
4637   \def\TMP@EnsureCode##1##2{%
4638     \edef\Hy@endWrap{%
4639       \Hy@endWrap
4640       \catcode##1 \the\catcode##1\relax
4641     }%
4642     \catcode##1 ##2\relax
4643   }%
4644   \TMP@EnsureCode{10}{12}% ^^J
4645   \TMP@EnsureCode{33}{12}% !
4646   \TMP@EnsureCode{34}{12}% "
4647   \TMP@EnsureCode{36}{3}% $ (math)
4648   \TMP@EnsureCode{38}{4}% & (alignment)
4649   \TMP@EnsureCode{39}{12}% '
4650   \TMP@EnsureCode{40}{12}% (
4651   \TMP@EnsureCode{41}{12}% )
4652   \TMP@EnsureCode{42}{12}% *
4653   \TMP@EnsureCode{43}{12}% +
4654   \TMP@EnsureCode{44}{12}% ,
4655   \TMP@EnsureCode{45}{12}% -
4656   \TMP@EnsureCode{46}{12}% .
4657   \TMP@EnsureCode{47}{12}% /
4658   \TMP@EnsureCode{58}{12}% :
4659   \TMP@EnsureCode{59}{12}% ;
4660   \TMP@EnsureCode{60}{12}% <
4661   \TMP@EnsureCode{61}{12}% =
4662   \TMP@EnsureCode{62}{12}% >
4663   \TMP@EnsureCode{63}{12}% ?
4664   \TMP@EnsureCode{91}{12}% [
4665   \TMP@EnsureCode{93}{12}% ]
4666   \TMP@EnsureCode{94}{7}% ^ (superscript)
4667   \TMP@EnsureCode{95}{8}% _ (subscript)
4668   \TMP@EnsureCode{96}{12}% `
4669   \TMP@EnsureCode{124}{12}% |
4670   \TMP@EnsureCode{126}{13}% ~ (active)
4671   ##1\relax
4672   \Hy@endWrap
4673 }

```

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

```

4674 \Hy@AtBeginDocument{%
4675   \ifHy@ocgcolorlinks
4676     \kvsetkeys{Hyp}{colorlinks}%
4677     \ifHy@pdfa
4678       \Hy@Warning{%
4679         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4680         using `colorlinks' instead of `ocgcolorlinks'%
4681       }%
4682       \Hy@ocgcolorlinksfalse
4683     \fi

```

```

4684 \fi
4685 \ifHy@ocgcolorlinks
4686 \else
4687   \Hy@DisableOption{ocgcolorlinks}%
4688 \fi
4689 \ifHy@colorlinks
4690   \def\@pdfborder{0 0 0}%
4691   \let\@pdfborderstyle\@empty
4692   \ifHy@typexml
4693   \else
4694     \Hy@CatcodeWrapper{%
4695       \RequirePackage{color}%
4696     }%
4697   \fi
4698   \def\Hy@colorlink#1{%
4699     \begingroup
4700     \HyColor@UseColor#1%
4701   }%
4702   \def\Hy@endcolorlink{\endgroup}%
4703   \Hy@Info{Link coloring ON}%
4704 \else
4705   \ifHy@frenchlinks
4706     \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4707     \def\Hy@endcolorlink{\endgroup}%
4708     \Hy@Info{French linking ON}%
4709   \else
for grouping consistency:
4710     \def\Hy@colorlink#1{\begingroup}%
4711     \def\Hy@endcolorlink{\endgroup}%
4712     \Hy@Info{Link coloring OFF}%
4713   \fi
4714 \fi
4715 \Hy@DisableOption{colorlinks}%
4716 \Hy@DisableOption{frenchlinks}%
4717 \ifHy@texht
4718   \long\def\@firstoffive#1#2#3#4#5{#1}%
4719   \long\def\@secondoffive#1#2#3#4#5{#2}%
4720   \long\def\@thirdoffive#1#2#3#4#5{#3}%
4721   \long\def\@fourthoffive#1#2#3#4#5{#4}%
4722   \long\def\@fifthoffive#1#2#3#4#5{#5}%
4723   \providecommand*\@safe@activetrue{}%
4724   \providecommand*\@safe@activesfalse{}%
4725   \def\T@ref#1{%
4726     \Hy@safe@activetrue
4727     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4728     \Hy@safe@activesfalse
4729   }%
4730   \def\T@pageref#1{%
4731     \Hy@safe@activetrue
4732     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4733     \Hy@safe@activesfalse
4734   }%
4735 \else
4736   \ifHy@typexml

```

```

4737 \else
4738 \Hy@CatcodeWrapper{%
4739 \RequirePackage{nameref}[2012/07/28]%
4740 }%
4741 \fi
4742 \fi
4743 \DeclareRobustCommand\ref{%
4744 \@ifstar\@refstar\T@ref
4745 }%
4746 \DeclareRobustCommand\pageref{%
4747 \@ifstar\@pagerefstar\T@pageref
4748 }%
4749 % \ifclassloaded{memoir}{%
4750 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4751 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4752 % }%
4753 % }\ltx@secondoftwo
4754 % {%
4755 % \DeclareRobustCommand*{\nameref}{%
4756 % \@ifstar\@mem@titlerefno link\@mem@titleref
4757 % }%
4758 % }{%
4759 \DeclareRobustCommand*{\nameref}{%
4760 \@ifstar\@namerefstar\T@nameref
4761 }%
4762 % }%
4763 \ifHy@implicit
4764 \else
4765 \let \@pagerefstar\T@pageref
4766 \let \@refstar\T@ref
4767 \let \@namerefstar\T@nameref
4768 \fi
4769 }
4770 \Hy@AtBeginDocument{%
4771 \ifHy@texht
4772 \else
4773 \Hy@CatcodeWrapper\ReadBookmarks
4774 \fi
4775 }
4776 \ifHy@backref
4777 \RequirePackage{backref}%
4778 \else
4779 \let\Hy@backout\@gobble
4780 \fi
4781 \Hy@DisableOption{backref}
4782 \Hy@DisableOption{pagebackref}
4783 \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`.

```

4784 \begingroup
4785 \endlinechar=-1 %
4786 \catcode\^^A=14 %
4787 \catcode\^^M\active
4788 \catcode\%\active
4789 \catcode\#\active
4790 \catcode\_ \active
4791 \catcode\$\active
4792 \catcode\&\active
4793 \gdef\hyper@normalise{^^A
4794   \begingroup
4795   \catcode\^^M\active
4796   \def^^M{ }^^A
4797   \catcode\%\active
4798   \let%\@percentchar
4799   \let\%\@percentchar
4800   \catcode\#\active
4801   \def#{\hyper@hash}^^A
4802   \def#\{\hyper@hash}^^A
4803   \@makeother\&^^A
4804   \edef&{\string&}^^A
4805   \edef\&{\string&}^^A
4806   \edef\textunderscore{\string_}^^A
4807   \let\_ \textunderscore
4808   \catcode\_ \active
4809   \let\_ \textunderscore
4810   \let~\hyper@tilde
4811   \let~\hyper@tilde
4812   \let\textasciitilde\hyper@tilde
4813   \let\\\@backslashchar
4814   \edef$\{\string$}^^A
4815   \Hy@safe@activetrue
4816   \hyper@n@rmalise
4817 }^^A
4818 \catcode\#=6 ^^A
4819 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4820 \gdef\hyper@n@rmalise#1#2{^^A
4821   \def\Hy@tempa{#2}^^A
4822   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4823     \ltx@ReturnAfterElseFi{^^A
4824       \hyper@@normalise{#1}^^A
4825     }^^A
4826   \else
4827     \ltx@ReturnAfterFi{^^A
4828       \hyper@@normalise{#1}{#2}^^A
4829     }^^A
4830   \fi
4831 }^^A
4832 \gdef\hyper@@normalise#1#2{^^A
4833   \edef\Hy@tempa{^^A

```

```

4834 \endgroup
4835 \noexpand#1{\Hy@RemovePercentCr#2%^~M\@nil}^^A
4836 }^^A
4837 \Hy@tempa
4838 }^^A
4839 \gdef\Hy@RemovePercentCr#1%^~M#2\@nil{^^A
4840 #1^^A
4841 \ifx\limits#2\limits
4842 \else
4843 \ltx@ReturnAfterFi{^^A
4844 \Hy@RemovePercentCr #2\@nil
4845 }^^A
4846 \fi
4847 }^^A
4848 \endgroup
4849 \providecommand*\hyper@chars{%
4850 \let\#\hyper@hash
4851 \let\%\@percentchar
4852 \Hy@safe@activetrue
4853 }

4854 \def\hyperlink#1#2{%
4855 \hyper@@link{}{#1}{#2}%
4856 }

4857 \def\Hy@VerboseLinkStart#1#2{%
4858 \ifHy@verbose
4859 \begingroup
4860 \Hy@safe@activetrue
4861 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4862 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4863 \xdef\Hy@VerboseGlobalTemp{%
4864 \Hy@VerboseGlobalTemp, %
4865 line \the\inputlineno
4866 }%
4867 \endgroup
4868 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4869 \@onelevel@sanitize\Hy@VerboseLinkInfo
4870 \fi
4871 }

4872 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4873 \def\Hy@VerboseLinkStop{%
4874 \ifHy@verbose
4875 \begingroup
4876 \edef\x{\endgroup
4877 \write\m@ne{%
4878 Package `hyperref' Info: %
4879 End of reference \Hy@VerboseLinkInfo.%
4880 }%
4881 }%
4882 \x
4883 \fi
4884 }

4885 \def\Hy@VerboseAnchor#1{%
4886 \ifHy@verbose

```

```

4887 \begingroup
4888 \Hy@safe@activetrue
4889 \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}{%
4890 \endgroup
4891 \fi
4892 }

4893 \def\Hy@AllowHyphens{%
4894 \relax
4895 \ifhmode
4896 \penalty\@M
4897 \hskip\z@skip
4898 \fi
4899 }

4900 \DeclareRobustCommand*\href[1][]{%
4901 \begingroup
4902 \setkeys{href}{#1}%
4903 \@ifnextchar\bggroup\Hy@href{\hyper@normalise\href@}%
4904 }
4905 \def\Hy@href#{%
4906 \hyper@normalise\href@
4907 }
4908 \begingroup
4909 \catcode`\$=6 %
4910 \catcode`\#=12 %
4911 \gdef\href$1{\expandafter\href@split$1##\\}%
4912 \gdef\href@split$1##$2##$3\\$4{%
4913 \hyper@@link{$1}{$2}{$3}{$4}%
4914 \endgroup
4915 }%
4916 \endgroup

Option 'page'.
4917 \define@key{href}{page}{%
4918 \def\Hy@href@page{#1}%
4919 }
4920 \let\Hy@href@page\@empty
4921 \newcount\c@Hy@tempcnt
4922 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4923 \def\Hy@MakeRemoteAction{%
4924 \ifx\Hy@href@page\@empty
4925 \def\Hy@href@page{0}%
4926 \else
4927 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4928 \ifnum\c@Hy@tempcnt<\@ne
4929 \Hy@Warning{%
4930 Invalid page number (\theHy@tempcnt)\MessageBreak
4931 for remote PDF file.\MessageBreak
4932 Using page 1%
4933 }%
4934 \def\Hy@href@page{0}%
4935 \else
4936 \global\advance\c@Hy@tempcnt\m@ne
4937 \edef\Hy@href@page{\theHy@tempcnt}%
4938 \fi

```

```
4939 \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.

```
4940 \ifx\Hy@href@nextactionraw\@empty
4941 \else
4942 \Hy@pdfnewwindowsettrue
4943 \Hy@pdfnewwindowtrue
4944 \fi
4945 }
```

Option ‘pdfremotestartview’.

```
4946 \define@key{href}{pdfremotestartview}{%
4947 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4948 }
```

Option ‘pdfnewwindow’.

```
4949 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4950 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default
```

Option ‘ismap’.

```
4951 \newif\ifHy@href@ismap
4952 \define@key{href}{ismap}{true}{%
4953 \ltx@ifundefined{Hy@href@ismap#1}{%
4954 \Hy@Error{%
4955 Invalid value (#1) for key `ismap'.\MessageBreak
4956 Permitted values are `true' or `false'.\MessageBreak
4957 Ignoring `ismap'%
4958 }\@ehc
4959 }{%
4960 \csname Hy@href@ismap#1\endcsname
4961 }%
4962 }
```

Option ‘nextactionraw’.

```
4963 \let\Hy@href@nextactionraw\@empty
4964 \define@key{href}{nextactionraw}{%
4965 \edef\Hy@href@nextactionraw{#1}%
4966 \ifx\Hy@href@nextactionraw\@empty
4967 \else
4968 \Hy@Match\Hy@href@nextactionraw{}%
4969 ~(\HyPat@ObjRef/|<.*[/S[ /.+>>| %
4970 \[( ?\HyPat@ObjRef/|<.*[/S[ /.+>>)+ ?])$%
4971 }-}{%
4972 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4973 \Hy@href@nextactionraw\MessageBreak
4974 The action is discarded%
4975 }%
4976 }%
4977 \ifx\Hy@href@nextactionraw\@empty
4978 \else
4979 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4980 \fi
4981 \fi
4982 }
4983 \def\HyPat@ObjRef/{.+}
```

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

```

4984 \RequirePackage{url}
4985 \let\HyOrg@url\url
4986 \def\Hurl{\begingroup \Url}
4987 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4988 \def\nolinkurl@#1{\Hurl{#1}}
4989 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4990 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4991 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4992 \providecommand\hyper@image[2]{#2}

4993 \def\hypertarget#1#2{%
4994   \ifHy@nesting
4995     \hyper@@anchor{#1}{#2}%
4996   \else
4997     \hyper@@anchor{#1}{\relax}#2%
4998   \fi
4999 }
```

`\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.

```

5000 \DeclareRobustCommand*\hyperref{%
5001   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5002 }
5003 \def\Hy@babelnormalise#1[#2]{%
5004   \begingroup
5005     \Hy@safe@activestrue
5006     \edef\Hy@tempa{%
5007       \endgroup
5008       \noexpand#1[#2]}%
5009   }%
5010   \Hy@tempa
5011 }
5012 \def\@hyperref{\hyper@normalise\@hyperref}
5013 \def\@hyperref#1#2#3{%
5014   \edef\ref@one{\ifx\\#2\\ \else#2.\fi#3}%
5015   \expandafter\tryhyper@link\ref@one\\{#1}%
5016 }
5017 \def\tryhyper@link#1\\#2{%
5018   \hyper@@link{#2}{#1}%
5019 }

5020 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5021 \def\@hyperdef#1#2#3{%, category, name, text
5022   \ifx\\#1\\%
5023     \def\Hy@AnchorName{#2}%
5024   \else
5025     \def\Hy@AnchorName{#1.#2}%
5026   \fi
```



```

5027 \ifHy@nesting
5028   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5029 \else
5030   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5031 \fi
5032 }

```

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.

```

5033 \let\hyperrefundefinedlink\@firstofone
5034 \def\label@hyperref[#1]{%
5035   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5036 }%
5037 \def\label@@hyperref#1#2#3{%
5038   \ifx#1\relax
5039     \protect\G@refundefinedtrue
5040     \@latex@warning{%
5041       Hyper reference `#2' on page \thepage \space undefined%
5042     }%
5043     \begingroup
5044       \hyperrefundefinedlink{#3}%
5045     \endgroup
5046   \else
5047     \hyper@@link{\expandafter\@fifthoffive#1}%
5048     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5049   \fi
5050 }
5051 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5052                               % anchor text
5053   \@bsphack
5054   \ifx\#2\%
5055     \def\Hy@AnchorName{#3}%
5056   \else
5057     \def\Hy@AnchorName{#2.#3}%
5058   \fi
5059   \if@filesw
5060     \protected@write\@auxout{}{%
5061       \string\newlabel{#1}{\Hy@AnchorName}{#3}%
5062     }%
5063   \fi
5064   \@esphack
5065   \ifHy@nesting
5066     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5067   \else
5068     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5069   \fi
5070 }

```

16.1 Link box support for XeTeX

```

5071 \newdimen\XeTeXLinkMargin
5072 \setlength{\XeTeXLinkMargin}{2pt}
5073 \ifxetex

```

```

5074 \font\XeTeXLink@font=pzdr at 1sp\relax
5075 \newcommand*{\XeTeXLink@space}{%
5076   \begingroup
5077     \XeTeXLink@font
5078     \@xxxii
5079   \endgroup
5080 }%
5081 \newcommand{\XeTeXLinkBox}[1]{%
5082   \begingroup
5083     \leavevmode
5084     \sbox\z@{\#1}%
5085     \begingroup
5086       \dimen@=\dp\z@
5087       \advance\dimen@\XeTeXLinkMargin
5088       \setbox\tw@=\llap{%
5089         \hb@xt@\XeTeXLinkMargin{%
5090           \lower\dimen@\hbox{\XeTeXLink@space}%
5091         \hss
5092       }%
5093     }%
5094     \dp\tw@=\dp\z@
5095     \ht\tw@=\ht\z@
5096     \copy\tw@
5097   \endgroup
5098   \copy\z@
5099   \dimen@=\ht\z@
5100   \advance\dimen@\XeTeXLinkMargin
5101   \setbox\tw@=\rlap{%
5102     \hb@xt@\XeTeXLinkMargin{%
5103       \hss
5104       \raise\dimen@\hbox{\XeTeXLink@space}%
5105     }%
5106   }%
5107   \dp\tw@=\dp\z@
5108   \ht\tw@=\ht\z@
5109   \copy\tw@
5110 \endgroup
5111 }%
5112 \else
5113 \newcommand*{\XeTeXLinkBox}[1]{%
5114   \begingroup
5115     \leavevmode
5116     \sbox\z@{\#1}%
5117     \copy\z@
5118   \endgroup
5119 }%
5120 \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.

```

5121 \def\hyper@@link{\let\Hy@reserved@a\relax
5122 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
5123 }
5124 % #1: type
5125 % #2: URL
5126 % #3: destination name
5127 % #4: text
5128 \def\hyper@link@[#1]#2#3#4{%
5129 \ltx@ifempty{#4}{% link text
5130 \Hy@Warning{Suppressing empty link}%
5131 }{%
5132 \begingroup
5133 \protected@edef\Hy@tempa{#2}%
5134 \edef\Hy@tempb{#3}%
5135 \ifx\Hy@tempa\ltx@empty
5136 \ltx@empty
5137 \Hy@Warning{Suppressing link with empty target}%
5138 \toks@{%
5139 \endgroup
5140 \ltx@secondoftwo
5141 }%
5142 \else
5143 \toks@{%
5144 \endgroup
5145 \hyper@link{#1}%
5146 }%
5147 \fi
5148 \else
5149 \toks@{%
5150 \endgroup
5151 \expandafter\hyper@readexternallink#2\{#1}%
5152 }%
5153 \fi
5154 \Hy@safe@activesfalse
5155 \toks@\expandafter{%
5156 \the\expandafter\toks@
5157 \expandafter{\Hy@tempb}{#4}%
5158 }%
5159 \the\toks@
5160 }%
5161 }

```

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.

```

5162 \def\hyper@readexternallink#1\{#2#3#4{%
5163 \begingroup
5164 \let\\\relax
5165 \expandafter\endgroup
5166 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5167 }

```

```
5168 \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.

```
5169 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5170 }
```

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

```
5171 \def\@pdfwordfile{file}%
5172 \def\@pdfwordrun{run}%
5173 \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:**

```
5174 \ifx\#6\%
5175 \@hyper@linkfile file:#7\{#3}{#2}{#7}%
5176 \else
5177 \ifx\#4\%
5178 \@hyper@linkfile file:#7\{#3}{#2}{#7}%
5179 \else
```

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

```
5180 \def\@pdfempa{#4}%
5181 \ifx\@pdfempa\@pdfwordfile
5182 \@hyper@linkfile#7\{#3}{#2}{#7}%
5183 \else
```

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

```
5184 \ifx\@pdfempa\@pdfwordrun
5185 \ifHy@pdfa
5186 \Hy@Error{%
5187 PDF/A: Launch action is prohibited%
5188 }\@ehc
5189 \begingroup
5190 \leavevmode
5191 #2%
5192 \endgroup
5193 \else
5194 \@hyper@launch#7\{#3}{#2}%
5195 \fi
5196 \else
```

otherwise its a URL

```

5197      \hyper@linkurl{#3}{#7\ifx\\#2\\else\hyper@hash#2\fi}%
5198      \fi
5199      \fi
5200      \fi
5201      \fi
5202 }

```

By default, turn run: into file:

```

5203 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5204   \hyper@linkurl{#2}{%
5205     \Hy@linkfileprefix
5206     #1%
5207     \ifx\\#3\\%
5208       \else
5209         \hyper@hash
5210         #3%
5211       \fi
5212   }%
5213 }

```

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

```

5214 \def\@hyper@linkfile file:#1\\#2#3#4{%
5215   %file url,link string, name, original uri
5216   \filename@parse{#1}%
5217   \ifx\filename@ext\relax
5218     \edef\filename@ext{\XR@ext}%
5219   \fi
5220   \def\use@file{\filename@area\filename@base.\filename@ext}%
5221   \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5222     \hyper@linkfile{#2}{\use@file}{#3}%
5223   }{%
5224     \ifx\@baseurl\@empty
5225       \hyper@linkurl{#2}{%
5226         #4\ifx\\#3\\else\hyper@hash#3\fi
5227       }%
5228     \else
5229       \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
5230     \fi
5231   }%
5232 }

5233 \def\Hy@IfStringEndsWith#1#2{%
5234   \begingroup
5235   \edef\x{#1}%
5236   \@onelevel@sanitize\x
5237   \edef\x{.\x}%
5238   \edef\y{#2}%
5239   \@onelevel@sanitize\y
5240   \edef\y{.\y}%
5241   \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5242     \endgroup
5243     \ifx\relax##2\relax
5244       \expandafter\ltx@secondoftwo

```

```

5245 \else
5246 \expandafter\ltx@firstoftwo
5247 \fi
5248 }%
5249 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5250 }

5251 \def\Hy@StringLocalhost{localhost}
5252 \@onelevel@sanitize\Hy@StringLocalhost
5253 \def\Hy@CleanupFile#1{%
5254 \edef#1{#1}%
5255 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5256 }
5257 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5258 \begingroup
5259 \toks@{\endgroup}%
5260 \def\x{#1}%
5261 \ifx\x\@empty
5262 \def\x{#2}%
5263 \ifx\x\@empty
5264 \toks@{\endgroup\def#5{/#3}}%
5265 \else
5266 \@onelevel@sanitize\x
5267 \ifx\x\Hy@StringLocalhost
5268 \toks@{\endgroup\def#5{/#3}}%
5269 \fi
5270 \fi
5271 \fi
5272 \the\toks@
5273 }

```

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.

```

5274 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5275 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5276 \ifx\#1\%
5277 #2\Hy@Warning{Ignoring empty anchor}%
5278 \else
5279 \def\anchor@spot{#2#3}%
5280 \let\put@me@back\@empty
5281 \ifx\relax#2\relax
5282 \else
5283 \ifHy@nesting
5284 \else
5285 \ifcat a\relax#2\relax
5286 \else
5287 \ifcat 0\relax#2\relax
5288 \else
5289 % \typeout{Anchor start is not alphanumeric %
5290 % on input line\the\inputlineno%

```

```

5291 %      }%
5292      \let\anchor@spot\@empty
5293      \def\put@me@back{#2#3}%
5294      \fi
5295      \fi
5296      \fi
5297      \fi
5298      \ifHy@activeanchor
5299      \anchor@spot
5300      \else
5301      \hyper@anchor{#1}%
5302      \fi
5303      \expandafter\put@me@back
5304      \fi
5305      \let\anchor@spot\@empty
5306 }
5307 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5308 \ifHy@destlabel

\hyper@newdestlabel

5309 \def\hyper@newdestlabel#1#2{%
5310   \begingroup
5311   \Hy@safe@activetrue
5312   \edef\x{\endgroup
5313     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5314   }%
5315   \x
5316 }%

\hyper@destlabel@hook

5317 \providecommand*{\hyper@destlabel@hook}{}%

\Hy@DestRename

5318 \newcommand*{\Hy@DestRename}[2]{%
5319   \ltx@ifundefined{HyDL!#1}{%
5320     \begingroup
5321     \Hy@safe@activetrue
5322     \edef\dest@name{#1}%
5323     \edef\label@name{#2}%
5324     \hyper@destlabel@hook
5325     \Hy@IsNotEmpty{dest@name}{%
5326       \Hy@IsNotEmpty{label@name}{%
5327         \global\expandafter
5328         \let\csname HyDL!#1\endcsname\ltx@empty
5329         \if@files
5330         \protected@write\@auxout{}{%
5331           \string\hyper@newdestlabel
5332           {#1}%
5333           {\label@name}%
5334         }%

```

```

5335         \fi
5336     }%
5337 }%
5338 \endgroup
5339 }{}%
5340 }%

```

\HyperDestRename

```

5341 \newcommand*{\HyperDestRename}[2]{%
5342   \AtBeginDocument{%
5343     \Hy@DestRename{#1}{#2}%
5344   }%
5345 }%
5346 \AtBeginDocument{%
5347   \let\HyperDestRename\Hy@DestRename
5348 }%

```

\Hy@IsNotEmpty

```

5349 \def\Hy@IsNotEmpty#1{%
5350   \ltx@ifundefined{#1}\ltx@gobble{%
5351     \expandafter\ifx\csname#1\endcsname\ltx@empty
5352       \expandafter\ltx@gobble
5353     \else
5354       \expandafter\ltx@firstofone
5355     \fi
5356   }%
5357 }%

5358 \ltx@GlobalAppendToMacro\label@hook{%
5359   \HyperDestRename\@currentHref\label@name
5360 }%

```

\HyperDestLabelReplace

```

5361 \def\HyperDestLabelReplace#1{%
5362   \ltx@ifundefined{HyDL@#1}{%
5363     #1%
5364   }{%
5365     \csname HyDL@#1\endcsname
5366   }%
5367 }%

```

\HyperDestNameFilter

```

5368 \let\HyperDestNameFilter\HyperDestLabelReplace
5369 \else

```

\hyper@newdestlabel

```

5370 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5371 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

5372 \fi

5373 \Hy@DisableOption{destlabel}

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

5374 \AddLineBeginAux{%

5375 \string\providecommand\string\hyper@newdestlabel[2]{}%

5376 }

19 Compatibility with the *L^AT_EX2html* package

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

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

5377 \let\htmladdimg\hyperimage

5378 \def\htmladdnormallink#1#2{\href{#2}{#1}}

5379 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}

5380 \def\htmlref#1#2{% anchor text, label

5381 \label@hyperref[{#2}]{#1}%

5382 }

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

5383 \def\@@latextohtmlX{%

5384 \let\hhyperref\hyperref

5385 \def\hyperref##1##2##3##4{% anchor text for HTML

5386 % text to print before label in print

5387 % label

5388 % post-label text in print

5389 ##2\ref{##4}##3%

5390 }%

5391 }

20 Forms creation

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

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

20.1 Field flags

The field flags are organized in a bit set.

5392 \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
5393 \def\HyField@NewFlag#1#2{%
5394   \lowercase{\HyField@NewOption{#2}}%
5395   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5396 }
```

```
\HyField@NewFlagOnly
5397 \def\HyField@NewFlagOnly#1#2{%
5398   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5399 }
```

```
\HyField@NewOption #1: option name
5400 \def\HyField@NewOption#1{%
5401   \expandafter\newif\csname ifFld@#1\endcsname
5402   \define@key{Field}{#1}[true]{%
5403     \lowercase{\Field@boolkey{##1}}{#1}%
5404   }%
5405 }
```

\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
5406 \def\HyField@NewBitsetFlag#1#2#3#4{%
5407   \begingroup
5408     \count@=#4\relax
5409     \advance\count@\m@ne
5410     \def\x##1{%
5411       \endgroup
5412       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5413       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5414         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5415           (\number#4) #2%
5416         }%
5417       \else
5418         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5419           \csname HyField@#3@#1\endcsname
5420           /#2%
5421         }%
5422       \fi
5423     }%
5424     \expandafter\x\expandafter{\the\count@}%
5425 }
```

```

\HyField@UseFlag The bit set is HyField@#1
5426 \def\HyField@UseFlag#1#2{%
5427   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5428 }

```

```

\HyField@@UseFlag
5429 \def\HyField@@UseFlag#1#2{%
5430   \bitsetSetValue{HyField@#2}{%
5431     \csname HyField@#2@#1\endcsname
5432   }{%
5433     \csname ifFld@#1\endcsname 1\else 0\fi
5434   }%
5435 }

```

```

\HyField@SetFlag The bit set is HyField@#1
5436 \def\HyField@SetFlag#1#2{%
5437   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5438 }

```

```

\HyField@@SetFlag
5439 \def\HyField@@SetFlag#1#2{%
5440   \bitsetSetValue{HyField@#2}{%
5441     \csname HyField@#2@#1\endcsname
5442   }{1}%
5443 }

```

```

\HyField@PrintFlags
5444 \def\HyField@PrintFlags#1#2{%
5445   \ifHy@verbose
5446     \begingroup
5447     \let\Hy@temp\@empty
5448     \let\MessageBreak\relax
5449     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5450     \bitsetGetSetBitList{HyField@#1}\do{%
5451       \edef\Hy@temp{%
5452         \Hy@temp
5453         \csname HyField@#1@\x\endcsname\MessageBreak
5454       }%
5455     }%
5456   \edef\x{\endgroup
5457     \noexpand\Hy@Info{%
5458       Field flags: %
5459       \expandafter\ifx\@car#1\@nil S\else/\fi
5460       #1 %
5461       \bitsetGetDec{HyField@#1} %
5462       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5463       \Hy@temp
5464       for #2%
5465     }%
5466   }\x
5467 \fi
5468 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
5469 \HyField@NewFlag{Ff}{ReadOnly}{1}  
5470 \HyField@NewFlag{Ff}{Required}{2}  
5471 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
5472 \HyField@NewFlag{Ff}{NoToggleToOff}{15}  
5473 \HyField@NewFlag{Ff}{Radio}{16}  
5474 \HyField@NewFlag{Ff}{Pushbutton}{17}  
5475 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
5476 \HyField@NewFlag{Ff}{Multiline}{13}  
5477 \HyField@NewFlag{Ff}{Password}{14}  
5478 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4  
5479 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4  
5480 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4  
5481 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4  
5482 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
5483 \HyField@NewFlag{Ff}{Combo}{18}  
5484 \HyField@NewFlag{Ff}{Edit}{19}  
5485 \HyField@NewFlag{Ff}{Sort}{20}  
5486 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4  
5487 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4  
5488 \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.

```
5489 \newif\ifFld@popdown  
5490 \define@key{Field}{popdown}[true]{%  
5491 \lowercase{\Field@boolkey{#1}}{popdown}%  
5492 }
```

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.

```
5493 \HyField@NewFlag{F}{Invisible}{1}  
5494 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2  
5495 \HyField@NewFlag{F}{Print}{3}% PDF 1.2  
5496 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2  
5497 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3  
5498 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3  
5499 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4  
5500 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5  
5501 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7  
  
5502 \ifHy@pdfa  
5503 \def\HyField@PDFAFldWarning#1#2{%  
5504 \Hy@Warning{%
```

```

5505     PDF/A: Annotation flag `#1' must\MessageBreak
5506     be set to `#2'%
5507 }%
5508 }%
5509 \Fld@invisiblefalse
5510 \def\Fld@invisibletrue{%
5511   \HyField@PDFAFIWarning{invisible}{false}%
5512 }%
5513 \Fld@hiddenfalse
5514 \def\Fld@hiddentrue{%
5515   \HyField@PDFAFIWarning{hidden}{false}%
5516 }%
5517 \Fld@printtrue
5518 \def\Fld@printfalse{%
5519   \HyField@PDFAFIWarning{print}{true}%
5520 }%
5521 \Fld@nozoomtrue
5522 \def\Fld@nozoomfalse{%
5523   \HyField@PDFAFIWarning{nozoom}{true}%
5524 }%
5525 \Fld@norotatetrue
5526 \def\Fld@norotatefalse{%
5527   \HyField@PDFAFIWarning{norotate}{true}%
5528 }%
5529 \Fld@noviewfalse
5530 \def\Fld@noviewtrue{%
5531   \HyField@PDFAFIWarning{noview}{false}%
5532 }%
5533 \fi

```

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

```

5534 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5535 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5536 \HyField@NewFlag{Submit}{GetMethod}{4}
5537 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5538 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5539 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5540 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5541 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5542 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5543 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5544 \HyField@NewFlag{Submit}{ExclFKey}{12}
5545 \HyField@NewFlag{Submit}{EmbedForm}{14}

5546 \define@key{Field}{export}{%
5547   \lowercase{\def\Hy@temp{#1}}%
5548   \@ifundefined{Fld@export@}\Hy@temp{%
5549     \@onelevel@sanitize\Hy@temp
5550     \Hy@Error{%
5551       Unknown export format `'\Hy@temp'.\MessageBreak
5552       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5553     }\@ehc
5554   }%
5555   \let\Fld@export\Hy@temp

```

```

5556 }%
5557 }
5558 \def\Fld@export{fdf}
5559 \@namedef{Fld@export@fdf}{0}%
5560 \@namedef{Fld@export@html}{1}%
5561 \@namedef{Fld@export@xpdf}{2}%
5562 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5563 \def\HyField@FlagsSubmit{%
5564   \bitsetReset{HyField@Submit}%
5565   \ifcase\@nameuse{Fld@export@\Fld@export} %
5566     % FDF
5567     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5568     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5569     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5570     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5571     \HyField@UseFlag{Submit}{CanonicalFormat}%
5572     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5573     \HyField@UseFlag{Submit}{ExclFKey}%
5574     \HyField@UseFlag{Submit}{EmbedForm}%
5575   \or % HTML
5576     \HyField@SetFlag{Submit}{ExportFormat}%
5577     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5578     \HyField@UseFlag{Submit}{GetMethod}%
5579     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5580     \HyField@UseFlag{Submit}{CanonicalFormat}%
5581   \or % XFDF
5582     \HyField@SetFlag{Submit}{XFDF}%
5583     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5584     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5585     \HyField@UseFlag{Submit}{CanonicalFormat}%
5586   \or % PDF
5587     \HyField@SetFlag{Submit}{SubmitPDF}%
5588     \HyField@UseFlag{Submit}{GetMethod}%
5589   \fi
5590   \HyField@PrintFlags{Submit}{submit button field}%
5591   \bitsetIsEmpty{HyField@Submit}{%
5592     \let\Fld@submitflags\ltx@empty
5593   }{%
5594     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5595   }%
5596 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5597 \def\HyField@FlagsAnnot#1{%
5598   \bitsetReset{HyField@F}%
5599   \HyField@UseFlag{F}{Invisible}%
5600   \HyField@UseFlag{F}{Hidden}%

```

```

5601 \HyField@UseFlag{F}{Print}%
5602 \HyField@UseFlag{F}{NoZoom}%
5603 \HyField@UseFlag{F}{NoRotate}%
5604 \HyField@UseFlag{F}{NoView}%
5605 \HyField@UseFlag{F}{Locked}%
5606 \HyField@UseFlag{F}{ToggleNoView}%
5607 \HyField@UseFlag{F}{LockedContents}%
5608 \HyField@PrintFlags{F}{#1}%
5609 \bitsetIsEmpty{HyField@F}%
5610 \let\Fld@annotflags\ltx@empty
5611 }{%
5612 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5613 }%
5614 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5615 \def\HyField@FlagsPushButton{%
5616 \HyField@FlagsAnnot{push button field}%
5617 \bitsetReset{HyField@Ff}%
5618 \HyField@UseFlag{Ff}{ReadOnly}%
5619 \HyField@UseFlag{Ff}{Required}%
5620 \HyField@UseFlag{Ff}{NoExport}%
5621 \HyField@SetFlag{Ff}{Pushbutton}%
5622 \HyField@PrintFlags{Ff}{push button field}%
5623 \bitsetIsEmpty{HyField@Ff}%
5624 \let\Fld@flags\ltx@empty
5625 }{%
5626 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5627 }%
5628 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5629 \def\HyField@FlagsCheckBox{%
5630 \HyField@FlagsAnnot{check box field}%
5631 \bitsetReset{HyField@Ff}%
5632 \HyField@UseFlag{Ff}{ReadOnly}%
5633 \HyField@UseFlag{Ff}{Required}%
5634 \HyField@UseFlag{Ff}{NoExport}%
5635 \HyField@PrintFlags{Ff}{check box field}%
5636 \bitsetIsEmpty{HyField@Ff}%
5637 \let\Fld@flags\ltx@empty
5638 }{%
5639 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5640 }%
5641 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5642 \def\HyField@FlagsRadioButton{%
5643   \HyField@FlagsAnnot{radio button field}%
5644   \bitsetReset{HyField@Ff}%
5645   \HyField@UseFlag{Ff}{ReadOnly}%
5646   \HyField@UseFlag{Ff}{Required}%
5647   \HyField@UseFlag{Ff}{NoExport}%
5648   \HyField@UseFlag{Ff}{NoToggleToOff}%
5649   \HyField@SetFlag{Ff}{Radio}%
5650   \HyField@UseFlag{Ff}{RadiosInUnison}%
5651   \HyField@PrintFlags{Ff}{radio button field}%
5652   \bitsetIsEmpty{HyField@Ff}{%
5653     \let\Fld@flags\ltx@empty
5654   }{%
5655     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5656   }%
5657 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5658 \def\HyField@FlagsText{%
5659   \HyField@FlagsAnnot{text field}%
5660   \bitsetReset{HyField@Ff}%
5661   \HyField@UseFlag{Ff}{ReadOnly}%
5662   \HyField@UseFlag{Ff}{Required}%
5663   \HyField@UseFlag{Ff}{NoExport}%
5664   \HyField@UseFlag{Ff}{Multiline}%
5665   \HyField@UseFlag{Ff}{Password}%
5666   \HyField@UseFlag{Ff}{FileSelect}%
5667   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5668   \HyField@UseFlag{Ff}{DoNotScroll}%
5669   \ifFld@comb
5670     \ifcase0\ifFld@multiline
5671       \else\ifFld@password
5672       \else\ifFld@fileselect
5673       \else 1\fi\fi\fi\relax
5674     \Hy@Error{%
5675       Field option `comb' cannot be used together with\MessageBreak
5676       `multiline', `password', or `fileselect'%
5677     } \@ehc
5678   \else
5679     \HyField@UseFlag{Ff}{Comb}%
5680   \fi
5681 \fi
5682 \HyField@UseFlag{Ff}{RichText}%
5683 \HyField@PrintFlags{Ff}{text field}%
5684 \bitsetIsEmpty{HyField@Ff}{%
5685   \let\Fld@flags\ltx@empty
5686 }{%
5687   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5688 }%
5689 }

```


20.1.8 Choice fields

\HyField@FlagsChoice

```

5690 \def\HyField@FlagsChoice{%
5691   \HyField@FlagsAnnot{choice field}%
5692   \bitsetReset{HyField@Ff}%
5693   \HyField@UseFlag{Ff}{ReadOnly}%
5694   \HyField@UseFlag{Ff}{Required}%
5695   \HyField@UseFlag{Ff}{NoExport}%
5696   \HyField@UseFlag{Ff}{Combo}%
5697   \ifFld@combo
5698     \HyField@UseFlag{Ff}{Edit}%
5699   \fi
5700   \HyField@UseFlag{Ff}{Sort}%
5701   \HyField@UseFlag{Ff}{MultiSelect}%
5702   \ifFld@combo
5703     \ifFld@edit
5704       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5705     \fi
5706   \fi
5707   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5708   \HyField@PrintFlags{Ff}{choice field}%
5709   \bitsetIsEmpty{HyField@Ff}%
5710   \let\Fld@flags\ltx@empty
5711 }{%
5712   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5713 }%
5714 }
```

20.2 Choice field

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

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

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

```

5715 \def\HyField@PDFChoices#1{%
5716   \begingroup
5717   \global\let\Fld@choices\ltx@empty
5718   \let\HyTmp@optlist\ltx@empty
5719   \let\HyTmp@optitem\relax
5720   \count@=0 %
5721   \kv@parse{#1}{%
5722     \Hy@pdfstringdef\kv@key\kv@key
5723     \ifx\kv@value\relax
5724       \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5725         \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
5726       \else
5727         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5728       \fi
5729     \else
5730       \Hy@pdfstringdef\kv@value\kv@value
5731       \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
5732     \fi
5733   }
```

```

5733 \edef\HyTmp@optlist{%
5734 \HyTmp@optlist
5735 \HyTmp@optitem{\the\count@}{\kv@key}0%
5736 }%
5737 \advance\count@ by 1 %
5738 \@gobbletwo
5739 }%
5740 \xdef\Fld@choices{/Opt[\Fld@choices]]}%
5741 \ifFld@multiselect
5742 \HyField@@PDFChoices{DV}\Fld@default
5743 \HyField@@PDFChoices{V}\Fld@value
5744 \else
5745 \ifx\Fld@default\relax
5746 \else
5747 \pdfstringdef\Hy@gtemp\Fld@default
5748 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5749 \fi
5750 \ifx\Fld@value\relax
5751 \else
5752 \pdfstringdef\Hy@gtemp\Fld@value
5753 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5754 \fi
5755 \fi
5756 \endgroup
5757 }

```

\HyField@@PDFChoices

```

5758 \def\HyField@@PDFChoices#1#2{%
5759 \ifx#2\relax
5760 \else
5761 \count@=0 %
5762 \def\HyTmp@optitem##1##2##3{%
5763 \def\HyTmp@key{##2}%
5764 \ifx\HyTmp@key\Hy@gtemp
5765 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5766 \HyTmp@optlist
5767 \HyTmp@optitem{##1}{##2}1%
5768 }%
5769 \let\HyTmp@found=Y%
5770 \else
5771 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5772 \HyTmp@optlist
5773 \HyTmp@optitem{##1}{##2}##3%
5774 }%
5775 \fi
5776 }%
5777 \expandafter\comma@parse\expandafter{#2}{%
5778 \pdfstringdef\Hy@gtemp\comma@entry
5779 \let\HyTmp@found=N %
5780 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5781 \HyTmp@optlist
5782 \ifx\HyTmp@found Y%
5783 \advance\count@ by 1 %
5784 \else

```

```

5785 \@onelevel@sanitize\comma@entry
5786 \PackageWarning{hyperref}{%
5787 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5788 \MessageBreak
5789 it cannot be found in the choices%
5790 }%
5791 \fi
5792 \@gobble
5793 }%
5794 \def\HyTmp@optitem##1##2##3{%
5795 \ifnum##3=1 %
5796 (##2)%
5797 \fi
5798 }%
5799 \ifcase\count@
5800 \or
5801 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5802 \else
5803 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5804 \ifx#1V%
5805 \def\HyTmp@optitem##1##2##3{%
5806 \ifnum##3=1 %
5807 \@firstofone{ ##1}%
5808 \fi
5809 }%
5810 \edef\HyTmp@optlist{\HyTmp@optlist}%
5811 \xdef\Fld@choices{%
5812 \Fld@choices
5813 /I[\expandafter\@firstofone\HyTmp@optlist]%
5814 }%
5815 \fi
5816 \fi
5817 \fi
5818 }

```

20.3 Forms

\HyField@SetKeys

```

5819 \def\HyField@SetKeys{%
5820 \kvsetkeys{Field}%
5821 }

5822 \newif\ifFld@checked
5823 \newif\ifFld@disabled
5824 \Fld@checkedfalse
5825 \Fld@disabledfalse
5826 \newcount\Fld@menulength
5827 \newdimen\Fld@Width
5828 \newdimen\Fld@charsize
5829 \Fld@charsize=10\p@
5830 \def\Fld@maxlen{0}
5831 \def\Fld@align{0}
5832 \def\Fld@color{0 0 0 rg}
5833 \def\Fld@bcolor{1 1 1}

```

```

5834 \def\Fld@bordercolor{1 0 0}
5835 \def\Fld@bordersep{1\p@}
5836 \def\Fld@borderwidth{1}
5837 \def\Fld@borderstyle{S}
5838 \def\Fld@cbsymbol{4}
5839 \def\Fld@radiosymbol{H}
5840 \def\Fld@rotation{0}
5841 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5842 \def\endForm{\@endForm}
5843 \newif\ifForm@html
5844 \Form@htmlfalse
5845 \def\Fld@boolkey#1#2{%
5846   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5847 }
5848 \define@key{Form}{action}{%
5849   \hyper@normalise\Hy@DefFormAction{#1}%
5850 }
5851 \def\Hy@DefFormAction{\def\Fld@action}
5852 \def\enc@html{html}
5853 \define@key{Form}{encoding}{%
5854   \def\Hy@tempa{#1}%
5855   \ifx\Hy@tempa\enc@html
5856     \Form@htmltrue
5857   \def\Fld@export{html}%
5858   \else
5859     \Hy@Warning{%
5860       Form `encoding' key with \MessageBreak
5861       unknown value `#1'%
5862     }%
5863     \Form@htmlfalse
5864   \fi
5865 }
5866 \define@key{Form}{method}{%
5867   \lowercase{\def\Hy@temp{#1}}%
5868   \@ifundefined{Form@method@\Hy@temp}{%
5869     \@onelevel@sanitize\Hy@temp
5870     \Hy@Error{%
5871       Unknown method ``\Hy@temp'.\MessageBreak
5872       Known values are `post' and `get'%
5873     } \@ehc
5874   }{%
5875     \let\Fld@method\Hy@temp
5876     \ifcase\@nameuse{Form@method@\Hy@temp} %
5877       \Fld@getmethodfalse
5878     \else
5879       \Fld@getmethodtrue
5880     \fi
5881   }%
5882 }
5883 \def\Fld@method{}
5884 \@namedef{Form@method@post}{0}
5885 \@namedef{Form@method@get}{1}
5886 \newif\ifHyField@NeedAppearances
5887 \def\HyField@NeedAppearancesfalse{%

```

```

5888 \global\let\ifHyField@NeedAppearances\iffalse
5889 }
5890 \def\HyField@NeedAppearancetrue{%
5891 \global\let\ifHyField@NeedAppearances\iftrue
5892 }
5893 \HyField@NeedAppearancetrue
5894 \define@key{Form}{NeedAppearances}[true]{%
5895 \edef\Hy@tempa{#1}%
5896 \ifx\Hy@tempa\Hy@true
5897 \HyField@NeedAppearancetrue
5898 \else
5899 \ifx\Hy@tempa\Hy@false
5900 \HyField@NeedAppearancesfalse
5901 \else
5902 \Hy@Error{%
5903 Unexpected value ``\Hy@tempa'\MessageBreak
5904 of option `NeedAppearances' instead of\MessageBreak
5905 `true' or `false'%
5906 }\@ehc
5907 \fi
5908 \fi
5909 }
5910 \def\Field@boolkey#1#2{%
5911 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5912 }
5913 \ifHy@texht
5914 \newtoks\Field@toks
5915 \Field@toks={ }%
5916 \def\Field@addtoks#1#2{%
5917 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5918 \@processme
5919 }%
5920 \else
5921 \def\Hy@WarnHTMLFieldOption#1{%
5922 \Hy@Warning{%
5923 HTML field option `#1'\MessageBreak
5924 is ignored%
5925 }%
5926 }%
5927 \fi
5928 \def\Fld@checkequals#1=#2=#3\\{%
5929 \def\@currDisplay{#1}%
5930 \ifx\\#2\\%
5931 \def\@currValue{#1}%
5932 \else
5933 \def\@currValue{#2}%
5934 \fi
5935 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5936 }
5937 \define@key{Field}{loc}{%
5938 \def\Fld@loc{#1}%
5939 }
5940 \define@key{Field}{checked}[true]{%
5941 \lowercase{\Field@boolkey{#1}}{checked}%

```

```

5942 }
5943 \define@key{Field}{disabled}[true]{%
5944   \lowercase{\Field@boolkey{#1}}{disabled}%
5945 }
5946 \ifHy@texht
5947   \define@key{Field}{accesskey}{%
5948     \Field@addtoks{accesskey}{#1}%
5949   }%
5950   \define@key{Field}{tabkey}{%
5951     \Field@addtoks{tabkey}{#1}%
5952   }%
5953 \else
5954   \define@key{Field}{accesskey}{%
5955     \Hy@WarnHTMLFieldOption{accesskey}%
5956   }%
5957   \define@key{Field}{tabkey}{%
5958     \Hy@WarnHTMLFieldOption{tabkey}%
5959   }%
5960 \fi
5961 \define@key{Field}{name}{%
5962   \def\Fld@name{#1}%
5963 }
5964 \let\Fld@altname\relax
5965 \define@key{Field}{altname}{%
5966   \def\Fld@altname{#1}%
5967 }
5968 \let\Fld@mappingname\relax
5969 \define@key{Field}{mappingname}{%
5970   \def\Fld@mappingname{#1}%
5971 }
5972 \define@key{Field}{width}{%
5973   \def\Fld@width{#1}%
5974   \Field@Width#1\setbox0=\hbox{m}%
5975 }
5976 \define@key{Field}{maxlen}{%
5977   \def\Fld@maxlen{#1}%
5978 }
5979 \define@key{Field}{menulength}{%
5980   \Fld@menulength=#1\relax
5981 }
5982 \define@key{Field}{height}{%
5983   \def\Fld@height{#1}%
5984 }
5985 \define@key{Field}{charsize}{%
5986   \setlength{\Fld@charsize}{#1}%
5987 }
5988 \define@key{Field}{borderwidth}{%
5989   \Hy@defaultbp\Fld@borderwidth{#1}%
5990 }
5991 \def\Hy@defaultbp#1#2{%
5992   \begingroup
5993   \afterassignment\Hy@defaultbpAux
5994   \dimen@=#2bp\relax{#1}{#2}%
5995 }

```

```

5996 \begingroup\expandafter\expandafter\expandafter\endgroup
5997 \expandafter\ifx\csname dimexpr\endcsname\relax
5998   \def\Hy@defaultbpAux#1\relax#2#3{%
5999     \ifx!#1!%
6000     \endgroup
6001     \def#2{#3}%
6002   \else
6003     \dimen@=.99626\dimen@
6004     \edef\x{\endgroup
6005       \def\noexpand#2{%
6006         \strip@pt\dimen@
6007       }%
6008     }\x
6009   \fi
6010 }%
6011 \else
6012   \def\Hy@defaultbpAux#1\relax#2#3{%
6013     \ifx!#1!%
6014     \endgroup
6015     \def#2{#3}%
6016   \else
6017     \edef\x{\endgroup
6018       \def\noexpand#2{%
6019         \strip@pt\dimexpr\dimen@*800/803\relax
6020       }%
6021     }\x
6022   \fi
6023 }%
6024 \fi
6025 \define@key{Field}{borderstyle}{%
6026   \let\Hy@temp\Fld@borderstyle
6027   \def\Fld@borderstyle{#1}%
6028   \Hy@Match\Fld@borderstyle}{}%
6029   ^[SDBIU]$%
6030 }{}{%
6031   \Hy@Warning{%
6032     Invalid value `\'@pdfborderstyle'\MessageBreak
6033     for option `pdfborderstyle'. Valid values:\MessageBreak
6034     \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6035     \space\space I (Inset), U (Underline)\MessageBreak
6036     Option setting is ignored%
6037   }%
6038   \let\Fld@borderstyle\Hy@temp
6039 }%
6040 }
6041 \define@key{Field}{bordersep}{%
6042   \def\Fld@bordersep{#1}%
6043 }
6044 \define@key{Field}{default}{%
6045   \Hy@pdfstringdef\Fld@default{#1}%
6046 }
6047 \define@key{Field}{align}{%
6048   \def\Fld@align{#1}%
6049 }

```

```

6050 \define@key{Field}{value}{%
6051   \Hy@pdfstringdef\Fld@value{#1}%
6052 }
6053 \define@key{Field}{checkboxsymbol}{%
6054   \Fld@DingDef\Fld@cbsymbol{#1}%
6055 }
6056 \define@key{Field}{radiosymbol}{%
6057   \Fld@DingDef\Fld@radiosymbol{#1}%
6058 }
6059 \def\Fld@DingDef#1#2{%
6060   \let\Fld@temp\ltx@empty
6061   \Fld@@@DingDef#2\ding{}\@nil
6062   \let#1\Fld@temp
6063 }
6064 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6065   \expandafter\def\expandafter\Fld@temp\expandafter{%
6066     \Fld@temp
6067     #1%
6068   }%
6069   \ifx\\#3\\%
6070     \expandafter\@gobble
6071   \else
6072     \begingroup
6073       \lccode`0=#2\relax
6074       \lowercase{\endgroup
6075       \expandafter\def\expandafter\Fld@temp\expandafter{%
6076         \Fld@temp
6077         0%
6078       }%
6079       }%
6080     \expandafter\@firstofone
6081   \fi
6082   {%
6083     \Fld@@@DingDef#3\@nil
6084   }%
6085 }

6086 \define@key{Field}{rotation}{%
6087   \def\Fld@rotation{#1}%
6088 }

6089 \define@key{Field}{backgroundcolor}{%
6090   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6091 }
6092 \define@key{Field}{bordercolor}{%
6093   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6094 }
6095 \define@key{Field}{color}{%
6096   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6097 }

6098 \let\Fld@onclick@code\ltx@empty
6099 \let\Fld@format@code\ltx@empty
6100 \let\Fld@validate@code\ltx@empty
6101 \let\Fld@calculate@code\ltx@empty
6102 \let\Fld@keystroke@code\ltx@empty

```



```

6103 \let\Fld@onfocus@code\ltx@empty
6104 \let\Fld@onblur@code\ltx@empty
6105 \let\Fld@onmousedown@code\ltx@empty
6106 \let\Fld@onmouseup@code\ltx@empty
6107 \let\Fld@onenter@code\ltx@empty
6108 \let\Fld@onexit@code\ltx@empty
6109 \def\Hy@temp#1{%
6110   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6111 }
6112 \def\Hy@@temp#1#2{%
6113   \ifHy@pdfa
6114     \define@key{Field}{#2}{%
6115       \Hy@Error{%
6116         PDF/A: Additional action `#2' is prohibited%
6117       }\@ehc
6118     }%
6119   \else
6120     \define@key{Field}{#2}{%
6121       \def#1{##1}%
6122     }%
6123   \fi
6124 }
6125 \Hy@temp{keystroke}
6126 \Hy@temp{format}
6127 \Hy@temp{validate}
6128 \Hy@temp{calculate}
6129 \Hy@temp{onfocus}
6130 \Hy@temp{onblur}
6131 \Hy@temp{onenter}
6132 \Hy@temp{onexit}

6133 \let\Fld@calculate@sortkey\ltx@empty
6134 \define@key{Field}{calculatesortkey}[1]{%
6135   \def\Fld@calculate@sortkey{#1}%
6136 }

6137 \ifHy@texht
6138   \def\Hy@temp#1{%
6139     \define@key{Field}{#1}{%
6140       \Field@addtoks{#1}{##1}%
6141     }%
6142   }%
6143 \else
6144   \def\Hy@temp#1{%
6145     \define@key{Field}{#1}{%
6146       \Hy@WarnHTMLFieldOption{#1}%
6147     }%
6148   }%
6149 \fi
6150 \Hy@temp{ondblclick}
6151 \Hy@temp{onmousedown}
6152 \Hy@temp{onmouseup}
6153 \Hy@temp{onmouseover}
6154 \Hy@temp{onmousemove}
6155 \Hy@temp{onmouseout}

```

```

6156 \Hy@temp{onkeydown}
6157 \Hy@temp{onkeyup}
6158 \Hy@temp{onselect}
6159 \Hy@temp{onchange}
6160 \Hy@temp{onkeypress}
6161 \ifHy@texht
6162   \define@key{Field}{onclick}{%
6163     \Field@addtoks{onclick}{#1}%
6164   }%
6165 \else
6166   \ifHy@pdfa
6167     \define@key{Field}{onclick}{%
6168       \Hy@Error{%
6169         PDF/A: Action `onclick' is prohibited%
6170       }\@ehc
6171     }%
6172   \else
6173     \define@key{Field}{onclick}{%
6174       \def\Fld@onclick@code{#1}%
6175     }%
6176   \fi
6177 \fi

6178 \DeclareRobustCommand\TextField{%
6179   \@ifnextchar[{\@TextField}{\@TextField[]}%
6180 }
6181 \DeclareRobustCommand\ChoiceMenu{%
6182   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6183 }
6184 \DeclareRobustCommand\CheckBox{%
6185   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6186 }
6187 \DeclareRobustCommand\PushButton{%
6188   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6189 }
6190 \DeclareRobustCommand\Gauge{%
6191   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6192 }
6193 \DeclareRobustCommand\Submit{%
6194   \@ifnextchar[{\@Submit}{\@Submit[]}%
6195 }
6196 \DeclareRobustCommand\Reset{%
6197   \@ifnextchar[{\@Reset}{\@Reset[]}%
6198 }
6199 \def\LayoutTextField#1#2{% label, field
6200   \def\Hy@temp{#1}%
6201   \ifx\Hy@temp\@empty
6202     #2%
6203   \else
6204     #1 #2%
6205   \fi
6206 }
6207 \def\LayoutChoiceField#1#2{% label, field
6208   \def\Hy@temp{#1}%
6209   \ifx\Hy@temp\@empty

```

```

6210    #2%
6211  \else
6212    #1 #2%
6213  \fi
6214 }
6215 \def\LayoutCheckField#1#2{% label, field
6216  \def\Hy@temp{#1}%
6217  \ifx\Hy@temp\@empty
6218    #2%
6219  \else
6220    #1 #2%
6221  \fi
6222 }
6223 \def\LayoutPushButtonField#1{% button
6224  #1%
6225 }
6226 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6227 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6228 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6229 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6230 \def\MakeButtonField#1{%
6231  \sbox0{%
6232    \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6233  }%
6234  \@tempdima\ht0 %
6235  \advance\@tempdima by \Fld@borderwidth bp %
6236  \advance\@tempdima by \Fld@borderwidth bp %
6237  \ht0\@tempdima
6238  \@tempdima\dp0 %
6239  \advance\@tempdima by \Fld@borderwidth bp %
6240  \advance\@tempdima by \Fld@borderwidth bp %
6241  \dp0\@tempdima
6242  \box0\relax
6243 }
6244 \def\DefaultHeightofSubmit{14pt}
6245 \def\DefaultWidthofSubmit{2cm}
6246 \def\DefaultHeightofReset{14pt}
6247 \def\DefaultWidthofReset{2cm}
6248 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6249 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6250 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6251 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6252 \def\DefaultHeightofText{\normalbaselineskip}
6253 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6254 \def\DefaultWidthofText{3cm}
6255 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6256 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6257 \def\DefaultOptionsofPushButton{print}
6258 \def\DefaultOptionsofCheckBox{print}
6259 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6260 \def\DefaultOptionsofListBox{print}
6261 \def\DefaultOptionsofComboBox{print,edit,sort}

```

```

6262 \def\DefaultOptionsofPopdownBox{print}
6263 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6264 \ifHy@hyperfigures
6265 \Hy@Info{Hyper figures ON}%
6266 \else
6267 \Hy@Info{Hyper figures OFF}%
6268 \fi
6269 \ifHy@nesting
6270 \Hy@Info{Link nesting ON}%
6271 \else
6272 \Hy@Info{Link nesting OFF}%
6273 \fi
6274 \ifHy@hyperindex
6275 \Hy@Info{Hyper index ON}%
6276 \else
6277 \Hy@Info{Hyper index OFF}%
6278 \fi
6279 \ifHy@backref
6280 \Hy@Info{backreferencing ON}%
6281 \else
6282 \Hy@Info{backreferencing OFF}%
6283 \fi
6284 \ifHy@colorlinks
6285 \Hy@Info{Link coloring ON}%
6286 \else
6287 \Hy@Info{Link coloring OFF}%
6288 \fi
6289 \ifHy@ocgcolorlinks
6290 \Hy@Info{Link coloring with OCG ON}%
6291 \else
6292 \Hy@Info{Link coloring with OCG OFF}%
6293 \fi
6294 \ifHy@pdfa
6295 \Hy@Info{PDF/A mode ON}%
6296 \else
6297 \Hy@Info{PDF/A mode OFF}%
6298 \fi

```

22 Low-level utility macros

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

```

6299 \edef\hyper@hash{\string#}
6300 \edef\hyper@tilde{\string~}
6301 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6302 \def\@currentHref{Doc-Start}
6303 \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.

```

6304 \Hy@AtBeginDocument{%
6305   \Hy@pdfstringtrue
6306   \PDF@SetupDoc
6307   \let\PDF@SetupDoc\@empty
6308   \Hy@DisableOption{pdfpagescrop}%
6309   \Hy@DisableOption{pdfpagemode}%
6310   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6311   \Hy@DisableOption{pdfdirection}%
6312   \Hy@DisableOption{pdfviewarea}%
6313   \Hy@DisableOption{pdfviewclip}%
6314   \Hy@DisableOption{pdfprintarea}%
6315   \Hy@DisableOption{pdfprintclip}%
6316   \Hy@DisableOption{pdfprintsclating}%
6317   \Hy@DisableOption{pdfduplex}%
6318   \Hy@DisableOption{pdfpicktraybypdfsize}%
6319   \Hy@DisableOption{pdfprintpagerange}%
6320   \Hy@DisableOption{pdfnumcopies}%
6321   \Hy@DisableOption{pdfstartview}%
6322   \Hy@DisableOption{pdfstartpage}%
6323   \Hy@DisableOption{pdftoolbar}%
6324   \Hy@DisableOption{pdfmenubar}%
6325   \Hy@DisableOption{pdfwindowui}%
6326   \Hy@DisableOption{pdfitwindow}%
6327   \Hy@DisableOption{pdfcenterwindow}%
6328   \Hy@DisableOption{pdfdisplaydoctitle}%
6329   \Hy@DisableOption{pdfpagelayout}%
6330   \Hy@DisableOption{pdflang}%
6331   \Hy@DisableOption{baseurl}%
6332   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6333   \Hy@pdfstringfalse
6334 }

  Ignore star from referencing macros:
6335 \LetLtxMacro\NoHy@OrgRef\ref
6336 \DeclareRobustCommand*{\ref}{%
6337   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6338 }
6339 \LetLtxMacro\NoHy@OrgPageRef\pageref
6340 \DeclareRobustCommand*{\pageref}{%
6341   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6342 }

```

23 Localized nullifying of package

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

```

6343 \def\NoHyper{%
6344   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6345   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%

```

```

6346 \global\let\hyper@livelink\hyper@link
6347 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6348 \let\hyper@anchor\ltx@gobble
6349 \let\hyper@anchorstart\ltx@gobble
6350 \def\hyper@anchorend{\Hy@xspace@end}%
6351 \let\hyper@linkstart\ltx@gobbletwo
6352 \def\hyper@linkend{\Hy@xspace@end}%
6353 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6354 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6355 \let\Hy@backout\@gobble
6356 }
6357 \def\stop@hyper{%
6358 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6359 \let\Hy@backout\@gobble
6360 \let\hyper@anchor\ltx@gobble
6361 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6362 \let\hyper@anchor\ltx@gobble
6363 \let\hyper@anchorstart\ltx@gobble
6364 \def\hyper@anchorend{\Hy@xspace@end}%
6365 \let\hyper@linkstart\ltx@gobbletwo
6366 \def\hyper@linkend{\Hy@xspace@end}%
6367 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6368 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6369 }
6370 \def\endNoHyper{%
6371 \global\let\hyper@link\hyper@livelink
6372 }
6373 \end{package}

```

24 Package nohyperref

This package is introduced by Sebastian Rahtz.

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

Some low-level commands:

```

6374 (*nohyperref)
6375 \RequirePackage{letltxmacro}[2008/06/13]
6376 \let\hyper@@anchor\@gobble
6377 \def\hyper@link#1#2#3{#3}%
6378 \let\hyper@anchorstart\@gobble
6379 \let\hyper@anchorend\@empty
6380 \let\hyper@linkstart\@gobbletwo
6381 \let\hyper@linkend\@empty
6382 \def\hyper@linkurl#1#2{#1}%
6383 \def\hyper@linkfile#1#2#3{#1}%
6384 \def\hyper@link@[#1]#2#3{#1}%
6385 \let\PDF@SetupDoc\@empty
6386 \let\PDF@FinishDoc\@empty
6387 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6388 \def\Acrobatmenu#1#2{\leavevmode#2}
6389 \let\pdfstringdefDisableCommands\@gobbletwo
6390 \let\texorpdfstring\@firstoftwo
6391 \let\pdfbookmark\@undefined
6392 \newcommand\pdfbookmark[3][]{ }
6393 \let\phantomsection\@empty
6394 \let\hypersetup\@gobble
6395 \let\hyperbaseurl\@gobble
6396 \newcommand*{\href}[3][\#3]{ }
6397 \let\hyperdef\@gobbletwo
6398 \let\hyperlink\@gobble
6399 \let\hypertarget\@gobble
6400 \def\hyperref{%
6401   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6402 }
6403 \long\def\@gobbleopt[#1]{ }
6404 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6405 \LetLtxMacro\NoHy@OrgRef\ref
6406 \DeclareRobustCommand*{\ref}{%
6407   \ifstar\NoHy@OrgRef\NoHy@OrgRef
6408 }
6409 \LetLtxMacro\NoHy@OrgPageRef\pageref
6410 \DeclareRobustCommand*{\pageref}{%
6411   \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6412 }
6413 \</nohyperref>

```

25 The Mangling Of Aux and Toc Files

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

```

6414 \<{*package}
6415 \Hy@AtBeginDocument{%

```

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

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

6416 \if@filesw
6417   \ifHy@typexml
6418     \immediate\closeout\@mainaux
6419     \immediate\openout\@mainaux\jobname.aux\relax
6420     \immediate\write\@auxout{<relaxxml>\relax}%
6421   \fi
6422   \immediate\write\@auxout{%
6423     \string\providecommand\string\HyperFirstAtBeginDocument{%
6424       \string\AtBeginDocument}^^J%
6425     \string\HyperFirstAtBeginDocument{%
6426       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6427       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6428       \string\gdef\string\contentsline%

```


26 Title strings

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

```

6471 \ifHy@pdfusetitle
6472   \let\HyOrg@title\title
6473   \let\HyOrg@author\author
6474   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6475   \def\Hy@scanopttitle[#1]{%
6476     \gdef\Hy@title{#1}%
6477     \HyOrg@title{#1}%
6478   }%
6479   \def\Hy@scantitle#1{%
6480     \gdef\Hy@title{#1}%
6481     \HyOrg@title{#1}%
6482   }%
6483   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6484   \def\Hy@scanoptauthor[#1]{%
6485     \gdef\Hy@author{#1}%
6486     \HyOrg@author{#1}%
6487   }%
6488   \def\Hy@scanauthor#1{%
6489     \gdef\Hy@author{#1}%
6490     \HyOrg@author{#1}%
6491   }%

```

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

```

6492 \begingroup
6493   \def\process@me#1\@nil#2{%
6494     \expandafter\let\expandafter\x\csname @#2\endcsname
6495     \edef\y{\expandafter\strip@prefix\meaning\x}%
6496     \def\c##1##2\@nil{%
6497       \ifx\\##1\\%
6498         \else
6499           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6500             \expandafter{\x}%
6501         \fi
6502       }%
6503     \expandafter\c\y\relax#1\@nil
6504   }%
6505   \expandafter\process@me\string\@latex@\@nil{title}%
6506   \expandafter\process@me\string\@latex@\@nil{author}%
6507 \endgroup
6508 \fi
6509 \Hy@DisableOption{pdfusetitle}

```

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

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

In the macro `\author` the newline can perhaps separate the different authors,

so the newline expands here to a comma with space.

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

A possible ¹ removes its argument.

```

6510 \def\Hy@UseMaketitleString#1{%
6511   \ltx@ifundefined{Hy@#1}{}%
6512   \begingroup
6513     \let\Hy@saved@hook\pdfstringdefPreHook
6514     \pdfstringdefDisableCommands{%
6515       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6516       \let\newline\\%
6517       \def\and{;}%
6518       \let\thanks\@gobble%
6519     }%
6520     \expandafter\ifx\csname @pdf#1\endcsname\@empty
6521     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6522       \csname Hy@#1\endcsname\@empty
6523     }%
6524     \fi
6525     \global\let\pdfstringdefPreHook\Hy@saved@hook
6526   \endgroup
6527 }%
6528 }
6529 \def\Hy@newline@title#1{ #1}
6530 \def\Hy@newline@author#1{, #1}
6531 \def\Hy@UseMaketitleInfos{%
6532   \Hy@UseMaketitleString{title}%
6533   \Hy@UseMaketitleString{author}%
6534 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6535 \RequirePackage{atbegshi}[2007/09/09]
6536 \let\Hy@EveryPageHook\ltx@empty
6537 \let\Hy@EveryPageBoxHook\ltx@empty
6538 \let\Hy@FirstPageHook\ltx@empty
6539 \AtBeginShipout{%
6540   \Hy@EveryPageHook
6541   \ifx\Hy@EveryPageBoxHook\ltx@empty
6542   \else
6543     \setbox\AtBeginShipoutBox=\vbox{%
6544       \offinterlineskip
6545       \Hy@EveryPageBoxHook
6546       \box\AtBeginShipoutBox
6547     }%
6548   \fi
6549 }

```

```

6550 \ltx@iffileloaded{hpdftex.def}{%
6551   \AtBeginShipout{%
6552     \Hy@FirstPageHook
6553     \global\let\Hy@FirstPageHook\ltx@empty
6554   }%
6555 }{%
6556   \AtBeginShipoutFirst{%
6557     \Hy@FirstPageHook
6558   }%
6559 }
6560 \g@addto@macro\Hy@FirstPageHook{%
6561   \PDF@FinishDoc
6562   \global\let\PDF@FinishDoc\ltx@empty
6563 }

```

28.1 PDF /PageLabels

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

```

6564 \ifHy@pdfpagelabels
6565   \begingroup\expandafter\expandafter\expandafter\endgroup
6566   \expandafter\ifx\csname thepage\endcsname\relax
6567     \Hy@pdfpagelabelsfalse
6568     \Hy@WarningNoLine{%
6569       Option `pdfpagelabels' is turned off\MessageBreak
6570       because \string\thepage\space is undefined%
6571     }%
6572     \csname fi\endcsname
6573     \csname iffalse\expandafter\endcsname
6574   \fi

```

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

```

6575 \def\thispdfpagelabel#1{%
6576   \gdef\HyPL@thisLabel{#1}%
6577 }%
6578 \global\let\HyPL@thisLabel\relax

```

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

```

6579 \let\HyPL@Labels\ltx@empty

```

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

```

6580 \newcount\Hy@abspage
6581 \Hy@abspage=0 %

```

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

```

6582 \def\HyPL@LastType{init}%
6583 \def\HyPL@LastNumber{0}%
6584 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the \LaTeX pendants.

```

6585 \def\HyPL@arabic{D}%
6586 \def\HyPL@Roman{R}%
6587 \def\HyPL@roman{r}%

```

```

6588 \def\HyPL@Alph{A}%
6589 \def\HyPL@alph{a}%

6590 \let\HyPL@SlidesSetPage\ltx@empty
6591 \ltx@ifclassloaded{slides}{%
6592   \def\HyPL@SlidesSetPage{%
6593     \advance\c@page\ltx@one
6594     \ifnum\value{page}>\ltx@one
6595       \protected@edef\HyPL@SlidesOptionalPage{%
6596         \Hy@SlidesFormatOptionalPage{\thepage}%
6597       }%
6598     \else
6599       \let\HyPL@SlidesOptionalPage\ltx@empty
6600     \fi
6601     \advance\c@page-\ltx@one
6602     \def\HyPL@page{%
6603       \csname the\Hy@SlidesPage\endcsname
6604       \HyPL@SlidesOptionalPage
6605     }%
6606   }%
6607 }{}%

```

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

```

6608 \def\HyPL@EveryPage{%
6609   \begingroup
6610   \ifx\HyPL@thisLabel\relax
6611     \let\HyPL@page\thepage
6612     \HyPL@SlidesSetPage
6613   \else
6614     \let\HyPL@page\HyPL@thisLabel
6615     \global\let\HyPL@thisLabel\relax
6616   \fi
6617   \let\HyPL@Type\relax
6618   \ifnum\c@page>0 %
6619     \ifx\HyPL@SlidesSetPage\ltx@empty
6620       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6621     \fi
6622   \fi
6623   \let\Hy@temp Y%
6624   \ifx\HyPL@Type\HyPL@LastType
6625   \else
6626     \let\Hy@temp N%
6627   \fi
6628   \ifx\HyPL@Type\relax
6629     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6630   \else
6631     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6632   \fi
6633   \ifx\HyPL@Prefix\HyPL@LastPrefix
6634   \else
6635     \let\Hy@temp N%
6636   \fi
6637   \if Y\Hy@temp
6638     \advance\c@page by -1 %

```

```

6639 \ifnum\HyPL@LastNumber=\the\c@page\relax
6640 \else
6641 \let\Hy@temp N%
6642 \fi
6643 \Hy@StepCount\c@page
6644 \fi
6645 \if N\Hy@temp
6646 \ifx\HyPL@Type\relax
6647 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6648 \else
6649 \HyPL@StorePageLabel{%
6650 \ifx\HyPL@Prefix\@empty
6651 \else
6652 /P(\HyPL@Prefix)%
6653 \fi
6654 /S/\csname HyPL\HyPL@Type\endcsname
6655 \ifnum\the\c@page=1 %
6656 \else
6657 \space/St \the\c@page
6658 \fi
6659 }%
6660 \fi
6661 \fi
6662 \xdef\HyPL@LastNumber{\the\c@page}%
6663 \global\let\HyPL@LastType\HyPL@Type
6664 \global\let\HyPL@LastPrefix\HyPL@Prefix
6665 \endgroup
6666 \Hy@GlobalStepCount\Hy@abspage
6667 }%

```

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

```

6668 \def\HyPL@CheckThePage#1\@nil{%
6669 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6670 }%

```

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

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

```

6671 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6672 \def\Hy@tempa{#4}%
6673 \def\Hy@tempb{\csname\endcsname\c@page}%
6674 \ifx\Hy@tempa\Hy@tempb
6675 \expandafter\ifx\csname HyPL#3\endcsname\relax
6676 \else
6677 \def\HyPL@Type{#3}%
6678 \def\HyPL@Prefix{#2}%
6679 \fi
6680 \else
6681 \begingroup
6682 \let\Hy@next\endgroup
6683 \let\HyPL@found\@undefined
6684 \def\arabic{\HyPL@Format{arabic}}%

```

```

6685 \def\Roman{\HyPL@Format{Roman}}}%
6686 \def\roman{\HyPL@Format{roman}}}%
6687 \def\Alph{\HyPL@Format{Alph}}}%
6688 \def\alph{\HyPL@Format{alph}}}%
6689 \protected@edef\Hy@temp{#1}%
6690 \ifx\HyPL@found\relax
6691 \toks@{\expandafter{\Hy@temp}}%
6692 \edef\Hy@next{\endgroup
6693 \noexpand\HyPL@@@CheckThePage\the\toks@
6694 \noexpand\HyPL@found\relax\noexpand\@nil
6695 }%
6696 \fi
6697 \Hy@next
6698 \fi
6699 }%

```

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

```

6700 \def\HyPL@Format#1#2{%
6701 \ifx\HyPL@found\@undefined
6702 \expandafter\ifx\csname c@#2\endcsname\c@page
6703 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6704 \else
6705 \expandafter\noexpand\csname#1\endcsname{#2}%
6706 \fi
6707 \else
6708 \expandafter\noexpand\csname#1\endcsname{#2}%
6709 \fi
6710 }%

```

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

```

6711 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6712 \def\Hy@tempa{#3}%
6713 \def\Hy@tempb{\HyPL@found\relax}%
6714 \ifx\Hy@tempa\Hy@tempb
6715 \def\HyPL@Type{#2}%
6716 \def\HyPL@Prefix{#1}%
6717 \fi
6718 }%

```

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

```

6719 \providecommand*{\HyPL@StorePageLabel}[1]{}%

```

\HyPL@Useless The `/PageLabels` entry does not make sense, if the absolute page numbers and the page labels are the same. Then `\HyPL@Labels` has the meaning of `\HyPL@Useless`.

```

6720 \def\HyPL@Useless{0<</S/D>>}%
6721 \@onelevel@sanitize\HyPL@Useless

```

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

```

6722 \def\HyPL@SetPageLabels{%
6723   \@onelevel@sanitize\HyPL@Labels
6724   \ifx\HyPL@Labels\@empty
6725     \else
6726       \ifx\HyPL@Labels\HyPL@Useless
6727       \else
6728         \Hy@PutCatalog{/PageLabels<</Nums\HyPL@Labels>>>}%
6729       \fi
6730     \fi
6731   }%

6732 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6733 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
6734 \Hy@DisableOption{pdfpagelabels}
6735 \end{package}

```

28.1.1 pdfTeX and VTeX

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

```

\Hy@PutCatalog
6736 \ifpdf
6737 \pdf@ifdraftmode{%
6738   \let\Hy@PutCatalog\ltx@gobble
6739 }{%
6740   \let\Hy@PutCatalog\pdfcatalog
6741 }
6742 \end{pdf}

```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```

6743 \ifvtex
6744 \providecommand*\XR@ext{pdf}
6745 \edef\Hy@VTeXversion{%
6746   \ifx\VTeXversion\@undefined
6747     \z@
6748   \else
6749     \ifx\VTeXversion\relax
6750       \z@
6751     \else
6752       \VTeXversion
6753     \fi
6754   \fi
6755 }
6756 \begingroup
6757 \ifnum\Hy@VTeXversion<660 %
6758   \gdef\Hy@PutCatalog#1{%
6759     \Hy@WarningNoLine{%

```

```

6760     VTeX 6.59g or above required for pdfpagelabels%
6761   }%
6762 }%
6763 \else
6764   \gdef\Hy@PutCatalog#1{%
6765     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6766   }%
6767   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6768     \ifx\#2\%
6769     \else
6770       \immediate\special{!pdfpagelabels #2}%
6771     \fi
6772   }%
6773 \fi
6774 \endgroup
6775 </vtex>

6776 <*pdftex | vtex>

```

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

```

6777 \ifHy@pdfpagelabels
6778   \def\HyPL@StorePageLabel#1{%
6779     \toks@{\expandafter{\HyPL@Labels}}%
6780     \xdef\HyPL@Labels{%
6781       \the\toks@
6782       \the\Hy@abspage<<#1>>%
6783     }%
6784   }%

```

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.

```

6785 \RequirePackage{atveryend}[2009/12/07]%
6786 \AtVeryEndDocument{%
6787   \HyPL@SetPageLabels
6788 }%

6789 \fi
6790 </pdftex | vtex>

```

28.1.2 xetex

```

6791 <*xetex>
6792 \HyPsd@LoadUnicode
6793 \Hy@unicodetrue
6794 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6795 \else
6796   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6797 \fi
6798 \HyPsd@LoadStringEncoding
6799 \define@key{Hyp}{unicode}[true]{%
6800   \Hy@boolkey{unicode}{#1}%
6801   \ifHy@unicode
6802   \else
6803     \Hy@Warning{%

```



```

6804 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6805 option setting `unicode=false'%
6806 }%
6807 \Hy@unicodetrue
6808 \fi
6809 }
6810 \define@key{Hyp}{pdfencoding}{%
6811 \edef\HyPsd@temp{#1}%
6812 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6813 \let\HyPsd@pdfencoding\HyPsd@temp
6814 \else
6815 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6816 \let\HyPsd@pdfencoding\HyPsd@temp
6817 \else
6818 \Hy@Warning{%
6819 XeTeX driver only supports\MessageBreak
6820 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6821 setting `pdfencoding=\HyPsd@temp'%
6822 }%
6823 \fi
6824 \fi
6825 }
6826 \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:

```

6827 \def\setpdfinkmargin#1{%
6828 \begingroup
6829 \setlength{\dimen@}{#1}%
6830 \special{dvipdfmx:config g \strip@pt\dimen@}%
6831 \endgroup}
6832 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6833 \<pdfmarkbase>
6834 \begingroup
6835 \@ifundefined{headerps@out}{%
6836 \toks@\expandafter{\Hy@FirstPageHook}%
6837 \xdef\Hy@FirstPageHook{%
6838 \noexpand\headerps@out{%
6839 systemdict /pdfmark known%
6840 {%
6841 userdict /?pdfmark systemdict /exec get put%
6842 }{%
6843 userdict /?pdfmark systemdict /pop get put %
6844 userdict /pdfmark systemdict /cleartomark get put%
6845 }%
6846 ifelse%
6847 }%
6848 \the\toks@
6849 }%
6850 }%
6851 \endgroup
6852 \</pdfmarkbase>

```

\Hy@PutCatalog

```
6853 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\pdfmark{docview <<#1>>}}
6854 <*pdfmarkbase>
6855 \def\Hy@PutCatalog#1{%
6856   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6857 }
6858 </pdfmarkbase>

6859 <*pdfmarkbase | dvipdfm | xetex>
6860 \ifHy@pdfpagelabels
```

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

```
6861 \def\HyPL@StorePageLabel#1{%
6862   \if@filesw
6863     \begingroup
6864     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6865     \immediate\write\@mainaux{%
6866       \string\HyPL@Entry{\Hy@tempa}%
6867     }%
6868   \endgroup
6869   \fi
6870 }%
```

Write a dummy definition of \HyPL@Entry for the case, that the next run is done without hyperref. A marker for the rerun warning is set and the /PageLabels is written.

```
6871 \Hy@AtBeginDocument{%
6872   \if@filesw
6873     \immediate\write\@mainaux{%
6874       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6875     }%
6876   \fi
6877   \ifx\HyPL@Labels\@empty
6878     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6879   \else
6880     \HyPL@SetPageLabels
6881   \fi
6882   \let\HyPL@Entry\@gobble
6883 }%
```

\HyPL@Entry

```
6884 \def\HyPL@Entry#1{%
6885   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6886     \HyPL@Labels
6887     #1%
6888   }%
6889 }%

6890 \fi
6891 </pdfmarkbase | dvipdfm | xetex>
6892 <*package>
6893 \ifx\MaybeStopEarly\relax
6894 \else
```

```

6895 \Hy@stoppedearlytrue
6896 \expandafter\MaybeStopEarly
6897 \fi
6898 \Hy@stoppedearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

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

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

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

Start with a fallback for equations

```

6899 \def\Hy@CounterExists#1{%
6900 \begingroup\expandafter\expandafter\expandafter\endgroup
6901 \expandafter\ifx\csname c@#1\endcsname\relax
6902 \expandafter\@gobble
6903 \else
6904 \begingroup\expandafter\expandafter\expandafter\endgroup
6905 \expandafter\ifx\csname the#1\endcsname\relax
6906 \expandafter\expandafter\expandafter\@gobble
6907 \else
6908 \expandafter\expandafter\expandafter\@firstofone
6909 \fi
6910 \fi
6911 }
6912 \Hy@CounterExists{section}{%
6913 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6914 }
6915 \Hy@CounterExists{part}{%
6916 \providecommand\theHpart{\arabic{part}}}%
6917 }
6918 \ltx@ifundefined{thechapter}{%
6919 \providecommand\theHsection {\arabic{section}}}%
6920 \providecommand\theHfigure {\arabic{figure}}}%
6921 \providecommand\theHtable {\arabic{table}}}%
6922 }{%
6923 \providecommand\theHchapter {\arabic{chapter}}}%
6924 \providecommand\theHfigure {\theHchapter.\arabic{figure}}}%

```

```

6925 \providecommand\theHtable    {\theHchapter.\arabic{table}}%
6926 \providecommand\theHsection  {\theHchapter.\arabic{section}}%
6927 }
6928 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6929 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6930 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6931 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6932 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6933 \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.

```

6934 \let\H@item\item
6935 \newcounter{Item}
6936 \def\theHItem{\arabic{Item}}
6937 \def\item{%
6938   \@hyper@itemfalse
6939   \if@nmbrrlist\@hyper@itemtrue\fi
6940   \H@item
6941 }
6942 \providecommand\theHenumi    {\theHItem}
6943 \providecommand\theHenumii   {\theHItem}
6944 \providecommand\theHenumiii  {\theHItem}
6945 \providecommand\theHenumiv   {\theHItem}
6946 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6947 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6948 \@ifundefined{theHHmpfootnote}{%
6949   \let\theHHmpfootnote\theHHfootnote
6950 }{}

```

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.

```

6951 \let\H@refstepcounter\refstepcounter
6952 \edef\name@of@eq{equation}%
6953 \edef\name@of@slide{slide}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional.

```

6954 \newif\if@hyper@item
6955 \newif\if@skiphyperref
6956 \@hyper@itemfalse
6957 \@skiphyperreffalse
6958 \def\refstepcounter#1{%
6959   \ifHy@pdfstring
6960   \else
6961     \H@refstepcounter{#1}%
6962     \edef\This@name{#1}%
6963     \ifx\This@name\name@of@slide
6964       \else
6965         \if@skiphyperref
6966         \else

```

```

6967 \if@hyper@item
6968 \stepcounter{Item}%
6969 \hyper@refstepcounter{Item}%
6970 \@hyper@itemfalse
6971 \else
6972 \hyper@refstepcounter{#1}%
6973 \fi
6974 \fi
6975 \fi
6976 \fi
6977 }
6978 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```

6979 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6980 \def\hyper@refstepcounter#1{%
6981 \edef\This@name{#1}%
6982 \ifx\This@name\name@of@eq
6983 \@ifundefined{theHequation}{%
6984 \make@stripped@name{\theequation}%
6985 \let\theHequation\newname
6986 }{}%
6987 \fi
6988 \HyCnt@ProvideTheHCounter{#1}%
6989 \hyper@makecurrent{#1}%
6990 \ifmeasuring@
6991 \else
6992 \Hy@raisedlink{%
6993 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6994 }%
6995 \fi
6996 }

```

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

```

6997 \def\HyCnt@ProvideTheHCounter#1{%
6998 \@ifundefined{theH#1}{%
6999 \expandafter\def\csname theH#1\endcsname{}%
7000 \def\Hy@temp{\@elt{#1}}%
7001 \ltx@onelevel@sanitize\Hy@temp
7002 \let\HyOrg@elt\@elt
7003 \edef\@elt{%
7004 \noexpand\HyCnt@LookForParentCounter
7005 \expandafter\noexpand\csname theH#1\endcsname
7006 }%

```

```

7007 \cl@@ckpt
7008 \let\@elt\HyOrg@elt
7009 \expandafter
7010 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7011 \expandafter{%
7012   \expandafter\@arabic\csname c@#1\endcsname
7013 }%
7014 }{}%
7015 }

```

\Hy@LookForParentCounter

```

7016 \def\HyCnt@LookForParentCounter#1#2{%
7017   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7018   \ltx@ifundefined{cl@#2}{%
7019     }{%
7020     \ltx@onelevel@sanitize\Hy@temp@A
7021     \edef\Hy@temp@A{%
7022       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7023     }\Hy@temp@A
7024     \fin@
7025     \ltx@ifundefined{theH#2}{%
7026       \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7027       \expandafter{%
7028         \expandafter\@arabic\csname c@#2\endcsname.%
7029       }%
7030     }{%
7031       \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7032       \expandafter{%
7033         \csname theH#2\endcsname.%
7034       }%
7035     }%
7036   \fi
7037 }%
7038 }

```

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

The “french” package defines counter \thechapter by \newcounterchapter, if \@ifundefinedchapter.

```

7039 \begingroup\expandafter\expandafter\expandafter\endgroup
7040 \expandafter\ifx\csname chapter\endcsname\relax
7041   \def\Hy@chapterstring{section}%
7042 \else
7043   \def\Hy@chapterstring{chapter}%
7044 \fi
7045 \def\Hy@appendixstring{appendix}
7046 \def\Hy@chapapp{\Hy@chapterstring}
7047 \ltx@ifundefined{appendix}{%
7048 }{%
7049   \let\HyOrg@appendix\appendix
7050   \def\Hy@AlphNoErr#1{%
7051     \ifnum\value{#1}>26 %

```

```

7052     Alph\number\value{#1}%
7053   \else
7054     \ifnum\value{#1}<1 %
7055       Alph\number\value{#1}%
7056     \else
7057       \Alph{#1}%
7058     \fi
7059   \fi
7060 }%
7061 \def\appendix{%
7062   \ltx@ifundefined{chapter}{%
7063     \gdef\theHsection{\Hy@AlphNoErr{section}}%
7064   }{%
7065     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7066   }%
7067   \xdef\Hy@chapapp{\Hy@appendixstring}%
7068   \HyOrg@appendix
7069 }%
7070 }

```

\Hy@Test@Alph

```

7071 \def\Hy@Test@Alph#1{%
7072   \ifcase#1\or
7073     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7074     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7075     u\or v\or w\or x\or y\or z%
7076   \else
7077     \@ctrerr
7078   \fi
7079 }

```

\Hy@Test@Alph

```

7080 \def\Hy@Test@Alph#1{%
7081   \ifcase#1\or
7082     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7083     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7084     U\or V\or W\or X\or Y\or Z%
7085   \else
7086     \@ctrerr
7087   \fi
7088 }

```

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

```

7089 \def\hyper@makecurrent#1{%
7090   \begingroup
7091     \Hy@safe@activestru
7092     \edef\Hy@param{#1}%
7093     \ifx\Hy@param\Hy@chapterstring
7094       \let\Hy@param\Hy@chapapp
7095     \fi
7096     \ifHy@hypertextnames
7097       \let\@number\@firstofone
7098     \def\@fnsymbol##1{\fnsymbol\number##1}%

```

```

7099 \def\@arabic##1{\number##1}%
7100 \ifx\@alph\Hy@Test@alph
7101 \else
7102 \def\@alph{alph\number}%
7103 \fi
7104 \ifx\@Alph\Hy@Test@Alph
7105 \else
7106 \def\@Alph{Alph\number}%
7107 \fi
7108 \ifHy@naturalnames
7109 \let\textlatin\@firstofone
7110 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7111 \else
7112 \xdef\HyperGlobalCurrentHref{%
7113 \csname
7114 the%
7115 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7116 #1%
7117 \endcsname
7118 }%
7119 \fi
7120 \xdef\HyperGlobalCurrentHref{%
7121 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7122 }%
7123 \else
7124 \Hy@GlobalStepCount\Hy@linkcounter
7125 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7126 \fi
7127 \endgroup
7128 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7129 \ifHy@localanchorname
7130 \let\@currentHref\HyperLocalCurrentHref
7131 \else
7132 \global\let\@currentHref\HyperGlobalCurrentHref
7133 \fi
7134 }

```

\Hy@MakeCurrentHref

```

7135 \def\Hy@MakeCurrentHref#1{%
7136 \edef\HyperLocalCurrentHref{#1}%
7137 \@onelevel@sanitize\HyperLocalCurrentHref
7138 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7139 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7140 \ifHy@localanchorname
7141 \let\@currentHref\HyperLocalCurrentHref
7142 \else
7143 \global\let\@currentHref\HyperGlobalCurrentHref
7144 \fi
7145 }

```

\Hy@MakeCurrentHrefAuto

```

7146 \def\Hy@MakeCurrentHrefAuto#1{%
7147 \Hy@GlobalStepCount\Hy@linkcounter
7148 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%

```



```
7149 }
```

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

```
7150 \def\@currentHlabel{\@currentHref}
```

30 Package lastpage support

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

```
\lastpage@putlabel
```

```
7151 \Hy@AtBeginDocument{%
7152   \@ifclassloaded{revtex4}{%
7153     \@namedef{ver@lastpage.sty}{1994/06/25}%
7154   }{}%
7155   \@ifpackageloaded{lastpage}{%
7156     \ifHy@pageanchor
7157     \else
7158       \Hy@WarningNoLine{%
7159         The \string\pageref{LastPage} link doesn't work\MessageBreak
7160         with disabled option `pageanchor'%
7161       }%
7162     \fi
7163     \def\lastpage@putlabel{%
7164       \addtocounter{page}{-1}%
7165       \if@files
7166         \begingroup
7167           \let\@number\@firstofone
7168           \ifHy@pageanchor
7169             \ifHy@hypertexnames
7170               \ifHy@plainpages
7171                 \def\Hy@temp{\arabic{page}}%
7172               \else
7173                 \Hy@unicodedefalse
7174                 \pdfstringdef\Hy@temp{\thepage}%
7175               \fi
7176             \else
7177               \def\Hy@temp{\the\Hy@pagecounter}%
7178             \fi
7179           \fi
7180           \immediate\write\@auxout{%
7181             \string\newlabel
7182             {LastPage}{\the\Hy@temp}{\thepage}{\thepage}%
7183             \ifHy@pageanchor page.\Hy@temp\fi}{}}%
7184           }%
7185         \endgroup
7186       \fi
7187       \addtocounter{page}{1}%
```

```

7188 }%
7189 \@ifclassloaded{revtex4}{%
7190   \begingroup
7191     \toks@{\expandafter{\lastpage@putlabel}}%
7192     \edef\x{\endgroup
7193       \def\noexpand\lastpage@putlabel{%
7194         \noexpand\stepcounter{page}%
7195         \the\toks@
7196         \noexpand\addtocounter{page}\noexpand\m@ne
7197       }%
7198     }%
7199     \x
7200   }{}%
7201 }{}%
7202 }
7203 \</package>
7204 \<*check>
7205 \checkpackage{lastpage}[1994/06/25]
7206 \checkcommand\def\lastpage@putlabel{%
7207   \addtocounter{page}{-1}%
7208   \immediate\write\@auxout{%
7209     \string\newlabel{LastPage}{\the\thepage}}%
7210 }%
7211 \addtocounter{page}{1}%
7212 }
7213 \</check>
7214 \<*package>

```

31 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

7215 \def\hypergetref#1{\getrefbykeydefault{#1}{\{??\}}
7216 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

32 Package titlesec and titletoc support

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

Package titlesec support:

```

7217 \@ifpackageloaded{titlesec}{%
7218   \def\ttl@Hy@steplink#1{%
7219     \Hy@MakeCurrentHrefAuto{#1*}%
7220     \edef\ttl@Hy@saveanchor{%
7221       \noexpand\Hy@raisedlink{%
7222         \noexpand\hyper@anchorstart{\@currentHref}%
7223         \noexpand\hyper@anchorend
7224         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7225         \noexpand\ttl@Hy@PatchSaveWrite
7226       }%
7227     }%

```

```

7228 }%
7229 \def\ttl@Hy@PatchSaveWrite{%
7230   \begingroup
7231   \toks@{\expandafter{\ttl@savewrite}}%
7232   \edef\x{\endgroup
7233     \def\noexpand\ttl@savewrite{%
7234       \let\noexpand\@currentHref
7235       \noexpand\ttl@Hy@SavedCurrentHref
7236       \the\toks@
7237     }%
7238   }%
7239   \x
7240 }%
7241 \def\ttl@Hy@refstepcounter#1{%
7242   \let\ttl@b\Hy@raisedlink
7243   \def\Hy@raisedlink##1{%
7244     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7245   }%
7246   \refstepcounter{#1}%
7247   \let\Hy@raisedlink\ttl@b
7248 }%
7249 }{}

Package titletoc support:
7250 \@ifpackageloaded{titletoc}{%
7251   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7252 }{}

```

33 Package varioref support

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

```

7253 \AtBeginDocument{%
7254   \def\Hy@varioref@undefined{{??}{??}{}}{}%
7255   \@ifpackageloaded{varioref}{%
7256     \def\vref@pagenum#1#2{%
7257       \@ifundefined{r@#2}{%
7258         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7259       }{}%
7260       \edef#1{\getpagerefnumber{#2}}%
7261     }%
7262 }{}

```

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

```

7263 \def\Hy@varioref@refstepcounter#1{%
7264   \stepcounter{#1}%
7265   \protected@edef\@currentlabel{%
7266     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7267   }%
7268 }
7269 \ifx\refstepcounter\Hy@varioref@refstepcounter
7270   \let\H@refstepcounter\refstepcounter

```

```

7271 \let\refstepcounter\Hy@saved@refstepcounter
7272 \fi
7273 }

```

34 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by hyperref's `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\LT@array`: replace `\refstepcounter` by the original `\H@refstepcounter` without anchor generation

```

7274 \@ifpackageloaded{longtable}{%
7275 \begingroup
7276 \def\y{\LT@array}%
7277 \@ifundefined{scr@LT@array}{%
7278 \ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7279 }{\def\y{\scr@LT@array}}%
7280 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7281 \expandafter\endgroup
7282 \expandafter\def\y[##1]##2{%
7283 \H@refstepcounter{#1}%
7284 \hyper@makecurrent{table}%
7285 \let\Hy@LT@currentHref\@currentHref
7286 #2\@sharp###4%
7287 }%
7288 }%
7289 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7290 \begingroup
7291 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7292 \endgroup
7293 \def\LT@start{%
7294 #1%
7295 \ifvoid\LT@foot#2\fi
7296 \let\@currentHref\Hy@LT@currentHref
7297 \Hy@raisedlink{%
7298 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7299 }%
7300 #3%
7301 }%
7302 }%
7303 \expandafter\x\LT@start\@nil
7304 }{}

```

35 Equations

We want to make the whole equation a target anchor. Overload `equation`, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 42). The exception is that we move the equation incrementation inside the math environment

to avoid specials outside and a wrong vertical spacing of equation environments.

```

7305 \let\new@refstepcounter\refstepcounter
7306 \let\H@equation\equation
7307 \let\H@endequation\endequation
7308 \@ifpackageloaded{amsmath}{%
7309   \long\def\Hy@temp{%
7310     \incr@eqnum
7311     \mathdisplay@push
7312     \st@rredfalse \global\@eqnswtrue
7313     \mathdisplay{equation}%
7314   }%
7315   \ifx\Hy@temp\equation
7316     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7317       \csname iftrue\endcsname
7318   \else
7319     \long\def\equation{%
7320       \mathdisplay@push
7321       \st@rredfalse \global\@eqnswtrue
7322       \mathdisplay{equation}%
7323       \incr@eqnum
7324     }%
7325   \fi
7326 \fi
7327 }{%
7328 \def\equation{%
7329   \let\refstepcounter\H@refstepcounter
7330   \H@equation
7331   \@ifundefined{theHequation}{%
7332     \make@stripped@name{\theequation}%
7333     \let\theHequation\newname
7334   }{}%
7335   \hyper@makecurrent{equation}%

```

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

```

7336   \mathopen{%
7337     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7338   }%
7339   \let\refstepcounter\new@refstepcounter
7340 }%
7341 \def\endequation{%
7342   \ifx\Hy@raisedlink\ltx@empty
7343     \hyper@anchorend
7344   \else
7345     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7346   \fi
7347   \H@endequation
7348 }%
7349 }

```

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.

```

7350 \newif\if@eqnstar
7351 \@eqnstarfalse
7352 \let\H@eqnarray\eqnarray
7353 \let\H@endeqnarray\endeqnarray
7354 \def\eqnarray{%
7355   \let\Hy@reserved@a\relax
7356   \def\@currentHref{}%
7357   \H@eqnarray
7358   \if@eqnstar
7359   \else
7360     \ifx\\ \@currentHref\\%
7361     \else
7362       \@ifundefined{theHequation}{%
7363         \make@stripped@name{\theequation}%
7364         \let\theHequation\newname
7365       }{}%
7366       \hyper@makecurrent{equation}%
7367       \mathopen{%
7368         \Hy@raisedlink{%
7369           \hyper@anchorstart{\@currentHref}\hyper@anchorend
7370         }%
7371       }%
7372     \fi
7373   \fi
7374 }
7375 \def\endeqnarray{%
7376   \H@endeqnarray
7377 }

```

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.

```

7378 \@namedef{eqnarray*}{%
7379   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
7380 }
7381 \@namedef{endeqnarray*}{%
7382   \nonumber\endeqnarray\@eqnstarfalse
7383 }

```

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

```

7384 \ltx@ifundefined{subeqnarray}{}{}%
7385 \let\H@subeqnarray\subeqnarray
7386 \let\H@endsubeqnarray\endsubeqnarray
7387 \def\subeqnarray{%
7388   \let\Hy@reserved@a\relax
7389   \H@subeqnarray
7390   \@ifundefined{theHequation}{%
7391     \make@stripped@name{\theequation}%
7392     \let\theHequation\newname
7393   }{}%
7394   \hyper@makecurrent{equation}%
7395   \hyper@anchorstart{\@currentHref}\hyper@anchorend
7396 }%
7397 \def\endsubeqnarray{%

```

```

7398 \H@endsubeqnarray
7399 }%
7400 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7401 }

```

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

```

7402 \def\make@stripped@name#1{%
7403 \begingroup
7404 \escapechar\m@ne
7405 \global\let\newname\@empty
7406 \protected@edef\Hy@tempa{#1}%
7407 \edef\@tempb{%
7408 \noexpand\@tfor\noexpand\Hy@tempa:=%
7409 \expandafter\strip@prefix\meaning\Hy@tempa
7410 }%
7411 \@tempb\do{%
7412 \if{\Hy@tempa\else
7413 \if}\Hy@tempa\else
7414 \xdef\newname{\newname\Hy@tempa}%
7415 \fi
7416 \fi
7417 }%
7418 \endgroup
7419 }

```

Support for amsmath's subequations:

```

7420 \begingroup\expandafter\expandafter\expandafter\endgroup
7421 \expandafter\ifx\csname subequations\endcsname\relax
7422 \else
7423 \let\HyOrg@subequations\subequations
7424 \def\subequations{%
7425 \stepcounter{equation}%
7426 \protected@edef\theHparentequation{%
7427 \@ifundefined{theHequation}\theequation\theHequation
7428 }%
7429 \addtocounter{equation}{-1}%
7430 \HyOrg@subequations
7431 \def\theHequation{\theHparentequation\alph{equation}}%
7432 \ignorespaces
7433 }%
7434 \fi

```

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

```

7435 \Hy@AtBeginDocument{%
7436 \@ifpackageloaded{cleveref}{%
7437 \let\Hy@savethm\@thm
7438 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7439 }{%
7440 \@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

```

```

7441 \def\Hy@temp#1#2#3{%
7442   \ifhmode\unskip\unskip\par\fi
7443   \normalfont
7444   \trivlist
7445   \let\thmheadnl\relax
7446   \let\thm@swap\@gobble
7447   \let\thm@indent\indent % indent
7448   \thm@headfont{\scshape}% heading font small caps
7449   \thm@notefont{\fontseries\mddefault\upshape}%
7450   \thm@headpunct{.}% add period after heading
7451   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7452   \thm@space@setup
7453   #1% style overrides
7454   \@topsep \thm@preskip           % used by thm head
7455   \@topsepadd \thm@postskip       % used by \@endparenv
7456   \def\@tempa{#2}\ifx\@empty\@tempa
7457     \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7458   \else
7459     \refstepcounter{#2}%
7460     \def\@tempa{%
7461       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7462     }%
7463   \fi
7464   \@tempa
7465 }%
7466 \ifx\Hy@temp\@thm
7467   \def\@thm#1#2#3{%
7468     \ifhmode
7469       \unskip\unskip\par
7470     \fi
7471     \normalfont
7472     \trivlist
7473     \let\thmheadnl\relax
7474     \let\thm@swap\@gobble
7475     \let\thm@indent\indent % indent
7476     \thm@headfont{\scshape}% heading font small caps
7477     \thm@notefont{\fontseries\mddefault\upshape}%
7478     \thm@headpunct{.}% add period after heading
7479     \thm@headsep 5\p@ plus\p@ minus\p@\relax
7480     \thm@space@setup
7481     #1% style overrides
7482     \@topsep \thm@preskip           % used by thm head
7483     \@topsepadd \thm@postskip       % used by \@endparenv
7484     \def\dth@counter{#2}%
7485     \ifx\@empty\dth@counter
7486       \def\@tempa{%
7487         \@oparg{\@begintheorem{#3}{}}{}}%
7488       }%
7489     \else
7490       \H@refstepcounter{#2}%
7491       \hyper@makecurrent{#2}%
7492       \let\Hy@dth@currentHref\@currentHref
7493       \def\@tempa{%
7494         \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%

```



```

7495     }%
7496     \fi
7497     \@tempa
7498 }%
7499 \else
7500 \def\@thm#1#2#3{%
7501     \ifhmode
7502         \unskip\unskip\par
7503     \fi
7504     \normalfont
7505     \trivlist
7506     \let\thmheadnl\relax
7507     \let\thm@swap\@gobble
7508     \thm@notefont{\fontseries\mddefault\upshape}%
7509     \thm@headpunct{.}% add period after heading
7510     \thm@headsep 5\p@ plus\p@ minus\p@\relax
7511     \thm@space@setup
7512     #1% style overrides
7513     \@topsep \thm@preskip           % used by thm head
7514     \@topsepadd \thm@postskip       % used by \@endparenv
7515     \def\dth@counter{#2}%
7516     \ifx\@empty\dth@counter
7517         \def\@tempa{%
7518             \@oparg{\@begintheorem{#3}{}}[]%
7519         }%
7520     \else
7521         \H@refstepcounter{#2}%
7522         \hyper@makecurrent{#2}%
7523         \let\Hy@dth@currentHref\@currentHref
7524         \def\@tempa{%
7525             \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7526         }%
7527     \fi
7528     \@tempa
7529 }%
7530 \fi
7531 \dth@everypar={%
7532     \@minipagefalse
7533     \global\@newlistfalse
7534     \@noparitemfalse
7535     \if@inlabel
7536         \global\@inlabelfalse
7537     \begingroup
7538         \setbox\z@\lastbox
7539         \ifvoid\z@
7540             \kern-\itemindent
7541         \fi
7542     \endgroup
7543     \ifx\@empty\dth@counter
7544     \else
7545         \Hy@raisedlink{%
7546             \hyper@anchorstart{%
7547                 \ltx@ifundefined{Hy@dth@currentHref}%
7548                 \@currentHref\Hy@dth@currentHref

```

```

7549     }\hyper@anchorend
7550   }%
7551   \fi
7552   \unhbox\@labels
7553 \fi
7554 \if@nobreak
7555   \@nobreakfalse \clubpenalty\@M
7556 \else
7557   \clubpenalty\@clubpenalty \everypar{}%
7558 \fi
7559 }%
7560 }%

```

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

```

7561 {%
7562 \let\Hy@savedthm\@thm
7563 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7564 }%
7565 }%
7566 }

```

36 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original.

```

7567 \ifHy@hyperfootnotes
7568   \newcounter{Hfootnote}%
7569   \let\H@@footnotetext\@footnotetext
7570   \let\H@@footnotemark\@footnotemark
7571   \def\@xfootnotenext[#1]{%
7572     \begingroup
7573       \csname c@\@mpfn\endcsname #1\relax
7574       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7575     \endgroup
7576     \ifx\@footnotetext\@mpfootnotetext
7577       \expandafter\H@@mpfootnotetext
7578     \else
7579       \expandafter\H@@footnotetext
7580     \fi
7581   }%
7582   \def\@xfootnotemark[#1]{%
7583     \begingroup
7584       \c@footnote #1\relax
7585       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7586     \endgroup
7587     \H@@footnotemark
7588   }%
7589   \let\H@@mpfootnotetext\@mpfootnotetext
7590   \long\def\@mpfootnotetext#1{%
7591     \H@@mpfootnotetext{%

```

```

7592 \ifHy@nesting
7593 \expandafter\ltx@firstoftwo
7594 \else
7595 \expandafter\ltx@secondoftwo
7596 \fi
7597 {%
7598 \expandafter\hyper@@anchor\expandafter{%
7599 \Hy@footnote@currentHref
7600 }\ignorespaces #1}%
7601 }{%
7602 \Hy@raisedlink{%
7603 \expandafter\hyper@@anchor\expandafter{%
7604 \Hy@footnote@currentHref
7605 }\relax}%
7606 }\ignorespaces #1%
7607 }%
7608 }%
7609 }%
7610 \long\def\@footnotetext#1{%
7611 \H@@@footnotetext{%
7612 \ifHy@nesting
7613 \expandafter\ltx@firstoftwo
7614 \else
7615 \expandafter\ltx@secondoftwo
7616 \fi
7617 {%
7618 \expandafter\hyper@@anchor\expandafter{%
7619 \Hy@footnote@currentHref
7620 }\ignorespaces #1}%
7621 }{%
7622 \Hy@raisedlink{%
7623 \expandafter\hyper@@anchor\expandafter{%
7624 \Hy@footnote@currentHref
7625 }\relax}%
7626 }%
7627 \let\@currentHref\Hy@footnote@currentHref
7628 \let\@currentlabelname\@empty
7629 \ignorespaces #1%
7630 }%
7631 }%
7632 }%

```

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.

```

7633 \def\@footnotemark{%
7634 \leavevmode
7635 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7636 \stepcounter{Hfootnote}%
7637 \global\let\Hy@saved@currentHref\@currentHref
7638 \hyper@makecurrent{Hfootnote}%
7639 \global\let\Hy@footnote@currentHref\@currentHref

```

```

7640 \global\let\@currentHref\Hy@saved@currentHref
7641 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7642 \@makefnmark
7643 \hyper@linkend
7644 \ifhmode\spacefactor\@x@sf\fi
7645 \relax
7646 }%

```

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

```

7647 \@ifpackageloaded{tabularx}{%
7648 \let\HyOrg@TX@endtabularx\TX@endtabularx
7649 \def\Hy@tabularx@hook{%
7650 \let\@footnotetext\H@@footnotetext
7651 \let\@footnotemark\H@@footnotemark
7652 \let\@mpfootnotetext\H@@mpfootnotetext
7653 }%
7654 \begingroup
7655 \toks@\expandafter{\TX@endtabularx}%
7656 \xdef\Hy@gtemp{%
7657 \noexpand\Hy@tabularx@hook
7658 \the\toks@
7659 }%
7660 \endgroup
7661 \let\TX@endtabularx\Hy@gtemp
7662 }{}%

```

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

```

7663 \@ifpackageloaded{longtable}{%
7664 \CheckCommand*{\LT@p@ftntext}[1]{%
7665 \edef\@tempa{%
7666 \the\LT@p@ftn
7667 \noexpand\footnotetext[\the\c@footnote]%
7668 }%
7669 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7670 }%
7671 \long\def\LT@p@ftntext#1{%
7672 \edef\@tempa{%
7673 \the\LT@p@ftn
7674 \begingroup
7675 \noexpand\c@footnote=\the\c@footnote\relax
7676 \noexpand\protected\xdef\noexpand\@thefnmark{%
7677 \noexpand\thempfn
7678 }%
7679 \noexpand\Hy@LT@footnotetext{%
7680 \Hy@footnote@currentHref
7681 }%
7682 }%
7683 \global\LT@p@ftn\expandafter{%
7684 \@tempa{#1}%
7685 \endgroup
7686 }%

```

```

7687 }%
7688 \long\def\Hy@LT@footnotetext#1#2{%
7689   \H@@footnotetext{%
7690     \ifHy@nesting
7691       \hyper@@anchor{#1}{#2}%
7692     \else
7693       \Hy@raisedlink{%
7694         \hyper@@anchor{#1}{\relax}%
7695       }%
7696       \def\@currentHref{#1}%
7697       \let\@currentlabelname\@empty
7698       #2%
7699     \fi
7700   }%
7701 }%
7702 }{}%

```

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

```

7703 \ifpackageloaded{fancyvrb}{%
7704   \def\V@@footnotetext{%
7705     \insert\footins\bgroup
7706     \csname reset@font\endcsname
7707     \footnotesize
7708     \interlinepenalty\interfootnotelinepenalty
7709     \splittopskip\footnotesep
7710     \splitmaxdepth\dp\strutbox
7711     \floatingpenalty \@MM
7712     \hsize\columnwidth
7713     \@parboxrestore
7714     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7715     \@makefntext{}%
7716     \rule{\z@}{\footnotesep}%
7717     \bgroup
7718     \aftergroup\V@@@footnotetext
7719     \Hy@raisedlink{%
7720       \expandafter\hyper@@anchor\expandafter{%
7721         \Hy@footnote@currentHref
7722       }\relax}%
7723     }%
7724     \let\@currentHref\Hy@footnote@currentHref
7725     \let\@currentlabelname\@empty
7726     \ignorespaces
7727   }%
7728 }{}%

```

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

```

7729 \def\Hy@temp#1{%
7730   \begingroup
7731   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7732   \endgroup
7733   \@footnotemark
7734 }%
7735 \ifx\Hy@temp\footref
7736   \def\footref#1{%

```

```

7737 \begingroup
7738 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7739 \endgroup
7740 \H@@footnotemark
7741 }%
7742 \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.

```

7743 \let\HyOrg@maketitle\maketitle
7744 \def\maketitle{%
7745   \let\Hy@saved@footnotemark\@footnotemark
7746   \let\Hy@saved@footnotetext\@footnotetext
7747   \let\@footnotemark\H@@footnotemark
7748   \let\@footnotetext\H@@footnotetext
7749   \@ifnextchar[\Hy@maketitle@optarg{% ]
7750   \HyOrg@maketitle
7751   \Hy@maketitle@end
7752 }%
7753 }%
7754 \def\Hy@maketitle@optarg[#1]{%
7755   \HyOrg@maketitle[{#1}]%
7756   \Hy@maketitle@end
7757 }%
7758 \def\Hy@maketitle@end{%
7759   \ifx\@footnotemark\H@@footnotemark
7760     \let\@footnotemark\Hy@saved@footnotemark
7761   \fi
7762   \ifx\@footnotetext\H@@footnotetext
7763     \let\@footnotetext\Hy@saved@footnotetext
7764   \fi
7765 }%

```

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

```

7766 \def\realfootnote{%
7767   \@ifnextchar[\@xfootnote{%
7768     \stepcounter{\@mpfn}%
7769     \protected@xdef\@thefnmark{\thempfn}%
7770     \H@@footnotemark\H@@footnotetext
7771   }%
7772 }%
7773 \fi
7774 \Hy@DisableOption{hyperfootnotes}
7775 </package>
7776 <*check>
7777 \checklatex
7778 \checkcommand\def\@xfootnotenext[#1]{%
7779   \begingroup
7780   \csname c@{\@mpfn}\endcsname #1\relax
7781   \unrestored@protected@xdef\@thefnmark{\thempfn}%
7782 \endgroup
7783 \@footnotetext

```

```

7784 }
7785 \checkcommand\def\@xfootnotemark[#1]{%
7786   \begingroup
7787     \c@footnote #1\relax
7788     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7789   \endgroup
7790   \@footnotemark
7791 }
7792 \checkcommand\def\@footnotemark{%
7793   \leavevmode
7794   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7795   \@makefnmark
7796   \ifhmode\spacefactor\@x@sf\fi
7797   \relax
7798 }
7799 </check>
7800 <*package>

```

37 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

7801 \def\caption{%
7802   \ifx\@captive\@undefined
7803     \@latex@error{\noexpand\caption outside float}\@ehd
7804     \expandafter\@gobble
7805   \else
7806     \H@refstepcounter\@captive
7807     \let\Hy@tempa\@caption
7808     \@ifundefined{float@caption}{%
7809       }{%
7810         \expandafter\ifx\csname @float@c@\@captive\endcsname
7811           \float@caption
7812         \let\Hy@tempa\Hy@float@caption
7813       \fi
7814     }%
7815     \expandafter\@firstofone
7816   \fi
7817   {\@dblarg{\Hy@tempa\@captive}}%
7818 }
7819 \long\def\@caption#1[#2]#3{%
7820   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7821     \csname iftrue\endcsname
7822     \global\let\@currentHref\hc@currentHref
7823   \else
7824     \hyper@makecurrent{\@captive}%
7825   \fi
7826   \@ifundefined{NR@gettitle}{%
7827     \def\@currentlabelname{#2}%
7828   }{%
7829     \NR@gettitle{#2}%
7830   }%
7831   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%

```

```

7832 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7833 }%
7834 \begingroup
7835 \parboxrestore
7836 \if@minipage
7837 \setminipage
7838 \fi
7839 \normalsize
7840 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7841 \csname iftrue\endcsname
7842 \global\@capstartfalse
7843 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7844 \else
7845 \@makecaption{\csname fnum@#1\endcsname}{%
7846 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7847 \ifHy@nesting
7848 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7849 \else
7850 \Hy@raisedlink{%
7851 \expandafter\hyper@@anchor\expandafter{%
7852 \@currentHref
7853 }{\relax}%
7854 }%
7855 #3%
7856 \fi
7857 }%
7858 \fi
7859 \par
7860 \endgroup
7861 }

```

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’.

```

7862 \let\Hy@float@caption\@caption
7863 \newcommand{\HyNew@float@makebox}[1]{%
7864 \HyOrg@float@makebox{%
7865 #1\relax
7866 \ifx\Hy@float@currentHref\@undefined
7867 \else
7868 \expandafter\hyper@@anchor\expandafter{%
7869 \Hy@float@currentHref
7870 }{\relax}%
7871 \global\let\Hy@float@currentHref\@undefined
7872 \fi
7873 }%
7874 }%
7875 \ifpackageloaded{float}{%
7876 \def\Hy@float@caption{%
7877 \ifx\Hy@float@currentHref\@undefined
7878 \hyper@makecurrent{\@cuptype}%

```



```

7879 \global\let\Hy@float@currentHref\@currentHref
7880 \else
7881 \let\@currentHref\Hy@float@currentHref
7882 \fi
7883 \float@caption
7884 }%
7885 \let\HyOrg@float@makebox\float@makebox
7886 \let\float@makebox\HyNew@float@makebox
7887 }{}

7888 \endpackage
7889 \ifcheck
7890 \checklatex[1999/06/01 - 2000/06/01]
7891 \checkcommand\def\caption{%
7892 \ifx\@capttype\@undefined
7893 \@latex@error{\noexpand\caption outside float}\@ehd
7894 \expandafter\@gobble
7895 \else
7896 \refstepcounter\@capttype
7897 \expandafter\@firstofone
7898 \fi
7899 {\@dblarg{\@caption\@capttype}}}%
7900 }
7901 \checkcommand\long\def\@caption#1[#2]#3{%
7902 \par
7903 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7904 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
7905 }%
7906 \begingroup
7907 \@parboxrestore
7908 \if@minipage
7909 \@setminipage
7910 \fi
7911 \normalsize
7912 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7913 \endgroup
7914 }
7915 \endcheck
7916 \endpackage

```

38 Bibliographic references

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

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

```

7917 \def\hyper@natlinkstart#1{%
7918 \Hy@backout{#1}%
7919 \hyper@linkstart{cite}{cite.#1}%

```

```

7920 \def\hyper@nat@current{#1}%
7921 }
7922 \def\hyper@natlinkend{%
7923 \hyper@linkend
7924 }
7925 \def\hyper@natlinkbreak#1#2{%
7926 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7927 }
7928 \def\hyper@natanchorstart#1{%
7929 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7930 }
7931 \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.

```

7932 \ltx@ifundefined{NAT@parse}{%
7933 \providecommand*\@extra@binfo{}%
7934 \providecommand*\@extra@b@citeb{}%
7935 \def\bibcite#1#2{%
7936 \@newl@bel{b}{#1\@extra@binfo}{%
7937 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7938 }%
7939 }%
7940 \gdef\@extra@binfo{}%

```

Package `babel` redefines `\bibcite` with macro `\bbl@cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

7941 \let\Hy@bibcite\bibcite
7942 \begingroup
7943 \@ifundefined{bbl@cite@choice}{}{%
7944 \g@addto@macro\bbl@cite@choice{%
7945 \let\bibcite\Hy@bibcite
7946 }%
7947 }%
7948 \endgroup

```

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

```

7949 \providecommand*\@BIBLABEL{\@biblabel}%
7950 \def\@lbibitem[#1]#2{%
7951 \@skiphyperrftrue
7952 \H@item[%
7953 \ifx\Hy@raisedlink\@empty
7954 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7955 \@BIBLABEL{#1}%
7956 \hyper@anchorend
7957 \else
7958 \Hy@raisedlink{%
7959 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7960 }%
7961 \@BIBLABEL{#1}%
7962 \fi
7963 \hfill
7964 ]%

```

```

7965 \@skiphyperreffalse
7966 \if@filesw
7967 \begingroup
7968 \let\protect\noexpand
7969 \immediate\write\@auxout{%
7970 \string\bibcite{#2}{#1}%
7971 }%
7972 \endgroup
7973 \fi
7974 \ignorespaces
7975 }%

```

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

```

7976 \def\@bibitem#1{%
7977 \@skiphyperrefftrue\H@item\@skiphyperreffalse
7978 \Hy@raisedlink{%
7979 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7980 }%
7981 \if@filesw
7982 \begingroup
7983 \let\protect\noexpand
7984 \immediate\write\@auxout{%
7985 \string\bibcite{#1}{\the\value{\@listctr}}}%
7986 }%
7987 \endgroup
7988 \fi
7989 \ignorespaces
7990 }%
7991 }{}

7992 \</package>
7993 \<?check>
7994 \checklatex
7995 \checkcommand\def\@lbibitem[#1]#2{%
7996 \item[\@biblabel{#1}]{\hfill}%
7997 \if@filesw
7998 {%
7999 \let\protect\noexpand
8000 \immediate\write\@auxout{%
8001 \string\bibcite{#2}{#1}%
8002 }%
8003 }%
8004 \fi
8005 \ignorespaces
8006 }
8007 \checkcommand\def\@bibitem#1{%
8008 \item
8009 \if@filesw
8010 \immediate\write\@auxout{%
8011 \string\bibcite{#1}{\the\value{\@listctr}}}%
8012 }%
8013 \fi
8014 \ignorespaces
8015 }

```

```

8016 \</check>
8017 \<{*package>

```

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

```

8018 \ifclassloaded{revtex}{%
8019   \Hy@Info{*** compatibility with revtex **** }%
8020   \def\revtex@checking#1#2{%
8021     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8022     \expandafter\def\csname b@#1\endcsname{#2}%
8023     \@SetMaxRnhefLabel{#1}%
8024     \expandafter\let\csname b@#1\endcsname\T@temp
8025   }%

```

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

```

8026 \ifundefined{@CITE}{\def\CITE{\@cite}}}%
8027 \providecommand*{\@extra@b@citeb}{}%
8028 \def\CITEX[#1]#2{%
8029   \let\@citea\@empty
8030   \leavevmode
8031   \unskip
8032   $\sim{%
8033     \scriptstyle
8034     \@CITE{%
8035       \@for\@citeb:=#2\do{%
8036         \@citea
8037         \def\@citea{\penalty\@m\ }%
8038         \edef\@citeb{\expandafter\@firstofone\@citeb}%
8039         \if@filesw
8040           \immediate\write\@auxout{\string\citation{\@citeb}}%
8041         \fi
8042         \ifundefined{b@\@citeb\extra@b@citeb}{%
8043           \mbox{\reset@font\bfseries ?}%
8044           \G@refundefinedtrue
8045           \@latex@warning{%
8046             Citation ``\@citeb' on page \thepage \space undefined%
8047           }%
8048         }{%
8049           {\csname b@\@citeb\extra@b@citeb\endcsname}%
8050         }%
8051       }%
8052     }{#1}%
8053   }$%
8054 }%

```

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

```

8055 \def\@citex[#1]#2{%
8056   \let\@citea\@empty
8057   \@cite{%
8058     \@for\@citeb:=#2\do{%
8059       \@citea
8060       \def\@citea{\penalty\@m\ }%

```

```

8061 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8062 \if@filesw
8063 \immediate\write\@auxout{\string\citation{\@citeb}}%
8064 \fi
8065 \ifundefined{b@\@citeb\@extra@b@citeb}{%
8066 \mbox{\reset@font\bfseries ?}%
8067 \G@refundefinedtrue
8068 \@latex@warning{%
8069 Citation `'\@citeb' on page \thepage \space undefined%
8070 }%
8071 }%
8072 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8073 }%
8074 }%
8075 }{#1}%
8076 }%
8077 }{}

```

38.1 Package harvard

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

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

```

8078 \ifpackageloaded{harvard}{%
8079 \Hy@AtBeginDocument{%
8080 \Hy@Info{*** compatibility with harvard **** }%
8081 \Hy@raiselinksfalse
8082 \def\harvardcite#1#2#3#4{%
8083 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
8084 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8085 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
8086 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8087 }%
8088 \def\HAR@citetoaux#1{%
8089 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8090 \ifHy@backref
8091 \ifx\@empty\@currentlabel
8092 \else
8093 \@bsphack
8094 \if@filesw
8095 \protected@write\@auxout{}{%
8096 \string\@writefile{brf}{%
8097 \string\backcite{#1}{%
8098 {\thepage}{\@currentlabel}{\@currentHref}%
8099 }%
8100 }%
8101 }%
8102 \fi
8103 \@esphack

```

```

8104     \fi
8105     \fi
8106 }%
8107 \def\harvarditem{%
8108   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8109 }%
8110 \def\@harvarditem[#1]#2#3#4#5\par{%
8111   \item[]%
8112   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8113   \if@filesw
8114     \begingroup
8115       \def\protect##1{\string ##1\space}%
8116       \ifthenelse{\equal{#1}{\null}}{%
8117         {\def\next{{#4}{#2}{#2}{#3}}}%
8118         {\def\next{{#4}{#2}{#1}{#3}}}%
8119       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8120     \endgroup
8121     \fi
8122     \protect\hspace*{-\labelwidth}%
8123     \protect\hspace*{-\labelsep}%
8124     \ignorespaces
8125     #5%
8126     \ifHy@backref
8127       \newblock
8128       \backref{\csname br@#4\endcsname}%
8129     \fi
8130     \par
8131 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

8132 \long\def\HAR@checkcitations#1#2#3#4{%
8133   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8134   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8135     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8136     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8137       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8138       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8139         \else
8140           \@tempswatruue
8141         \fi
8142       \else
8143         \@tempswatruue
8144       \fi
8145     \else
8146       \@tempswatruue
8147     \fi
8148   }%
8149 }%

8150 }{}

```

38.2 Package chicago

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

```
8151 \@ifpackageloaded{chicago}{%

\citeN
8152 \def\citeN{%
8153   \def\@citesep{-1000}%
8154   \def\@cite##1##2{##1}%
8155   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
8156   \@citedata@opt
8157 }%

\shortciteN
8158 \def\shortciteN{%
8159   \def\@citesep{-1000}%
8160   \def\@cite##1##2{##1}%
8161   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
8162   \@citedata@opt
8163 }%

\@citedata@opt
8164 \def\@citedata@opt{%
8165   \let\@cite@opt\@empty
8166   \@ifnextchar [{%
8167     \@tempswatrue
8168     \@citedatax@opt
8169   }{%
8170     \@tempswafalse
8171     \@citedatax[]%
8172   }%
8173 }%

\@citedatax@opt
8174 \def\@citedatax@opt[#1]{%
8175   \def\@cite@opt{, #1}%
8176   \@citedatax[{#1}]%
8177 }%

8178 }
```

39 Page numbers

The last page should not contain a `/Dur` key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdf-pageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by `hyperref`.

This where we supply a destination for each page.

```
8179 \ltx@ifclassloaded{slides}{%
8180   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8181   \def\Hy@PageAnchorSlidesPlain{%
```

```

8182 \advance\c@page\ltx@one
8183 \edef\Hy@TempPageAnchor{%
8184 \noexpand\hyper@@anchor{%
8185 page.\the\c@slide.\the\c@overlay.\the\c@note%
8186 \ifnum\c@page=\ltx@one
8187 \else
8188 .\the\c@page
8189 \fi
8190 }%
8191 }%
8192 \advance\c@page-\ltx@one
8193 }%
8194 \def\Hy@PageAnchorSlide{%
8195 \advance\c@page\ltx@one
8196 \ifnum\c@page>\ltx@one
8197 \ltx@ifundefined{theHpage}{%
8198 \protected@edef\Hy@TheSlideOptionalPage{%
8199 \Hy@SlidesFormatOptionalPage{theHpage}%
8200 }%
8201 }{%
8202 \protected@edef\Hy@TheSlideOptionalPage{%
8203 \Hy@SlidesFormatOptionalPage{theHpage}%
8204 }%
8205 }%
8206 \else
8207 \def\Hy@TheSlideOptionalPage{}%
8208 \fi
8209 \advance\c@page-\ltx@one
8210 \pdfstringdef\@theH@page{%
8211 \csname
8212 the%
8213 \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8214 \Hy@SlidesPage
8215 \endcsname
8216 \Hy@TheSlideOptionalPage
8217 }%
8218 \ltx@gobblethree
8219 }%
8220 \def\Hy@SlidesPage{slide}%
8221 \g@addto@macro\slide{%
8222 \def\Hy@SlidesPage{slide}%
8223 }%
8224 \g@addto@macro\overlay{%
8225 \def\Hy@SlidesPage{overlay}%
8226 }%
8227 \g@addto@macro\note{%
8228 \def\Hy@SlidesPage{note}%
8229 }%
8230 }{%
8231 \def\Hy@PageAnchorSlidesPlain{}%
8232 \def\Hy@PageAnchorSlide{}%
8233 }
8234 \def\Hy@EveryPageAnchor{%
8235 \Hy@DistillerDestFix

```



```

8236 \ifHy@pageanchor
8237 \ifHy@hypertextnames
8238 \ifHy@plainpages
8239 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8240 \Hy@PageAnchorSlidesPlain
8241 \else
8242 \begingroup
8243 \let\@number\@firstofone
8244 \Hy@unicodedefalse
8245 \Hy@PageAnchorSlide
8246 \pdfstringdef\@the@H@page{\thepage}%
8247 \endgroup
8248 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8249 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8250 \fi
8251 \else
8252 \Hy@GlobalStepCount\Hy@pagecounter
8253 \def\Hy@TempPageAnchor{%
8254 \hyper@@anchor{page.\the\Hy@pagecounter}%
8255 }%
8256 \fi
8257 \vbox to 0pt{%
8258 \kern\voffset
8259 \kern\topmargin
8260 \kern-1bp\relax
8261 \hbox to 0pt{%
8262 \kern\hoffset
8263 \kern\ifodd\value{page}%
8264 \oddsidemargin
8265 \else
8266 \evensidemargin
8267 \fi
8268 \kern-1bp\relax
8269 \Hy@TempPageAnchor\relax
8270 \hss
8271 }%
8272 \vss
8273 }%
8274 \fi
8275 }
8276 \g@addto@macro\Hy@EveryPageBoxHook{%
8277 \Hy@EveryPageAnchor
8278 }

```

40 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble.

```

8279 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8280 % line in the \textt{toc}file.
8281 % \begin{macrocode}
8282 \providecommand\protected@file@percent{}

```

```

8283 \def\addcontentsline#1#2#3{% toc extension, type, tag
8284 \begingroup
8285 \let\label\@gobble
8286 \ifx\@currentHref\@empty
8287 \Hy@Warning{%
8288 No destination for bookmark of \string\addcontentsline,%
8289 \MessageBreak destination is added%
8290 }%
8291 \phantomsection
8292 \fi
8293 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8294 \begingroup
8295 \def\Hy@tempa{#1}%
8296 \ifx\Hy@tempa\Hy@bookmarkstype
8297 \Hy@WarningNoLine{%
8298 bookmark level for unknown #2 defaults to 0%
8299 }%
8300 \else
8301 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8302 \fi
8303 \endgroup
8304 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8305 \fi
8306 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8307 \Hy@writebookmark{\csname the#2\endcsname}%
8308 {#3}%
8309 {\@currentHref}%
8310 {\Hy@toplevel}%
8311 {#1}%
8312 \ifHy@verbose
8313 \begingroup
8314 \def\Hy@tempa{#3}%
8315 \@onelevel@sanitize\Hy@tempa
8316 \let\temp@online\on@line
8317 \let\on@line\@empty
8318 \Hy@Info{%
8319 bookmark\temp@online:\MessageBreak
8320 thecounter {\csname the#2\endcsname}\MessageBreak
8321 text {\Hy@tempa}\MessageBreak
8322 reference {\@currentHref}\MessageBreak
8323 toplevel {\Hy@toplevel}\MessageBreak
8324 type {#1}%
8325 }%
8326 \endgroup
8327 \fi
8328 \addtocontents{#1}{%
8329 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8330 }%
8331 \endgroup
8332 }

```

`\contentsline` The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8333 \def\contentsline#1#2#3#4{%
8334   \begingroup
8335     \Hy@safe@activestrue
8336   \edef\x{\endgroup
8337     \def\noexpand\Hy@tocdestname{#4}%
8338   }\x
8339   \ifx\Hy@tocdestname\ltx@empty
8340     \csname l@#1\endcsname{#2}{#3}%
8341   \else
8342     \ifcase\Hy@linktoc % none
8343       \csname l@#1\endcsname{#2}{#3}%
8344     \or % section
8345       \csname l@#1\endcsname{%
8346         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8347       }{#3}%
8348     \or % page
8349       \def\Hy@temp{#3}%
8350       \ifx\Hy@temp\ltx@empty
8351         \csname l@#1\endcsname{#2}{#3}%
8352       \else
8353         \csname l@#1\endcsname{#2}{%
8354           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8355         }%
8356       \fi
8357     \else % all
8358       \def\Hy@temp{#3}%
8359       \ifx\Hy@temp\ltx@empty
8360         \csname l@#1\endcsname{%
8361           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8362         }{}%
8363       \else
8364         \csname l@#1\endcsname{%
8365           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8366         }{%
8367           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8368         }%
8369       \fi
8370     \fi
8371   \fi
8372 }

8373 \</package>
8374 \< *check>
8375 \checklatex
8376 \checkcommand\def\addcontentsline#1#2#3{%
8377   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8378 }
8379 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8380 \</check>
8381 \< *package>

```

41 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```
8382 \let\H@definecounter\@definecounter
8383 \def\@definecounter#1{%
8384   \H@definecounter{#1}%
8385   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8386 }
```

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.

```
8387 \let\H@newctr\@newctr
8388 \def\@newctr#1[#2]{%
8389   \H@newctr#1[{#2}]%
8390   \expandafter\gdef\csname theH#1\endcsname{%
8391     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8392   }%
8393 }
```

42 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```
8394 \@ifpackageloaded{amsmath}{%
8395   \def\Hy@make@anchor{%
8396     \Hy@MakeCurrentHrefAuto{AMS}%
8397     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8398   }%
8399   \def\Hy@make@df@tag@@#1{%
8400     \gdef\df@tag{%
8401       \maketag@@@{\Hy@make@anchor#1}%
8402       \def\@currentlabel{#1}%
8403     }%
8404   }%
8405   \def\Hy@make@df@tag@@@#1{%
8406     \gdef\df@tag{%
8407       \tagform@{\Hy@make@anchor#1}%
8408       \toks@{\xp{p@equation{#1}}}%
8409       \edef\@currentlabel{\the\toks@}%
8410     }%
8411   }%
8412   \let\HyOrg@make@df@tag@@\make@df@tag@@
8413   \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
8414   \let\make@df@tag@@\Hy@make@df@tag@@
8415   \let\make@df@tag@@@ \Hy@make@df@tag@@@
8416 }
```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

8417 \ifpackagewith{hyperref}{pdftex}{%
8418   \let\H@seteqlabel\@seteqlabel
8419   \def\@seteqlabel#1{%
8420     \H@seteqlabel{#1}%
8421     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8422     \Hy@raisedlink{%
8423       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8424     }%
8425   }%
8426 }{}
```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```

\let\H@tagform@ \tagform@
\def\tagform@#1{%
  \maketag@@@{\hyper@@anchor{\@currentHref}%
    {(\ignorespaces#1\unskip)}}%
}
\def\eqref#1{\textup{\H@tagform@\ref{#1}}}
```

42.1 `\@addtoreset` and `\numberwithin` patches

`\@addtoreset` puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command `\theHcounter` is redefined in order to add the parent counter.

```

8427 \let\HyOrg@addtoreset\@addtoreset
8428 \def\@addtoreset#1#2{%
8429   \HyOrg@addtoreset{#1}{#2}%
8430   \expandafter\xdef\csname theH#1\endcsname{%
8431     \expandafter\noexpand
8432     \csname the\@ifundefined{theH#2}{ }H#2\endcsname
8433     .\noexpand\the\noexpand\value{#1}%
8434   }%
8435 }
```

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

```

8436 </package>
8437 <*check>
8438 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8439 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8440   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8441     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8442       \@addtoreset{#2}{#3}%
8443       \@xp\xdef\csname the#2\endcsname{%
8444         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8445       }%
8446     }%
8447   }%
8448 }
```

```

8449 </check>
8450 <*package>
8451 \ifpackageloaded{amsmath}{%
8452 \ifpackagelater{amsmath}{1999/12/14}{%
8453 \renewcommand*{\numberwithin}[3][\arabic]{%
8454 \ifundefined{c@#2}{\@nocounterr{#2}}{%
8455 \ifundefined{c@#3}{\@nocnterr{#3}}{%
8456 \HyOrg@addtoreset{#2}{#3}%
8457 \xp\xdef\csname the#2\endcsname{%
8458 \xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8459 }%
8460 \xp\xdef\csname theH#2\endcsname{%
8461 \xp\@nx
8462 \csname the\ifundefined{theH#3}{H#3\endcsname
8463 .\@nx#1{#2}%
8464 }%
8465 }%
8466 }%
8467 }%
8468 }{%
8469 \Hy@WarningNoLine{%
8470 \string\numberwithin\space of package `amsmath' %
8471 only fixed\MessageBreak
8472 for version 2000/06/06 v2.12 or newer%
8473 }%
8474 }%
8475 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8476 \ifHy@hyperfigures
8477 \let\Hy@Gin@setfile\Gin@setfile
8478 \def\Gin@setfile#1#2#3{%
8479 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8480 }%
8481 \fi
8482 \Hy@DisableOption{hyperfigures}

```

44 hyperindex entries

Internal command names are prefixed with `\HyInd@`.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the `|` feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the `|` specifier for something like boldening entries. That would make `Makeindex` fail (cannot have two `|` specifiers). The solution is for the author to use generic coding, and put in the requisite `\hyperpage` in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

8483 \ifHy@hyperindex

```

```

8484 \def\HyInd@ParenLeft{({}%
8485 \def\HyInd@ParenRight{)}}%
8486 \def\hyperindexformat#1#2{%
8487   \let\HyOrg@hyperpage\hyperpage
8488   \let\hyperpage\@firstofone
8489   #1{\HyOrg@hyperpage{#2}}%
8490   \let\hyperpage\HyOrg@hyperpage
8491 }%
8492 \Hy@nextfalse
8493 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8494 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8495 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8496 \begingroup
8497   \lccode`|= \expandafter`\HyInd@EncapChar\relax
8498   \lccode`\/= `\\ \relax
8499 \lowercase{\endgroup
8500   \ifHy@next
8501     \let\HyInd@org@wrindex\@wrindex
8502     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8503     \def\HyInd@@wrindex#1#2|#3|#4\{\%
8504       \ifx\\#3\\%
8505         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8506       \else
8507         \HyInd@@@wrindex{#1}{#2}#3\\%
8508       \fi
8509     }%
8510     \def\HyInd@@@wrindex#1#2#3#4\{\%
8511     \def\Hy@temp@A{#3}%
8512     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8513       \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8514       \relax
8515       \HyInd@org@wrindex{#1}{%
8516         #2|hyperindexformat{/#3#4}%
8517       }%
8518     \else
8519       \ifx\\#4\\%
8520         \ifx\Hy@temp@A\HyInd@ParenRight
8521           \HyInd@org@wrindex{#1}{#2|#3}%
8522         \else
8523           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8524         \fi
8525       \else
8526         \HyInd@org@wrindex{#1}{%
8527           #2|#3hyperindexformat{/#4}%
8528         }%
8529       \fi
8530     \fi
8531   }%
8532 \else
8533   \def\@wrindex#1{\@@wrindex#1||\}%
8534   \def\@@wrindex#1|#2|#3\{\%
8535   \if@filesw
8536     \ifx\\#2\\%
8537       \protected@write\@indexfile{\%

```

```

8538         \string\indexentry{#1|hyperpage}{\thepage}%
8539     }%
8540 \else
8541     \HyInd@@@wrindex{#1}#2\\%
8542 \fi
8543 \fi
8544 \endgroup
8545 \@esphack
8546 }%
8547 \def\HyInd@@@wrindex#1#2#3\\{%
8548 \def\Hy@temp@A{#2}%
8549 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8550     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8551     \relax
8552 \protected@write\@indexfile{}{%
8553     \string\indexentry{%
8554         #1|hyperindexformat{/#2#3}%
8555     }{\thepage}%
8556 }%
8557 \else
8558     \ifx\\#3\\%
8559     \ifx\Hy@temp@A\HyInd@ParenRight
8560         \HyInd@DefKey{#1}%
8561         \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8562             \let\Hy@temp\ltx@empty
8563         }{%
8564             \expandafter\let\expandafter\Hy@temp
8565             \csname HyInd@(\HyInd@key)\endcsname
8566         }%
8567         \protected@write\@indexfile{}{%
8568             \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8569         }%
8570     \else
8571         \protected@write\@indexfile{}{%
8572             \string\indexentry{#1|#2hyperpage}{\thepage}%
8573         }%
8574         \HyInd@DefKey{#1}%
8575         \expandafter
8576         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8577             hyperpage%
8578         }%
8579     \fi
8580 \else
8581     \protected@write\@indexfile{}{%
8582         \string\indexentry{%
8583             #1|#2hyperindexformat{/#3}%
8584         }{\thepage}%
8585     }%
8586     \ifx\Hy@temp@A\HyInd@ParenLeft
8587         \HyInd@DefKey{#1}%
8588         \expandafter
8589         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8590             hyperindexformat{/#3}%
8591         }%

```



```

8592         \fi
8593     \fi
8594 \fi
8595 }%
8596 \def\HyInd@DefKey#1{%
8597     \begingroup
8598     \let\protect\@unexpandable@protect
8599     \edef\Hy@temp{#1}%
8600     \ltx@onelevel@sanitize\Hy@temp
8601     \global\let\HyInd@key\Hy@temp
8602     \endgroup
8603 }%
8604 \fi
8605 }%
8606 \fi
8607 \Hy@DisableOption{hyperindex}
8608 \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.

```

8609 \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.

```

8610 \def\hyperpage#1{%
8611     \HyInd@hyperpage#1\nohyperpage{}\@nil
8612 }
8613 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8614     \HyInd@hyperpage{#1}%
8615     #2%
8616     \def\Hy@temp{#3}%
8617     \ifx\Hy@temp\@empty
8618     \else
8619         \ltx@ReturnAfterFi{%
8620             \HyInd@hyperpage#3\@nil
8621         }%
8622     \fi
8623 }
8624 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8625 \def\@hyperpage#1--#2--#3\{\%
8626     \ifx\#2\%
8627         \@commahyperpage{#1}%
8628     \else
8629         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8630     \fi
8631 }
8632 \def\@commahyperpage#1{\@commahyperpage#1, \}
8633 \def\@@commahyperpage#1, #2,#3\{\%
8634     \ifx\#2\%
8635         \HyInd@pagelink{#1}%
8636     \else
8637         \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8638     \fi
8639 }

```

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

```

8640 \def\HyInd@pagelink#1{%
8641   \begingroup
8642   \toks@={}%
8643   \HyInd@removespaces#1 \@nil
8644   \endgroup
8645 }
8646 \def\HyInd@removespaces#1 #2\@nil{%
8647   \toks@=\expandafter{\the\toks@#1}%
8648   \ifx\#2\%
8649     \edef\x{\the\toks@}%
8650     \ifx\x\@empty
8651       \else
8652         \hyperlink{page.\the\toks@}{\the\toks@}%
8653       \fi
8654     \else
8655       \ltx@ReturnAfterFi{%
8656         \HyInd@removespaces#2\@nil
8657       }%
8658     \fi
8659 }

```

45 Compatibility with foiltex

```

8660 \@ifclassloaded{foils}{%
8661   \providecommand*\ext@table{lot}%
8662   \providecommand*\ext@figure{lof}%
8663 }{}

```

46 Compatibility with seminar slide package

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

```

8664 \@ifclassloaded{seminar}{%
8665   \Hy@seminarstrue
8666   \providecommand\theHslide{\arabic{slide}}%
8667 }{}
8668 \Hy@seminarslidesfalse
8669 }
8670 \@ifpackageloaded{slidesec}{%
8671   \providecommand\theHslidesection {\arabic{slidesection}}%
8672   \providecommand\theHslidesubsection{%
8673     \theHslidesection.\arabic{slidesubsection}}%
8674   }%
8675   \def\slide@heading[#1]#2{%
8676     \H@refstepcounter{slidesection}%
8677     \@addtoreset{slidesubsection}{slidesection}%
8678     \addtocontents{los}{%
8679       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8680       {\@SCTR}{\slideheading.\theslide\theslide\theslide}%
8681     }%

```

```

8682 \def\Hy@tempa{#2}%
8683 \ifx\Hy@tempa\@empty
8684 \else
8685 {%
8686 \edef\@currentlabel{%
8687 \csname p@slidesection\endcsname\theslidesection
8688 }%
8689 \makeslideheading{#2}%
8690 }%
8691 \fi
8692 \gdef\theslideheading{#1}%
8693 \gdef\theslidesubheading{}%
8694 \ifHy@bookmarksnumbered
8695 \def\Hy@slidetitle{\theslidesection\space #1}%
8696 \else
8697 \def\Hy@slidetitle{#1}%
8698 \fi
8699 \ifHy@hypertextnames
8700 \ifHy@naturalnames
8701 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8702 \Hy@writebookmark
8703 {\theslidesection}%
8704 {\Hy@slidetitle}%
8705 {slideheading.\theslidesection}%
8706 {1}%
8707 {toc}%
8708 \else
8709 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8710 \Hy@writebookmark
8711 {\theslidesection}%
8712 {\Hy@slidetitle}%
8713 {slideheading.\theHslidesection}%
8714 {1}%
8715 {toc}%
8716 \fi
8717 \else
8718 \Hy@GlobalStepCount\Hy@linkcounter
8719 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8720 \Hy@writebookmark
8721 {\theslidesection}%
8722 {\Hy@slidetitle}%
8723 {slideheading.\the\Hy@linkcounter}%
8724 {1}%
8725 {toc}%
8726 \fi
8727 }%
8728 \def\slide@subheading[#1]#2{%
8729 \H@refstepcounter{slidesubsection}%
8730 \addtocontents{los}{%
8731 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8732 {\@SCTR}{slideheading.\theslidesubsection}%
8733 }%
8734 \def\Hy@tempa{#2}%
8735 \ifx\Hy@tempa\@empty

```

```

8736 \else
8737 {%
8738 \edef\@currentlabel{%
8739 \csname p@slidessubsection\endcsname\theslidessubsection
8740 }%
8741 \makeslidesubheading{#2}%
8742 }%
8743 \fi
8744 \gdef\theslidesubheading{#1}%
8745 \ifHy@bookmarksnumbered
8746 \def\Hy@slidetitle{\theslidessubsection\space #1}%
8747 \else
8748 \def\Hy@slidetitle{#1}%
8749 \fi
8750 \ifHy@hypertextnames
8751 \ifHy@naturalnames
8752 \hyper@@anchor{slideheading.\theslidessubsection}{\relax}%
8753 \Hy@writebookmark
8754 {\theslidessubsection}%
8755 {\Hy@slidetitle}%
8756 {slideheading.\theslidessubsection}%
8757 {2}%
8758 {toc}%
8759 \else
8760 \hyper@@anchor{slideheading.\theHslidessubsection}{\relax}%
8761 \Hy@writebookmark
8762 {\theslidessubsection}%
8763 {\Hy@slidetitle}%
8764 {slideheading.\theHslidessubsection}%
8765 {2}%
8766 {toc}%
8767 \fi
8768 \else
8769 \Hy@GlobalStepCount\Hy@linkcounter
8770 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8771 \Hy@writebookmark
8772 {\theslidessubsection}%
8773 {\Hy@slidetitle}%
8774 {slideheading.\the\Hy@linkcounter}%
8775 {1}%
8776 {toc}%
8777 \fi
8778 }%
8779 \providecommand*\listslidenamelist{List of Slides}%
8780 \def\listofslides{%
8781 \section*{%
8782 \listslidenamelist
8783 \@mkboth{%
8784 \expandafter\MakeUppercase\listslidenamelist
8785 }{%
8786 \expandafter\MakeUppercase\listslidenamelist
8787 }%
8788 }%
8789 \def\l@slide##1##2##3##4{%

```

```

8790 \slide@undottedcline{%
8791 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8792 }{}%
8793 }%
8794 \let\l@subslide\l@slide
8795 \@startlos
8796 }%
8797 \def\slide@contents{%
8798 \def\l@slide##1##2##3##4{%
8799 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8800 }%
8801 \let\l@subslide\@gobblefour
8802 \@startlos
8803 }%
8804 \def\Slide@contents{%
8805 \def\l@slide##1##2##3##4{%
8806 \ifcase\lslide@flag
8807 \message{##1 ** \the\c@slidesection}%
8808 \ifnum##1>\c@slidesection
8809 \def\lslide@flag{1}%
8810 {%
8811 \large
8812 \slide@cline{%
8813 \slidenumberline{$\rightarrow\bullet$}%
8814 {\hyperlink{##4}{##2}}%
8815 }{##3}%
8816 }%
8817 \else
8818 {%
8819 \large
8820 \slide@cline{%
8821 \slidenumberline{$\surd\;\bullet$}%
8822 {\hyperlink{##4}{##2}}%
8823 }{##3}%
8824 }%
8825 \fi
8826 \or
8827 \def\lslide@flag{2}%
8828 {%
8829 \large
8830 \slide@cline{%
8831 \slidenumberline{$\bullet$}%
8832 {\hyperlink{##4}{##2}}%
8833 }{##3}%
8834 }%
8835 \or
8836 {%
8837 \large
8838 \slide@cline{%
8839 \slidenumberline{$\bullet$}%
8840 {\hyperlink{##4}{##2}}%
8841 }{##3}%
8842 }%
8843 \fi

```

```

8844 }%
8845 \def\l@subslide##1##2##3##4{%
8846   \ifnum\lslide@flag=1 %
8847     \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
8848   \fi
8849 }%
8850 \def\lslide@flag{0}%
8851 \@startlos
8852 }%
8853 }{}

```

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.)

```

8854 \ifHy@texht
8855   \expandafter\endinput
8856 \fi
8857 \let\real@setref\@setref
8858 \def\@setref#1#2#3{% csname, extract group, refname
8859   \ifx#1\relax
8860     \protect\G@refundefinedtrue
8861     \nfss@text{\reset@font\bfseries ??}%
8862     \@latex@warning{%
8863       Reference `#3' on page \thepage \space undefined%
8864     }%
8865   \else
8866     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8867   \fi
8868 }

```

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

```

8869 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8870   \begingroup
8871     \toks0={\hyper@@link{#5}{#4}}%
8872     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8873     \edef\x{\endgroup
8874       \the\toks0 {\the\toks1 }%
8875     }%
8876   \x
8877 }
8878 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8879   \ifx#1\relax
8880     \protect\G@refundefinedtrue
8881     \nfss@text{\reset@font\bfseries ??}%
8882     \@latex@warning{%
8883       Reference `#3' on page \thepage \space undefined%
8884     }%
8885   \else
8886     \protect\hyper@@link
8887     {\expandafter\@fifthoffive#1}%
8888     {page.\expandafter\@secondoffive#1}%
8889     {\expandafter\@secondoffive#1}%
8890   \fi
8891 }

```

```

8892 \package
8893 \*check
8894 \checklatex
8895 \checkcommand\def\@setref#1#2#3{%
8896   \ifx#1\relax
8897     \protect\G@refundefinedtrue
8898     \nfss@text{\reset@font\bfseries ??}%
8899     \@latex@warning{%
8900       Reference `#3' on page \thepage\space undefined%
8901     }%
8902   \else
8903     \expandafter#2#1\null
8904   \fi
8905 }
8906 \check
8907 \*package

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

8908 \def\HyRef@StarSetRef#1{%
8909   \begingroup
8910   \Hy@safe@activestru
8911   \edef\x{#1}%
8912   \@onelevel@sanitize\x
8913   \edef\x{\endgroup
8914     \noexpand\HyRef@@StarSetRef
8915     \expandafter\noexpand\csname r@\x\endcsname{\x}%
8916   }%
8917   \x
8918 }
8919 \def\HyRef@@StarSetRef#1#2#3{%
8920   \ifx#1\@undefined
8921     \let#1\relax
8922   \fi
8923   \real@setref#1#3{#2}%
8924 }
8925 \def\@refstar#1{%
8926   \HyRef@StarSetRef{#1}\@firstoffive
8927 }
8928 \def\@pagerefstar#1{%
8929   \HyRef@StarSetRef{#1}\@secondoffive
8930 }
8931 \def\@namerefstar#1{%
8932   \HyRef@StarSetRef{#1}\@thirdoffive
8933 }
8934
8935 \Hy@AtBeginDocument{%
8936   \ifpackageloaded{varioref}{%
8937     \def\@Refstar#1{%
8938       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8939     }%
8940     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8941       \MakeUppercase#1%
8942     }%

```

```

8943 \DeclareRobustCommand*\Ref}{\Ref}{\%
8944 \@ifstar\@Refstar\HyRef@Ref
8945 }%
8946 \def\HyRef@Ref#1{%
8947 \hyperref[{#1}]{\Ref*{#1}}%
8948 }%

```

Test if we are running new 2019 varioref or old one:

```

8949 %FMi
8950 \ifdefined\vp@gerefstar
8951 \renewcommand\Vref@star[2][]{%
8952 \begingroup
8953 \let\T@pageref\@pagerefstar
8954 \Ref*{#2}
8955 \vpageref[#1]{#2}%
8956 \endgroup
8957 }%
8958 \renewcommand\Vr@f[2][]{%
8959 \begingroup
8960 \let\T@pageref\@pagerefstar
8961 \hyperref[{#2}]{\%
8962 \Ref*{#2}
8963 \vpageref[#1]{#2}%
8964 }%
8965 \endgroup
8966 }%
8967 \renewcommand\vr@f[2][]{%
8968 \begingroup
8969 \let\T@pageref\@pagerefstar
8970 \hyperref[{#2}]{\%
8971 \ref*{#2}
8972 \vpageref[#1]{#2}%
8973 }%
8974 \endgroup
8975 }%
8976 \renewcommand\vref@star[2][]{%
8977 \begingroup
8978 \let\T@pageref\@pagerefstar
8979 \ref*{#2}
8980 \vpageref[#1]{#2}%
8981 \endgroup
8982 }%

```

old varioref:

```

8983 \else
8984 \def\Vr@f#1{%
8985 \leavevmode\unskip\vref@space
8986 \hyperref[{#1}]{\%
8987 \Ref*{#1}}%
8988 \let\vref@space\nobreakspace
8989 \@vpageref[\unskip]{#1}%
8990 }%
8991 }%
8992 \def\vr@f#1{%
8993 \leavevmode\unskip\vref@space

```



```

8994 \begingroup
8995 \let\T@pageref\@pagerefstar
8996 \hyperref[{#1}]{%
8997 \ref*{#1}%
8998 \vpageref[\unskip]{#1}%
8999 }%
9000 \endgroup
9001 }%
9002 \fi
9003 %FMi -end mod
9004 }{}%
9005 }
9006
9007 \DeclareRobustCommand*\autopageref{%
9008 \ifstar{%
9009 \HyRef@autopagerefname\pageref*%
9010 }\HyRef@autopageref
9011 }
9012 \def\HyRef@autopageref#1{%
9013 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9014 }
9015 \def\HyRef@autopagerefname{%
9016 \ltx@ifundefined{pageautorefname}{%
9017 \ltx@ifundefined{pagename}{%
9018 \Hy@Warning{No autoref name for `page'}%
9019 }{}%
9020 \pagename\nobreakspace
9021 }%
9022 }{}%
9023 \pageautorefname\nobreakspace
9024 }%
9025 }

```

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

```

9026 \DeclareRobustCommand*\autoref{%
9027 \leavevmode
9028 \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9029 }
9030 \def\HyRef@autoref#1#2{%
9031 \begingroup
9032 \Hy@safe@activetrue
9033 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9034 \endgroup
9035 }
9036 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9037 \HyRef@ShowKeysRef{#2}%
9038 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9039 \edef\HyRef@thisref{%
9040 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9041 }%
9042 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9043 \Hy@safe@activesfalse
9044 #3}%

```

```

9045 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9046 }{%
9047 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9048 }{%
9049 \HyRef@currentHtag
9050 \expandafter\@firstoffive#1\@empty\@empty\@empty
9051 \null
9052 }%
9053 \else
9054 \protect\G@refundefinedtrue
9055 \nfss@text{\reset@font\bfseries ??}%
9056 \@latex@warning{%
9057 Reference `#2' on page \thepage\space undefined%
9058 }%
9059 \fi
9060 }
9061 \def\HyRef@testreftype#1.#2\{\%
9062 \ltx@ifundefined{#1autorefname}{%
9063 \ltx@ifundefined{#1name}{%
9064 \HyRef@StripStar#1\*\@nil{#1}%
9065 \ltx@ifundefined{\HyRef@name autorefname}{%
9066 \ltx@ifundefined{\HyRef@name name}{%
9067 \def\HyRef@currentHtag{%
9068 \Hy@Warning{No autoref name for `#1'}%
9069 }{%
9070 \edef\HyRef@currentHtag{%
9071 \expandafter\noexpand\csname\HyRef@name name\endcsname
9072 \noexpand~%
9073 }%
9074 }%
9075 }{%
9076 \edef\HyRef@currentHtag{%
9077 \expandafter\noexpand
9078 \csname\HyRef@name autorefname\endcsname
9079 \noexpand~%
9080 }%
9081 }%
9082 }{%
9083 \edef\HyRef@currentHtag{%
9084 \expandafter\noexpand\csname#1name\endcsname
9085 \noexpand~%
9086 }%
9087 }%
9088 }{%
9089 \edef\HyRef@currentHtag{%
9090 \expandafter\noexpand\csname#1autorefname\endcsname
9091 \noexpand~%
9092 }%
9093 }%
9094 }
9095 \def\HyRef@StripStar#1*\@nil#3{%
9096 \def\HyRef@name{#2}%
9097 \ifx\HyRef@name\HyRef@CaseStar
9098 \def\HyRef@name{#1}%

```

```

9099 \else
9100   \def\HyRef@name{#3}%
9101 \fi
9102 }
9103 \def\HyRef@CaseStar{*\\}
9104 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9105 \let\HyRef@ShowKeysRef@gobble
9106 \def\HyRef@ShowKeysInit{%
9107   \begingroup\expandafter\expandafter\expandafter\endgroup
9108   \expandafter\ifx\csname SK@@label\endcsname\relax
9109   \else
9110     \ifx\SK@ref\@empty
9111     \else
9112       \def\HyRef@ShowKeysRef{%
9113         \SK@\SK@@ref
9114       }%
9115     \fi
9116   \fi
9117 }
9118 \@ifpackageloaded{showkeys}{%
9119   \HyRef@ShowKeysInit
9120 }{%
9121   \Hy@AtBeginDocument{%
9122     \@ifpackageloaded{showkeys}{%
9123       \HyRef@ShowKeysInit
9124     }{%
9125     }%
9126 }

```

Defaults for the names that \autoref uses.

```

9127 \providecommand*\AMSautorefname{\equationautorefname}
9128 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9129 \providecommand*\Itemautorefname{\itemautorefname}
9130 \providecommand*\itemautorefname{item}
9131 \providecommand*\equationautorefname{Equation}
9132 \providecommand*\footnoteautorefname{footnote}
9133 \providecommand*\itemautorefname{item}
9134 \providecommand*\figureautorefname{Figure}
9135 \providecommand*\tableautorefname{Table}
9136 \providecommand*\partautorefname{Part}
9137 \providecommand*\appendixautorefname{Appendix}
9138 \providecommand*\chapterautorefname{chapter}
9139 \providecommand*\sectionautorefname{section}
9140 \providecommand*\subsectionautorefname{subsection}
9141 \providecommand*\subsubsectionautorefname{subsubsection}
9142 \providecommand*\paragraphautorefname{paragraph}
9143 \providecommand*\subparagraphautorefname{subparagraph}
9144 \providecommand*\FancyVerbLineautorefname{line}
9145 \providecommand*\theoremautorefname{Theorem}
9146 \providecommand*\pageautorefname{page}
9147 \</package>

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_{TEX} offers `\pdfescapestring`.

```
9148 <*pdftex | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9149 \begingroup\expandafter\expandafter\expandafter\endgroup
9150 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9151 \begingroup
9152 \catcode`\|=0 %
9153 \@makeother\|%
9154 |@firstofone{|endgroup
9155 |def|Hy@pstringdef#1#2{%
9156 |begingroup
9157 |edef~{|string~}%
9158 |xdef|Hy@gtemp{#2}%
9159 |endgroup
9160 |let#1|Hy@gtemp
9161 |@onelevel@sanitize#1%
9162 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9163 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9164 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9165 }%
9166 |def|Hy@ExchangeBackslash#1/#2|@nil{%
9167 #1%
9168 |ifx|\#2|\%%
9169 |else
9170 \\\%
9171 |ltx@ReturnAfterFi{%
9172 |Hy@ExchangeBackslash#2|@nil
9173 }%
9174 |fi
9175 }%
9176 }%
9177 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9178 #1%
9179 \ifx\|#2\%%
9180 \else
9181 \@backslashchar(%
9182 \ltx@ReturnAfterFi{%
9183 \Hy@ExchangeLeftParenthesis#2\@nil
9184 }%
9185 \fi
9186 }%
9187 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9188 #1%
9189 \ifx\|#2\%%
9190 \else
```

```

9191     \@backslashchar)%
9192     \ltx@ReturnAfterFi{%
9193         \Hy@ExchangeRightParenthesis#2\@nil
9194     }%
9195     \fi
9196 }%
9197 \else
9198 \def\Hy@pstringdef#1#2{%
9199     \begingroup
9200     \edef~{\string~}%
9201     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9202     \endgroup
9203     \let#1\Hy@gtemp
9204 }%
9205 \fi
9206 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9207 < *pdfTeX>
9208 \providecommand*\XR@ext}{pdf}
9209 \Hy@setbreaklinks{true}
9210 \def\HyPat@ObjRef{%
9211     [0-9]*[1-9][0-9]* 0 R%
9212 }

```

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

```

9213 \let\Hy@pdfminorversion\relax
9214 \begingroup\expandafter\expandafter\expandafter\endgroup
9215 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9216     \begingroup\expandafter\expandafter\expandafter\endgroup
9217     \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9218     \else
9219         \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9220     \fi
9221 \else
9222     \def\Hy@pdfminorversion{\pdfminorversion}%
9223 \fi
9224 \@ifundefined{Hy@pdfminorversion}{%
9225     \PackageInfo{hyperref}{%
9226         PDF version is not set, because pdfTeX is too old (<1.10a)%
9227     }%
9228 }{%
9229     \ifHy@ocgcolorlinks
9230         \ifnum\Hy@pdfmajorminor@version<105 %
9231             \kvsetkeys{Hyp}{pdfversion=1.5}%
9232         \fi
9233     \fi

```

```

9234 \ifHy@setpdfversion
9235   \ifnum\Hy@pdf@majorminor@version<105 %
9236     \ltx@ifundefined{pdfobjcompresslevel}{%
9237       }{%
9238         \ifHy@verbose
9239           \Hy@InfoNoLine{%
9240             PDF object streams are disabled, because they are%
9241             \MessageBreak
9242             not supported in requested PDF version %
9243             \Hy@pdf@majorversion.\Hy@pdf@minorversion
9244           }%
9245         \fi
9246         \pdfobjcompresslevel=\ltx@zero
9247       }%
9248     \fi
9249   \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
9250   \else
9251     \let\Hy@temp\ltx@empty
9252     \def\Hy@temp@A#1#2{%
9253       \ifnum#1>\ltx@zero
9254         \edef\Hy@temp{%
9255           \Hy@temp
9256           \space\space
9257           \the#1\space #2%
9258           \ifnum#1=\ltx@one\else s\fi
9259           \MessageBreak
9260         }%
9261       \fi
9262     }%
9263     \Hy@temp@A\pdflastobj{PDF object}%
9264     \Hy@temp@A\pdflastxform{formXObject}%
9265     \Hy@temp@A\pdflastximage{imageXObject}%
9266     \Hy@temp@A\pdflastannot{annotation}%
9267     \ltx@ifundefined{pdflastlink}{%
9268       }{%
9269         \Hy@temp@A\pdflastlink{link}%
9270       }%
9271     \ifx\Hy@temp\ltx@empty
9272       \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
9273       \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
9274     \else
9275       \let\Hy@temp@A\ltx@empty
9276       \ifnum\Hy@pdf@majorminor@version=104 %
9277         \IfFileExists{pdf14.sty}{%
9278           \def\Hy@temp@A{%
9279             \MessageBreak
9280             Or \string\RequirePackage{pdf14} can be used%
9281             \MessageBreak
9282             before \string\documentclass\space as shortcut%
9283           }%
9284         }{}%
9285       \fi
9286       \Hy@WarningNoLine{%
9287         The PDF version number could not be set,\MessageBreak

```

```

9288     because some PDF objects are already written:%
9289     \MessageBreak
9290     \Hy@temp
9291     The version should be set as early as possible:%
9292     \MessageBreak
9293     \space\space
9294     \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
9295     \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
9296     \string\relax
9297     \ifnum\Hy@pdf@majorminor@version<105 %
9298     \ltx@ifundefined{pdfobjcompresslevel}{%
9299     }{%
9300     \MessageBreak
9301     \space\space
9302     \string\pdfobjcompresslevel=0\string\relax
9303     }%
9304     \fi
9305     \Hy@temp@A
9306     }%
9307     \fi
9308     \fi
9309     \PackageInfo{hyperref}{%
9310     \expandafter\string\Hy@pdfmajorversion.%
9311     \expandafter\string\Hy@pdfminorversion
9312     :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
9313     }%
9314     \fi
9315     \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
9316     \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
9317 }
9318 \Hy@DisableOption{pdfversion}%

9319 \ifHy@ocgcolorlinks
9320 \pdf@ifdraftmode{}{%
9321 \immediate\pdfobj{%
9322 <<%
9323 /Type/OCG%
9324 /Name(View)%
9325 /Usage<<%
9326 /Print<<%
9327 /PrintState/OFF%
9328 >>%
9329 /View<<%
9330 /ViewState/ON%
9331 >>%
9332 >>%
9333 >>%
9334 }%
9335 \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
9336 \immediate\pdfobj{%
9337 <<%
9338 /Type/OCG%
9339 /Name(Print)%
9340 /Usage<<%
9341 /Print<<%

```

```

9342         /PrintState/ON%
9343     >>%
9344     /View<<%
9345         /ViewState/OFF%
9346     >>%
9347     >>%
9348     >>%
9349 }%
9350 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9351 \immediate\pdfobj{%
9352     [%
9353         \OBJ@OCG@view\space\OBJ@OCG@print
9354     ]%
9355 }%
9356 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9357 \pdfcatalog{%
9358     /OCProperties<<%
9359         /OCGs \OBJ@OCGs
9360     /D<<%
9361         /OFF[\OBJ@OCG@print]%
9362     /AS[%
9363         <<%
9364             /Event/View%
9365             /OCGs \OBJ@OCGs
9366             /Category[/View]%
9367         >>%
9368         <<%
9369             /Event/Print%
9370             /OCGs \OBJ@OCGs
9371             /Category[/Print]%
9372         >>%
9373         <<%
9374             /Event/Export%
9375             /OCGs \OBJ@OCGs
9376             /Category[/Print]%
9377         >>%
9378     ]%
9379     >>%
9380 >>%
9381 }%
9382 \begingroup
9383 \edef\x{\endgroup
9384     \pdfpageresources{%
9385         \the\pdfpageresources
9386     /Properties<<%
9387         /OCView \OBJ@OCG@view
9388         /OCPrint \OBJ@OCG@print
9389     >>%
9390     }%
9391 }%
9392 \x
9393 }%
9394 \Hy@AtBeginDocument{%
9395     \def\Hy@colorlink#1{%

```



```

9396 \begingroup
9397 \ifHy@ocgcolorlinks
9398 \def\Hy@ocgcolor{#1}%
9399 \setbox0=\hbox\bgroup\color@begingroup
9400 \else
9401 \HyColor@UseColor#1%
9402 \fi
9403 }%
9404 \def\Hy@endcolorlink{%
9405 \ifHy@ocgcolorlinks
9406 \color@endgroup\egroup
9407 \mbox{%
9408 \pdfliteral page{/OC/OCPrint BDC}%
9409 \rlap{\copy0}%
9410 \pdfliteral page{EMC/OC/OCView BDC}%
9411 \begingroup
9412 \expandafter\HyColor@UseColor\Hy@ocgcolor
9413 \box0 %
9414 \endgroup
9415 \pdfliteral page{EMC}%
9416 }%
9417 \fi
9418 \endgroup
9419 }%
9420 }%
9421 \else
9422 \Hy@DisableOption{ocgcolorlinks}%
9423 \fi

```

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

```

9424 \def\setpdfinkmargin#1{%
9425 \begingroup
9426 \setlength{\dimen@}{#1}%
9427 \expandafter\endgroup
9428 \expandafter\pdfinkmargin\the\dimen@\relax
9429 }
9430 \ifx\pdfstartlink\@undefined% less than version 14
9431 \let\pdfstartlink\pdfannotlink
9432 \let\pdfinkmargin\@tempdima
9433 \let\pdfxform\pdfform
9434 \let\pdfastxform\pdfastform
9435 \let\pdfrefxform\pdfrefform
9436 \else
9437 \pdfinkmargin1pt %
9438 \fi

```

First set up the default linking

```

9439 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9440 \Hy@WrapperDef\new@pdfink#1{%
9441 \ifhmode
9442 \@savsf\spacefactor
9443 \fi
9444 \Hy@SaveLastskip

```

```

9445 \Hy@VerboseAnchor{#1}%
9446 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9447 \Hy@DestName\Hy@pstringDest\@pdfview
9448 \Hy@RestoreLastskip
9449 \ifhmode
9450   \spacefactor\@savs
9451 \fi
9452 }
9453 \let\pdf@endanchor\@empty

```

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

```

9454 \def\Hy@DestName#1#2{%
9455   \pdfdest name{#1}#2\relax
9456 }

```

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.

```

9457 \providecommand*\@pdfborder{0 0 1}
9458 \providecommand*\@pdfborderstyle{}
9459 \def\Hy@undefinedname{UNDEFINED}
9460 \def\find@pdflink#1#2{%
9461   \leavevmode
9462   \protected@edef\Hy@testname{#2}%
9463   \ifx\Hy@testname\@empty
9464     \Hy@Warning{%
9465       Empty destination name,\MessageBreak
9466       using '\Hy@undefinedname'%
9467     }%
9468     \let\Hy@testname\Hy@undefinedname
9469   \else
9470     \Hy@pstringdef\Hy@testname{%
9471       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9472     }%
9473   \fi
9474   \Hy@StartlinkName{%
9475     \ifHy@pdfa /F 4\fi
9476     \Hy@setpdfborder
9477     \Hy@setpdfhighlight
9478     \ifx\CurrentBorderColor\relax
9479       \else
9480         /C[\CurrentBorderColor]%
9481       \fi
9482   }\Hy@testname
9483   \expandafter\Hy@colorlink\csname @#1color\endcsname
9484 }
9485 \def\Hy@StartlinkName#1#2{%
9486   \pdfstartlink attr{#1}goto name{#2}\relax
9487 }
9488 \def\close@pdflink{%
9489   \Hy@endcolorlink
9490   \Hy@VerboseLinkStop

```

```

9491 \pdfendlink
9492 }
9493 \def\hyper@anchor#1{%
9494 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9495 }
9496 \def\hyper@anchorstart#1{%
9497 \new@pdfink{#1}%
9498 \Hy@activeanchortrue
9499 }
9500 \def\hyper@anchorend{%
9501 \pdf@endanchor
9502 \Hy@activeanchorfalse
9503 }
9504 \def\hyper@linkstart#1#2{%
9505 \Hy@VerboseLinkStart{#1}{#2}%
9506 \ltx@ifundefined{@#1bordercolor}{%
9507 \let\CurrentBorderColor\relax
9508 }{%
9509 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9510 }%
9511 \find@pdfink{#1}{#2}%
9512 }
9513 \def\hyper@linkend{\close@pdfink}
9514 \def\hyper@link#1#2#3{%
9515 \Hy@VerboseLinkStart{#1}{#2}%
9516 \ltx@ifundefined{@#1bordercolor}{%
9517 \let\CurrentBorderColor\relax
9518 }{%
9519 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9520 }%
9521 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9522 \close@pdfink
9523 }
9524 \let\CurrentBorderColor\@linkbordercolor
9525 \def\hyper@linkurl#1#2{%
9526 \begingroup
9527 \Hy@pstringdef\Hy@pstringURI{#2}%
9528 \hyper@chars
9529 \leavevmode
9530 \pdfstartlink
9531 attr{%
9532 \Hy@setpdfborder
9533 \Hy@setpdfhighlight
9534 \ifx\@urlbordercolor\relax
9535 \else
9536 /C[\@urlbordercolor]%
9537 \fi
9538 }%
9539 user{%
9540 /Subtype/Link%
9541 \ifHy@pdfa /F 4\fi
9542 /A<<%
9543 /Type/Action%
9544 /S/URI%

```

```

9545      /URI(\Hy@pstringURI)%
9546      \ifHy@href@ismap
9547      /IsMap true%
9548      \fi
9549      \Hy@href@nextactionraw
9550      >>%
9551      }%
9552      \relax
9553      \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9554      \close@pdflink
9555      \endgroup
9556  }
9557  \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9558      \begingroup
9559      \def\Hy@pstringF{#2}%
9560      \Hy@CleanupFile\Hy@pstringF
9561      \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9562      \Hy@pstringdef\Hy@pstringD{#3}%
9563      \Hy@MakeRemoteAction
9564      \leavevmode
9565      \pdfstartlink
9566      attr{%
9567          \Hy@setpdfborder
9568          \Hy@setpdfhighlight
9569          \ifx\@filebordercolor\relax
9570              \else
9571              /C[\@filebordercolor]%
9572          \fi
9573      }%
9574      user {%
9575          /Subtype/Link%
9576          \ifHy@pdfa /F 4\fi
9577          /A<<%
9578          /F(\Hy@pstringF)%
9579          /S/GoToR%
9580          \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}

```

```

9581      \ifx\#3\%
9582      /D[\Hy@href@page\@pdfremotestartview]%
9583      \else
9584      /D(\Hy@pstringD)%
9585      \fi
9586      \Hy@href@nextactionraw

```

```

9587     >>%
9588   }%
9589   \relax
9590   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9591   \close@pdflink
9592 \endgroup
9593 }
9594 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9595   \begingroup
9596   \Hy@pstringdef\Hy@pstringF{#1}%
9597   \Hy@pstringdef\Hy@pstringP{#3}%
9598   \leavevmode
9599   \pdfstartlink
9600   attr{%
9601     \Hy@setpdfborder
9602     \Hy@setpdfhighlight
9603     \ifx\@runbordercolor\relax
9604     \else
9605       /C[\@runbordercolor]%
9606     \fi
9607   }%
9608   user {%
9609     /Subtype/Link%
9610     \ifHy@pdfa /F 4\fi
9611     /A<<%
9612       /F(\Hy@pstringF)%
9613       /S/Launch%
9614       \Hy@SetNewWindow
9615       \ifx\|#3\|
9616       \else
9617         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9618       \fi
9619       \Hy@href@nextactionraw
9620     >>%
9621   }%
9622   \relax
9623   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9624   \close@pdflink
9625 \endgroup
9626 }

```

\PDF@SetupDox

```

9627 \def\PDF@SetupDoc{%
9628   \ifx\@pdfpagescrop\@empty
9629   \else
9630     \edef\process@me{%
9631       \pdfpagesattr={%
9632         /CropBox[\@pdfpagescrop]%
9633         \expandafter\ifx\expandafter\|the\pdfpagesattr\|
9634         \else
9635           ^^J\the\pdfpagesattr
9636         \fi
9637       }%
9638     }%

```

```

9639 \process@me
9640 \fi
9641 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9642 \pdfcatalog{%
9643 /PageMode/\@pdfpagemode
9644 \ifx\@baseurl\@empty
9645 \else
9646 /URI<</Base(\Hy@pstringB)>>%
9647 \fi
9648 }%
9649 \ifx\@pdfstartpage\@empty
9650 \else
9651 \ifx\@pdfstartview\@empty
9652 \else
9653 openaction goto page\@pdfstartpage{\@pdfstartview}%
9654 \fi
9655 \fi
9656 \edef\Hy@temp{%
9657 \ifHy@pdftoolbar\else /HideToolbar true\fi
9658 \ifHy@pdfmenubar\else /HideMenubar true\fi
9659 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9660 \ifHy@pdfwindow /FitWindow true\fi
9661 \ifHy@pdfcenterwindow /CenterWindow true\fi
9662 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9663 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9664 \Hy@UseNameKey{Direction}\@pdfdirection
9665 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9666 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9667 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9668 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9669 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9670 \Hy@UseNameKey{Duplex}\@pdfduplex
9671 \ifx\@pdfpicktraybypdfsize\@empty
9672 \else
9673 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9674 \fi
9675 \ifx\@pdfprintpagerange\@empty
9676 \else
9677 /PrintPageRange[\@pdfprintpagerange]%
9678 \fi
9679 \ifx\@pdfnumcopies\@empty
9680 \else
9681 /NumCopies \@pdfnumcopies
9682 \fi
9683 }%
9684 \pdfcatalog{%
9685 \ifx\Hy@temp\@empty
9686 \else
9687 /ViewerPreferences<<\Hy@temp>>%
9688 \fi
9689 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9690 \ifx\@pdflang\relax
9691 \else
9692 /Lang(\@pdflang)%

```

```

9693   \fi
9694 }%
9695 }

\PDF@FinishDoc

9696 \def\PDF@FinishDoc{%
9697   \pdf@ifdraftmode{}{%
9698     \Hy@UseMaketitleInfos
9699     \HyInfo@GenerateAddons
9700     \pdfinfo{%
9701       /Author(\@pdfauthor)%
9702       /Title(\@pdftitle)%
9703       /Subject(\@pdfsubject)%
9704       /Creator(\@pdfcreator)%
9705       \ifx\@pdfcreationdate\@empty
9706       \else
9707         /CreationDate(\@pdfcreationdate)%
9708       \fi
9709       \ifx\@pdfmoddate\@empty
9710       \else
9711         /ModDate(\@pdfmoddate)%
9712       \fi
9713       \ifx\@pdfproducer\relax
9714       \else
9715         /Producer(\@pdfproducer)%
9716       \fi
9717       /Keywords(\@pdfkeywords)%
9718       \ifx\@pdftrapped\@empty
9719       \else
9720         /Trapped/\@pdftrapped
9721       \fi
9722       \HyInfo@Addons
9723     }%
9724   }%
9725   \Hy@DisableOption{pdfauthor}%
9726   \Hy@DisableOption{pdftitle}%
9727   \Hy@DisableOption{pdfsubject}%
9728   \Hy@DisableOption{pdfcreator}%
9729   \Hy@DisableOption{addtopdfcreator}%
9730   \Hy@DisableOption{pdfcreationdate}%
9731   \Hy@DisableOption{pdfmoddate}%
9732   \Hy@DisableOption{pdfproducer}%
9733   \Hy@DisableOption{pdfkeywords}%
9734   \Hy@DisableOption{pdftrapped}%
9735   \Hy@DisableOption{pdfinfo}%
9736 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

9737 \def\hyper@pagetransition{%
9738   \ifx\@pdfpagetransition\relax
9739   \else
9740     \expandafter\Hy@RemoveTransPageAttr

```

```

9741 \the\pdfpageattr^^J/Trans{}>>\END
9742 \ifx\@pdfpagetransition\@empty
9743 \else
9744 \edef\@processme{%
9745 \global\pdfpageattr{%
9746 \the\pdfpageattr
9747 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9748 }%
9749 }%
9750 \@processme
9751 \fi
9752 \fi
9753 }

```

`\Hy@RemoveTransPageAttr` Macro `\Hy@RemoveTransPageAttr` removes a `/Trans` entry from `\pdfpageattr`. It is called with the end marker `^^J/Trans{}>>\END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

9754 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9755 \ifx\\#2\\%
9756 \global\pdfpageattr{#1}%
9757 \else
9758 \Hy@RemoveTransPageAttr#1#4\END
9759 \fi
9760 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpage-duration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

9761 \def\hyper@pageduration{%
9762 \ifx\@pdfpageduration\relax
9763 \else
9764 \expandafter
9765 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9766 \ifx\@pdfpageduration\@empty
9767 \else
9768 \edef\@processme{%
9769 \global\pdfpageattr{%
9770 \the\pdfpageattr
9771 ^^J/Dur \@pdfpageduration\space
9772 }%
9773 }%
9774 \@processme
9775 \fi
9776 \fi
9777 }

```

`\Hy@RemoveDurPageAttr` Macro `\Hy@RemoveDurPageAttr` removes a `/Dur` entry from `\pdfpageattr`. It is called with the end marker `^^J/Dur{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

9778 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%

```



```

9779 \ifx\|#2\|%
9780 \global\pdfpageattr{#1}%
9781 \else
9782 \Hy@RemoveDurPageAttr#1#4\END
9783 \fi
9784 }

9785 \pdf@ifdraftmode{}{%
9786 \g@addto@macro\Hy@EveryPageHook{%
9787 \hyper@pagetransition
9788 \hyper@pageduration
9789 }%
9790 }

```

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

```

9791 \pdfifx{pdf}{xetex}
9792 \ifx\pdfifx{xetex}{xetex}
9793 \Hy@AtBeginDocument{%
9794 \ifHy@setpagesize
9795 \expandafter\@firstofone
9796 \else
9797 \expandafter\@gobble
9798 \fi
9799 }%
9800 \ifclassloaded{seminar}{%
9801 \pdfifx{pdf}{xetex}
9802 \setlength{\pdfhorigin}{1truein}%
9803 \setlength{\pdfvorigin}{1truein}%
9804 \pdfifx{pdf}{xetex}
9805 \ifportrait
9806 \ifdim\paperwidth=\z@
9807 \else
9808 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9809 \fi
9810 \ifdim\paperheight=\z@
9811 \else
9812 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9813 \fi
9814 \else
9815 \ifdim\paperheight=\z@
9816 \else
9817 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9818 \fi
9819 \ifdim\paperwidth=\z@
9820 \else
9821 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9822 \fi
9823 \fi
9824 }{%
9825 \ltx@ifundefined{stockwidth}{%
9826 \ifdim\paperwidth>\z@
9827 \setlength{\pdfpagewidth}{\paperwidth}%
9828 \fi
9829 \ifdim\paperheight>\z@

```

```

9830     \setlength{\pdfpageheight}{\paperheight}%
9831     \fi
9832   }{%
9833     \ifdim\stockwidth>\z@
9834       \setlength{\pdfpagewidth}{\stockwidth}%
9835     \fi
9836     \ifdim\stockheight>\z@
9837       \setlength{\pdfpageheight}{\stockheight}%
9838     \fi
9839   }%
9840 }%
9841 }%
9842 \Hy@DisableOption{setpagesize}%
9843 }
9844 </pdfTeX | xetex>
9845 (*pdfTeX)
9846 \def\Acrobatmenu#1#2{%
9847   \Hy@Acrobatmenu{#1}{#2}{%
9848     \leavevmode
9849     \EdefEscapeName\Hy@temp@menu{#1}%
9850     \pdfstartlink
9851     attr{%
9852       \Hy@setpdfborder
9853       \Hy@setpdfhighlight
9854       \ifx\@menubordercolor\relax
9855         \else
9856           /C[\@menubordercolor]%
9857         \fi
9858     }%
9859     user{%
9860       /Subtype/Link%
9861       \ifHy@pdfa /F 4\fi
9862       /A<<%
9863       /S/Named%
9864       /N/\Hy@temp@menu
9865       \Hy@href@nextactionraw
9866     >>%
9867   }%
9868   \relax
9869   \Hy@colorlink\@menucolor#2%
9870   \close@pdflink
9871 }%
9872 }

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package ‘atbegshi’ \AtBeginShipoutFirst does not add a additional box layer.

change 2020-10-01: the code has been removed as outdated.

9873 </pdfTeX>

47.3 hypertex

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

href: html:

name: html:

end: html:

image: html:

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

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL’s may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the T_EX file — the T_EX 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.

```

9874 <*hypertex>
9875 \providecommand*{\XR@ext}{dvi}
9876 \let\PDF@FinishDoc\ltx@empty
9877 \def\PDF@SetupDoc{%
9878   \ifx\@baseurl\@empty
9879     \else
9880       \special{html:<base href="\@baseurl">}%
9881     \fi
9882 }
9883 \Hy@WrapperDef\hyper@anchor#1{%
9884   \Hy@SaveLastskip
9885   \Hy@VerboseAnchor{#1}%
9886   \begingroup

```

```

9887 \let\protect=\string
9888 \hyper@chars
9889 \special{html:<a name=%
9890     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9891 \endgroup
9892 \Hy@activeanchortrue
9893 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9894 \special{html:</a>}}%
9895 \Hy@activeanchorfalse
9896 \Hy@RestoreLastskip
9897 }
9898 \Hy@WrapperDef\hyper@anchorstart#1{%
9899 \Hy@SaveLastskip
9900 \Hy@VerboseAnchor{#1}%
9901 \begingroup
9902 \hyper@chars
9903 \special{html:<a name=%
9904     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9905 \endgroup
9906 \Hy@activeanchortrue
9907 }
9908 \def\hyper@anchorend{%
9909 \special{html:</a>}}%
9910 \Hy@activeanchorfalse
9911 \Hy@RestoreLastskip
9912 }
9913 \def\@urltype{url}
9914 \def\hyper@linkstart#1#2{%
9915 \Hy@VerboseLinkStart{#1}{#2}%
9916 \expandafter\Hy@colorlink\csname @#1color\endcsname
9917 \def\Hy@tempa{#1}%
9918 \ifx\Hy@tempa\@urltype
9919 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9920 \else
9921 \begingroup
9922 \hyper@chars
9923 \special{html:<a href=%
9924     \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}}%
9925 \endgroup
9926 \fi
9927 }
9928 \def\hyper@linkend{%
9929 \special{html:</a>}}%
9930 \Hy@endcolorlink
9931 }
9932 \def\hyper@linkfile#1#2#3{%
9933 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9934 }
9935 \def\hyper@linkurl#1#2{%

```

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

```

9936 \leavevmode

```

```

9937 \ifHy@raiselinks
9938 \Hy@SaveSpaceFactor
9939 \Hy@SaveSavedSpaceFactor
9940 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9941 \Hy@RestoreSavedSpaceFactor
9942 \@linkdim\dp\@tempboxa
9943 \lower\@linkdim\hbox{%
9944   \hyper@chars
9945   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9946 }%
9947 \Hy@colorlink\@urlcolor
9948 \Hy@RestoreSpaceFactor
9949 #1%
9950 \Hy@SaveSpaceFactor
9951 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

9952 \advance\@linkdim by -6.5\p@
9953 \raise\@linkdim\hbox{\special{html:</a>}}%
9954 \Hy@endcolorlink
9955 \Hy@RestoreSpaceFactor
9956 \else
9957 \begingroup
9958   \hyper@chars
9959   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9960   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9961   \special{html:</a>}}%
9962   \Hy@endcolorlink
9963 \endgroup
9964 \fi
9965 }

```

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

```

9966 \def\hyper@link#1#2#3{%
9967   \Hy@VerboseLinkStart{#1}{#2}%
9968   \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}}%
9969 }

9970 \def\hyper@image#1#2{%
9971   \begingroup
9972     \hyper@chars
9973     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9974   \endgroup
9975 }
9976 </hypertex>
9977 <*\dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default c:/netscape/netscape is not suitable) Dviwindo could in fact handle external links

to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertext cfg. For dviwindo, L^AT_EX 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.

```

9978 \providecommand*\XR@ext}{dvi}
9979 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9980 \Hy@WrapperDef\hyper@anchor#1{%
9981   \Hy@SaveLastskip
9982   \Hy@VerboseAnchor{#1}%
9983   \begingroup
9984     \let\protect=\string
9985     \special{mark: #1}%
9986   \endgroup
9987   \Hy@activeanchortrue
9988   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9989   \Hy@activeanchorfalse
9990   \Hy@RestoreLastskip
9991 }
9992 \Hy@WrapperDef\hyper@anchorstart#1{%
9993   \Hy@SaveLastskip
9994   \Hy@VerboseAnchor{#1}%
9995   \special{mark: #1}%
9996   \Hy@activeanchortrue
9997 }
9998 \def\hyper@anchorend{%
9999   \Hy@activeanchorfalse
10000   \Hy@RestoreLastskip
10001 }
10002 \def\hyper@linkstart#1#2{%
10003   \Hy@VerboseLinkStart{#1}{#2}%
10004   \expandafter\Hy@colorlink\csname @#1color\endcsname
10005   \special{button: %
10006     10000000 %
10007     \number\baselineskip\space
10008     #2%
10009   }%
10010 }
10011 \def\hyper@linkend{%
10012   \Hy@endcolorlink
10013 }
10014 \def\hyper@link#1#2#3{%
10015   \Hy@VerboseLinkStart{#1}{#2}%
10016   \leavevmode
10017   \ifHy@raiselinks
10018     \Hy@SaveSpaceFactor
10019     \Hy@SaveSavedSpaceFactor
10020     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10021     \Hy@RestoreSavedSpaceFactor
10022     \@linkdim\dp\@tempboxa
10023     \lower\@linkdim\hbox{%

```

```

10024 \special{button: %
10025 \number\wd\@tempboxa\space
10026 \number\ht\@tempboxa\space
10027 #2%
10028 }%
10029 \expandafter\Hy@colorlink\csname @#1color\endcsname
10030 \Hy@RestoreSpaceFactor
10031 #3\Hy@xspace@end
10032 \Hy@SaveSpaceFactor
10033 \Hy@endcolorlink
10034 }%
10035 \@linkdim\ht\@tempboxa
10036 \advance\@linkdim by -6.5\p@
10037 \raise\@linkdim\hbox{}%
10038 \Hy@RestoreSpaceFactor
10039 \else
10040 \special{button: %
10041 \number\wd\@tempboxa\space
10042 \number\ht\@tempboxa\space
10043 #2%
10044 }%
10045 \expandafter\Hy@colorlink\csname @#1color\endcsname
10046 #3\Hy@xspace@end
10047 \Hy@endcolorlink
10048 \fi
10049 }
10050 \def\hyper@linkurl#1#2{%
10051 \begingroup
10052 \hyper@chars
10053 \leavevmode
10054 \ifHy@raiselinks
10055 \Hy@SaveSpaceFactor
10056 \Hy@SaveSavedSpaceFactor
10057 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10058 \Hy@RestoreSavedSpaceFactor
10059 \@linkdim\dp\@tempboxa
10060 \lower\@linkdim\hbox{%
10061 \special{button: %
10062 \number\wd\@tempboxa\space
10063 \number\ht\@tempboxa\space
10064 launch: \wwwbrowser\space
10065 #2%
10066 }%
10067 \Hy@colorlink\@urlcolor
10068 \Hy@RestoreSpaceFactor
10069 #1\Hy@xspace@end
10070 \Hy@SaveSpaceFactor
10071 \Hy@endcolorlink
10072 }%
10073 \@linkdim\ht\@tempboxa
10074 \advance\@linkdim by -6.5\p@
10075 \raise\@linkdim\hbox{}%
10076 \Hy@RestoreSpaceFactor
10077 \else

```

```

10078 \special{button: %
10079 \number\wd\@tempboxa\space
10080 \number\ht\@tempboxa\space
10081 launch: \wwwbrowser\space
10082 #2%
10083 }%
10084 \Hy@colorlink\@urlcolor
10085 #1\Hy@xspace@end
10086 \Hy@endcolorlink
10087 \fi
10088 \endgroup
10089 }
10090 \def\hyper@linkfile#1#2#3{%
10091 \begingroup
10092 \hyper@chars
10093 \leavevmode
10094 \ifHy@raiselinks
10095 \Hy@SaveSpaceFactor
10096 \Hy@SaveSavedSpaceFactor
10097 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10098 \Hy@RestoreSavedSpaceFactor
10099 \@linkdim\dp\@tempboxa
10100 \lower\@linkdim\hbox{%
10101 \special{button: %
10102 \number\wd\@tempboxa\space
10103 \number\ht\@tempboxa\space
10104 #3,%
10105 file: #2%
10106 }%
10107 \Hy@colorlink\@filecolor
10108 \Hy@RestoreSpaceFactor
10109 #1\Hy@xspace@end
10110 \Hy@SaveSpaceFactor
10111 \Hy@endcolorlink
10112 }%
10113 \@linkdim\ht\@tempboxa
10114 \advance\@linkdim by -6.5\p@
10115 \raise\@linkdim\hbox{}}%
10116 \Hy@RestoreSpaceFactor
10117 \else
10118 \special{button: %
10119 \number\wd\@tempboxa\space
10120 \number\ht\@tempboxa\space
10121 #3,%
10122 file: #2%
10123 }%
10124 \Hy@colorlink\@filecolor
10125 #1\Hy@xspace@end
10126 \Hy@endcolorlink
10127 \fi
10128 \endgroup
10129 }
10130 \HyInfo@AddonUnsupportedtrue
10131 \def\PDF@FinishDoc{%

```



```

10132 \Hy@UseMaketitleInfos
10133 \HyInfo@TrappedUnsupported
10134 \special{PDF: Keywords \@pdfkeywords}%
10135 \special{PDF: Title \@pdftitle}%
10136 \special{PDF: Creator \@pdfcreator}%
10137 \ifx\@pdfcreationdate\@empty
10138 \else
10139 \special{PDF: CreationDate \@pdfcreationdate}%
10140 \fi
10141 \ifx\@pdfmoddate\@empty
10142 \else
10143 \special{PDF: ModDate \@pdfmoddate}%
10144 \fi
10145 \special{PDF: Author \@pdfauthor}%
10146 \ifx\@pdfproducer\relax
10147 \else
10148 \special{PDF: Producer \@pdfproducer}%
10149 \fi
10150 \special{PDF: Subject \@pdfsubject}%
10151 \Hy@DisableOption{pdfauthor}%
10152 \Hy@DisableOption{pdftitle}%
10153 \Hy@DisableOption{pdfsubject}%
10154 \Hy@DisableOption{pdfcreator}%
10155 \Hy@DisableOption{addtopdfcreator}%
10156 \Hy@DisableOption{pdfcreationdate}%
10157 \Hy@DisableOption{pdfcreationdate}%
10158 \Hy@DisableOption{pdfmoddate}%
10159 \Hy@DisableOption{pdfproducer}%
10160 \Hy@DisableOption{pdfkeywords}%
10161 \Hy@DisableOption{pdftrapped}%
10162 \Hy@DisableOption{pdfinfo}%
10163 }
10164 \def\PDF@SetupDoc{%
10165 \ifx\@baseurl\@empty
10166 \else
10167 \special{PDF: Base \@baseurl}%
10168 \fi
10169 \ifx\@pdfpagescrop\@empty\else
10170 \special{PDF: BBox \@pdfpagescrop}%
10171 \fi
10172 \def\Hy@temp{}%
10173 \ifx\@pdfstartpage\@empty
10174 \else
10175 \ifx\@pdfstartview\@empty
10176 \else
10177 \edef\Hy@temp{%
10178 ,Page=\@pdfstartpage
10179 ,View=\@pdfstartview
10180 }%
10181 \fi
10182 \fi
10183 \edef\Hy@temp{%
10184 \noexpand\pdfmark{%
10185 pdfmark=/DOCVIEW,%

```

```

10186     PageMode=/\@pdfpagemode
10187     \Hy@temp
10188   }%
10189 }%
10190 \Hy@temp
10191 \ifx\@pdfpagescrop\@empty
10192 \else
10193   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10194 \fi
10195 \edef\Hy@temp{%
10196   \ifHy@pdftoolbar\else /HideToolbar true\fi
10197   \ifHy@pdfmenubar\else /HideMenubar true\fi
10198   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10199   \ifHy@pdfwindow /FitWindow true\fi
10200   \ifHy@pdfcenterwindow /CenterWindow true\fi
10201   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10202   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10203   \Hy@UseNameKey{Direction}\@pdfdirection
10204   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10205   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10206   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10207   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10208   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10209   \Hy@UseNameKey{Duplex}\@pdfduplex
10210   \ifx\@pdfpicktraybypdfsize\@empty
10211     \else
10212       /PickTrayByPDFSize \@pdfpicktraybypdfsize
10213     \fi
10214   \ifx\@pdfprintpagerange\@empty
10215     \else
10216       /PrintPageRange[\@pdfprintpagerange]%
10217     \fi
10218   \ifx\@pdfnumcopies\@empty
10219     \else
10220       /NumCopies \@pdfnumcopies
10221     \fi
10222   }%
10223   \pdfmark{pdfmark=/PUT,%
10224     Raw={%
10225       \string{Catalog\string}<<%
10226       \ifx\Hy@temp\@empty
10227         \else
10228           /ViewerPreferences<<\Hy@temp>>%
10229         \fi
10230       \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10231       \ifx\@pdflang\relax
10232         \else
10233           /Lang(\@pdflang)%
10234         \fi
10235       >>%
10236     }%
10237   }%
10238 }
10239 </dviwindo>

```

10240 \langle *dvi \rangle pdfm | xetex \rangle

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```
10241 \providecommand*\XR@ext}{pdf}
10242 \Hy@setbreaklinks{true}
10243 \def\HyPat@ObjRef{%
10244   @[^ ]+ %
10245 }
10246 \newsavebox{\pdfm@box}
10247 \def\@pdfm@mark#1{\special{pdf:#1}}
10248 \Hy@WrapperDef\@pdfm@dest#1{%
10249   \Hy@SaveLastskip
10250   \Hy@VerboseAnchor{#1}%
10251   \begingroup
10252     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10253     \def\x{XYZ}%
10254     \ifx\x\@pdfview
10255       \def\x{XYZ @xpos @ypos null}%
10256     \else
10257       \def\x{FitH}%
10258       \ifx\x\@pdfview
10259         \def\x{FitH @ypos}%
10260       \else
10261         \def\x{FitBH}%
10262         \ifx\x\@pdfview
10263           \def\x{FitBH @ypos}%
10264         \else
10265           \def\x{FitV}%
10266           \ifx\x\@pdfview
10267             \def\x{FitV @xpos}%
10268           \else
10269             \def\x{FitBV}%
10270             \ifx\x\@pdfview
10271               \def\x{FitBV @xpos}%
10272             \else
10273               \def\x{Fit}%
10274               \ifx\x\@pdfview
10275                 \let\x\@pdfview
10276               \else
10277                 \def\x{FitB}%
10278                 \ifx\x\@pdfview
10279                   \let\x\@pdfview
10280                 \else
10281                   \def\x{FitR}%
10282                   \ifx\x\@pdfview
10283                     \Hy@Warning{'pdfview=FitR' is not supported}%
10284                     \def\x{XYZ @xpos @ypos null}%
10285                   \else
10286                     \@onelevel@sanitize\@pdfview
10287                     \Hy@Warning{%
10288                       Unknown value '\@pdfview' for pdfview%
10289                     }%

```

```

10290         \def\x{XYZ @xpos @ypos null}%
10291         \fi
10292     \fi
10293 \fi
10294 \fi
10295 \fi
10296 \fi
10297 \fi
10298 \fi
10299 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10300 \endgroup
10301 \Hy@RestoreLastskip
10302 }
10303 \providecommand*\@pdfview{XYZ}
10304 \providecommand*\@pdfborder{0 0 1}
10305 \providecommand*\@pdfborderstyle{}
10306 \def\hyper@anchor#1{%
10307     \@pdfm@dest{#1}%
10308 }
10309 \def\hyper@anchorstart#1{%
10310     \Hy@activeanchortrue
10311     \@pdfm@dest{#1}%
10312 }
10313 \def\hyper@anchorend{%
10314     \Hy@activeanchorfalse
10315 }
10316 \newcounter{Hy@AnnotLevel}
10317 \ifHy@ocgcolorlinks
10318     \def\OBJ@OCG@view{@OCG@view}%
10319     \@pdfm@mark{%
10320         obj \OBJ@OCG@view <<%
10321         /Type/OCG%
10322         /Name(View)%
10323         /Usage<<%
10324         /Print<<%
10325         /PrintState/OFF%
10326         >>%
10327         /View<<%
10328         /ViewState/ON%
10329         >>%
10330     >>%
10331     >>%
10332 }%
10333 \@pdfm@mark{close \OBJ@OCG@view}%
10334 \def\OBJ@OCG@print{@OCG@print}%
10335 \@pdfm@mark{%
10336     obj \OBJ@OCG@print <<%
10337     /Type/OCG%
10338     /Name(Print)%
10339     /Usage<<%
10340     /Print<<%
10341     /PrintState/ON%
10342     >>%

```

```

10343     /View<<%
10344     /ViewState/OFF%
10345     >>%
10346     >>%
10347     >>%
10348 }%
10349 \@pdfm@mark{close \OBJ@OCG@print}%
10350 \def\OBJ@OCGs{@OCGs}%
10351 \@pdfm@mark{%
10352   obj \OBJ@OCGs [%
10353     \OBJ@OCG@view\space\OBJ@OCG@print
10354   ]%
10355 }%
10356 \@pdfm@mark{close \OBJ@OCGs}%
10357 \@pdfm@mark{%
10358   put @catalog <<%
10359     /OCProperties<<%
10360     /OCGs \OBJ@OCGs
10361     /D<<%
10362     /OFF[\OBJ@OCG@print]%
10363     /AS[%
10364       <<%
10365         /Event/View%
10366         /OCGs \OBJ@OCGs
10367         /Category[/View]%
10368       >>%
10369       <<%
10370         /Event/Print%
10371         /OCGs \OBJ@OCGs
10372         /Category[/Print]%
10373       >>%
10374       <<%
10375         /Event/Export%
10376         /OCGs \OBJ@OCGs
10377         /Category[/Print]%
10378       >>%
10379     ]%
10380     >>%
10381     >>%
10382     >>%
10383   }%
10384 \AtBeginShipout{%
10385   \setbox\AtBeginShipoutBox=\hbox{%
10386     \copy\AtBeginShipoutBox
10387   \@pdfm@mark{%
10388     put @resources <<%
10389       /Properties<<%
10390       /OCView \OBJ@OCG@view
10391       /OCPrint \OBJ@OCG@print
10392     >>%
10393     >>%
10394   }%
10395 }%
10396 }%

```

```

10397 \Hy@AtBeginDocument{%
10398   \def\Hy@colorlink#1{%
10399     \begingroup
10400     \ifHy@ocgcolorlinks
10401       \def\Hy@ocgcolor{#1}%
10402       \setbox0=\hbox\bgroup\color@begingroup
10403     \else
10404       \HyColor@UseColor#1%
10405     \fi
10406   }%
10407   \def\Hy@endcolorlink{%
10408     \ifHy@ocgcolorlinks
10409       \color@endgroup\egroup
10410       \mbox{%
10411         \@pdfm@mark{content /OC/OCPrint BDC}%
10412         \rlap{\copy0}%
10413         \@pdfm@mark{content EMC/OC/OCView BDC}%
10414         \begingroup
10415         \expandafter\HyColor@UseColor\Hy@ocgcolor
10416         \box0 %
10417         \endgroup
10418         \@pdfm@mark{content EMC}%
10419       }%
10420     \fi
10421   \endgroup
10422 }%
10423 }%
10424 \else
10425 \Hy@DisableOption{ocgcolorlinks}%
10426 \fi

```

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

```

10427 \def\Hy@BeginAnnot#1{%
10428   \global\advance\c@Hy@AnnotLevel\@ne
10429   \ifnum\c@Hy@AnnotLevel=\@ne
10430     #1%
10431   \fi
10432 }
10433 \def\Hy@endAnnot{%
10434   \ifnum\value{Hy@AnnotLevel}=\@ne
10435     \Hy@endcolorlink
10436     \@pdfm@mark{eann}%
10437   \fi
10438   \global\advance\c@Hy@AnnotLevel\m@ne
10439 }

10440 \def\Hy@undefinedname{UNDEFINED}
10441 \def\hyper@linkstart#1#2{%
10442   \Hy@VerboseLinkStart{#1}{#2}%
10443   \leavevmode
10444   \Hy@BeginAnnot{%
10445     \protected@edef\Hy@testname{#2}%
10446     \ifx\Hy@testname\@empty
10447       \Hy@Warning{%

```

```

10448     Empty destination name,\MessageBreak
10449     using ``\Hy@undefinedname'%
10450 }%
10451 \let\Hy@testname\Hy@undefinedname
10452 \else
10453 \Hy@pstringdef\Hy@testname{%
10454 \expandafter\HyperDestNameFilter\expandafter{%
10455 \Hy@testname
10456 }%
10457 }%
10458 \fi
10459 \@pdfm@mark{%
10460 bann<<%
10461 /Type/Annot%
10462 /Subtype/Link%
10463 \ifHy@pdfa /F 4\fi
10464 \Hy@setpdfborder
10465 \Hy@setpdfhighlight
10466 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10467 \else
10468 /C[\csname @#1bordercolor\endcsname]%
10469 \fi
10470 /A<<%
10471 /S/GoTo%
10472 /D(\Hy@testname)%
10473 \Hy@href@nextactionraw
10474 >>%
10475 >>%
10476 }%
10477 \expandafter\Hy@colorlink\csname @#1color\endcsname
10478 }%
10479 }
10480 \def\hyper@linkend{\Hy@EndAnnot}%
10481 \def\hyper@link#1#2#3{%
10482 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10483 }
10484 \def\hyper@linkfile#1#2#3{%
10485 \leavevmode
10486 \Hy@BeginAnnot{%
10487 \def\Hy@pstringF{#2}%
10488 \Hy@CleanupFile\Hy@pstringF
10489 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10490 \Hy@pstringdef\Hy@pstringD{#3}%
10491 \Hy@MakeRemoteAction
10492 \@pdfm@mark{%
10493 bann<<%
10494 /Type/Annot%
10495 /Subtype/Link%
10496 \ifHy@pdfa /F 4\fi
10497 \Hy@setpdfborder
10498 \Hy@setpdfhighlight
10499 \ifx\@filebordercolor\relax
10500 \else
10501 /C[\@filebordercolor]%

```

```

10502     \fi
10503     /A<<%
10504     /S/GoToR%
10505     /F(\Hy@pstringF)%
10506     /D%
10507     \ifx\|#3\|%
10508         [\Hy@href@page\@pdfremotestartview]%
10509     \else
10510         (\Hy@pstringD)%
10511     \fi
10512     \Hy@SetNewWindow
10513     \Hy@href@nextactionraw
10514     >>%
10515     >>%
10516     }%
10517     \Hy@colorlink\@filecolor
10518     }%
10519     #1\Hy@xspace@end
10520     \Hy@EndAnnot
10521 }
10522 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
10523     \leavevmode
10524     \Hy@BeginAnnot{%
10525         \Hy@pstringdef\Hy@pstringF{#1}%
10526         \Hy@pstringdef\Hy@pstringP{#3}%
10527         \@pdfm@mark{%
10528             bann<<%
10529             /Type/Annot%
10530             /Subtype/Link%
10531             \ifHy@pdfa /F 4\fi
10532             \Hy@setpdfborder
10533             \Hy@setpdfhighlight
10534             \ifx\@runbordercolor\relax
10535             \else
10536                 /C[\@runbordercolor]%
10537             \fi
10538             /A<<%
10539             /F(\Hy@pstringF)%
10540             /S/Launch%
10541             \Hy@SetNewWindow
10542             \ifx\|#3\|%
10543             \else
10544                 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10545             \fi
10546             \Hy@href@nextactionraw
10547             >>%
10548             >>%
10549             }%
10550             \Hy@colorlink\@runcolor
10551             }%
10552             #2\Hy@xspace@end
10553             \Hy@EndAnnot
10554         }
10555     \def\hyper@linkurl#1#2{%

```



```

10556 \leavevmode
10557 \Hy@BeginAnnot{%
10558   \Hy@pstringdef\Hy@pstringURI{#2}%
10559   \@pdfm@mark{%
10560     bann<<%
10561     /Type/Annot%
10562     /Subtype/Link%
10563     \ifHy@pdfa /F 4\fi
10564     \Hy@setpdfborder
10565     \Hy@setpdfhighlight
10566     \ifx\@urlbordercolor\relax
10567     \else
10568       /C[\@urlbordercolor]%
10569     \fi
10570     /A<<%
10571     /S/URI%
10572     /URI(\Hy@pstringURI)%
10573     \ifHy@href@ismap
10574       /IsMap true%
10575     \fi
10576     \Hy@href@nextactionraw
10577     >>%
10578     >>%
10579   }%
10580   \Hy@colorlink\@urlcolor
10581 }%
10582 #1\Hy@xspace@end
10583 \Hy@endAnnot
10584 }
10585 \def\Acrobatmenu#1#2{%
10586   \Hy@Acrobatmenu{#1}{#2}{%
10587     \Hy@BeginAnnot{%
10588       \EdefEscapeName\Hy@temp@menu{#1}%
10589       \@pdfm@mark{%
10590         bann<<%
10591         /Type/Annot%
10592         /Subtype/Link%
10593         \ifHy@pdfa /F 4\fi
10594         \Hy@setpdfborder
10595         \Hy@setpdfhighlight
10596         \ifx\@menubordercolor\relax
10597         \else
10598           /C[\@menubordercolor]%
10599         \fi
10600         /A<<%
10601         /S/Named%
10602         /N/\Hy@temp@menu
10603         \Hy@href@nextactionraw
10604         >>%
10605         >>%
10606       }%
10607       \Hy@colorlink\@menucolor
10608     }%
10609     #2\Hy@xspace@end

```

```

10610 \Hy@EndAnnot
10611 }%
10612 }
10613
10614 \def\PDF@FinishDoc{%
10615 \Hy@UseMaketitleInfos
10616 \HyInfo@GenerateAddons
10617 \@pdfm@mark{%
10618 docinfo<<%
10619 /Title(\@pdftitle)%
10620 /Subject(\@pdfsubject)%
10621 /Creator(\@pdfcreator)%
10622 \ifx\@pdfcreationdate\@empty
10623 \else
10624 /CreationDate(\@pdfcreationdate)%
10625 \fi
10626 \ifx\@pdfmoddate\@empty
10627 \else
10628 /ModDate(\@pdfmoddate)%
10629 \fi
10630 /Author(\@pdfauthor)%
10631 \ifx\@pdfproducer\relax
10632 \else
10633 /Producer(\@pdfproducer)%
10634 \fi
10635 /Keywords(\@pdfkeywords)%
10636 \ifx\@pdftrapped\@empty
10637 \else
10638 /Trapped/\@pdftrapped
10639 \fi
10640 \HyInfo@Addons
10641 >>%
10642 }%
10643 \Hy@DisableOption{pdfauthor}%
10644 \Hy@DisableOption{pdftitle}%
10645 \Hy@DisableOption{pdfsubject}%
10646 \Hy@DisableOption{pdfcreator}%
10647 \Hy@DisableOption{addtopdfcreator}%
10648 \Hy@DisableOption{pdfcreationdate}%
10649 \Hy@DisableOption{pdfcreationdate}%
10650 \Hy@DisableOption{pdfmoddate}%
10651 \Hy@DisableOption{pdfproducer}%
10652 \Hy@DisableOption{pdfkeywords}%
10653 \Hy@DisableOption{pdftrapped}%
10654 \Hy@DisableOption{pdfinfo}%
10655 }
10656 \def\PDF@SetupDoc{%
10657 \edef\Hy@temp{%
10658 \ifHy@pdftoolbar\else /HideToolbar true\fi
10659 \ifHy@pdfmenubar\else /HideMenubar true\fi
10660 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10661 \ifHy@pdffitwindow /FitWindow true\fi
10662 \ifHy@pdfcenterwindow /CenterWindow true\fi
10663 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi

```

```

10664 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10665 \Hy@UseNameKey{Direction}\@pdfdirection
10666 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10667 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10668 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10669 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10670 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10671 \Hy@UseNameKey{Duplex}\@pdfduplex
10672 \ifx\@pdfpicktraybypdfsize\@empty
10673 \else
10674 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10675 \fi
10676 \ifx\@pdfprintpagerange\@empty
10677 \else
10678 /PrintPageRange[\@pdfprintpagerange]%
10679 \fi
10680 \ifx\@pdfnumcopies\@empty
10681 \else
10682 /NumCopies \@pdfnumcopies
10683 \fi
10684 }%
10685 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10686 \@pdfm@mark{%
10687 docview<<%
10688 \ifx\@pdfstartpage\@empty
10689 \else
10690 \ifx\@pdfstartview\@empty
10691 \else
10692 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10693 \fi
10694 \fi
10695 \ifx\@baseurl\@empty
10696 \else
10697 /URI<</Base(\Hy@pstringB)>>%
10698 \fi
10699 /PageMode/\@pdfpagemode
10700 \ifx\Hy@temp\@empty
10701 \else
10702 /ViewerPreferences<<\Hy@temp>>%
10703 \fi
10704 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10705 \ifx\@pdflang\relax
10706 \else
10707 /Lang(\@pdflang)%
10708 \fi
10709 >>%
10710 }%
10711 \ifx\@pdfpagescrop\@empty
10712 \else
10713 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10714 \fi
10715 }
10716 </dvipdfm | xetex>
10717 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

10718 \def\hyper@pagetransition{%
10719   \ifx\@pdfpagetransition\relax
10720   \else
10721     \ifx\@pdfpagetransition\@empty
10722     \else
10723       \special{pdf:put @thispage %
10724         <</Trans<</S/\@pdfpagetransition>>>>%
10725       }%
10726     \fi
10727   \fi
10728 }

```

\hyper@pageduration

```

10729 \def\hyper@pageduration{%
10730   \ifx\@pdfpageduration\relax
10731   \else
10732     \ifx\@pdfpageduration\@empty
10733     \else
10734       \special{pdf:put @thispage %
10735         <</Dur \@pdfpageduration>>>%
10736       }%
10737     \fi
10738   \fi
10739 }

```

```

10740 \g@addto@macro\Hy@EveryPageBoxHook{%
10741   \hyper@pagetransition
10742   \hyper@pageduration
10743 }
10744 </dvipdfm | xetex>

```

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

```

10745 < *dvipdfm>
10746 \AtBeginShipoutFirst{%
10747   \ifHy@setpagesize
10748   \begingroup
10749     \@ifundefined{stockwidth}{%
10750       \ifdim\paperwidth>\z@
10751       \ifdim\paperheight>\z@
10752         \special{papersize=\the\paperwidth,\the\paperheight}%
10753       \fi
10754     \fi
10755   }{%
10756     \ifdim\stockwidth>\z@
10757     \ifdim\stockheight>\z@
10758       \special{papersize=\the\stockwidth,\the\stockheight}%
10759     \fi
10760   \fi
10761 }%
10762 \endgroup
10763 \fi
10764 \Hy@DisableOption{setpagesize}%

```

```

10765 }
10766 </dvipdfm>

```

47.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

10767 <*vtexhtml>
10768 \providecommand*{\XR@ext}{htm}
10769 \RequirePackage{vtexhtml}
10770 \newif\if@Localurl
10771 \let\PDF@FinishDoc\ltx@empty
10772 \def\PDF@SetupDoc{%
10773   \ifx\@baseurl\@empty
10774     \else
10775       \special{!direct <base href="\@baseurl">}%
10776     \fi
10777 }
10778 \def\@urltype{url}
10779 \def\hyper@link#1#2#3{%
10780   \Hy@VerboseLinkStart{#1}{#2}%
10781   \leavevmode
10782   \special{!direct <a href=%
10783     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10784   #3\Hy@xspace@end
10785   \special{!direct </a>}%
10786 }
10787 \def\hyper@linkurl#1#2{%
10788   \begingroup
10789     \hyper@chars
10790     \leavevmode
10791     \MathBSuppress=1\relax
10792     \special{!direct <a href=%
10793       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10794     #1\Hy@xspace@end
10795     \MathBSuppress=0\relax
10796     \special{!direct </a>}%
10797   \endgroup
10798 }
10799 \def\hyper@linkfile#1#2#3{%
10800   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
10801 }
10802 \def\hyper@linkstart#1#2{%
10803   \Hy@VerboseLinkStart{#1}{#2}%
10804   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10805     \@Localurltrue
10806     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10807   \else
10808     \@Localurlfalse
10809     \begingroup
10810       \hyper@chars
10811       \special{!aref \HyperDestNameFilter{#2}}%
10812     \endgroup
10813   \fi

```

```

10814 }
10815 \def\hyper@linkend{%
10816   \if@Localurl
10817     \special{!endaref}%
10818   \else
10819     \special{!direct </a>}%
10820   \fi
10821 }
10822 \Hy@WrapperDef\hyper@anchorstart#1{%
10823   \Hy@SaveLastskip
10824   \Hy@VerboseAnchor{#1}%
10825   \begingroup
10826     \hyper@chars
10827     \special{!aname #1}%
10828     \special{!direct <a name=%
10829       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10830   \endgroup
10831   \Hy@activeanchortrue
10832 }
10833 \def\hyper@anchorend{%
10834   \special{!direct </a>}%
10835   \Hy@activeanchorfalse
10836   \Hy@RestoreLastskip
10837 }
10838 \Hy@WrapperDef\hyper@anchor#1{%
10839   \Hy@SaveLastskip
10840   \Hy@VerboseAnchor{#1}%
10841   \begingroup
10842     \let\protect=\string
10843     \hyper@chars
10844     \leavevmode
10845     \special{!aname #1}%
10846     \special{!direct <a name=%
10847       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10848   \endgroup
10849   \Hy@activeanchortrue
10850   \bgroup\anchor@spot\egroup
10851   \special{!direct </a>}%
10852   \Hy@activeanchorfalse
10853   \Hy@RestoreLastskip
10854 }
10855 \def\@Form[#1]{%
10856   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10857 }
10858 \let\@endForm\ltx@empty
10859 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10860   \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10861 }
10862 \def\@TextField[#1]#2{% parameters, label
10863   \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10864 }
10865 \def\@CheckBox[#1]#2{% parameters, label
10866   \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10867 }

```

```

10868 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10869 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10870 }
10871 \def\@PushButton[#1]#2{% parameters, label
10872 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10873 }
10874 \def\@Reset[#1]#2{%
10875 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10876 }
10877 \def\@Submit[#1]#2{%
10878 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10879 }
10880 \</vtexhtml>
10881 \< *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.

```

10882 \ifx\mediaheight\@undefined
10883 \else
10884 \ifx\mediaheight\relax
10885 \else
10886 \ifHy@setpagesize
10887 \providecommand*\VTeXInitMediaSize{%
10888 \ltx@ifundefined{stockwidth}{%
10889 \ifdim\paperheight>0pt %
10890 \setlength\mediaheight\paperheight
10891 \fi
10892 \ifdim\paperheight>0pt %
10893 \setlength\mediawidth\paperwidth
10894 \fi
10895 }{%
10896 \ifdim\stockheight>0pt %
10897 \setlength\mediaheight\stockheight
10898 \fi
10899 \ifdim\stockwidth>0pt %
10900 \setlength\mediawidth\stockwidth
10901 \fi
10902 }%
10903 }%
10904 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10905 \fi
10906 \Hy@DisableOption{setpagesize}%
10907 \fi
10908 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

10909 \providecommand*\@pdfview{xyz}
10910 \providecommand*\@pdfborder{0 0 1}
10911 \providecommand*\@pdfborderstyle{}
10912 \let\CurrentBorderColor\@linkbordercolor
10913 \Hy@WrapperDef\hyper@anchor#1{%
10914 \Hy@SaveLastskip
10915 \Hy@VerboseAnchor{#1}%

```

```

10916 \begingroup
10917 \let\protect=\string
10918 \hyper@chars
10919 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10920 \endgroup
10921 \Hy@activeanchortrue
10922 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10923 \Hy@activeanchorfalse
10924 \Hy@RestoreLastskip
10925 }
10926 \Hy@WrapperDef\hyper@anchorstart#1{%
10927 \Hy@SaveLastskip
10928 \Hy@VerboseAnchor{#1}%
10929 \begingroup
10930 \hyper@chars
10931 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10932 \endgroup
10933 \Hy@activeanchortrue
10934 }
10935 \def\hyper@anchorend{%
10936 \Hy@activeanchorfalse
10937 \Hy@RestoreLastskip
10938 }
10939 \def\@urltype{url}
10940 \def\Hy@undefinedname{UNDEFINED}
10941 \def\hyper@linkstart#1#2{%
10942 \Hy@VerboseLinkStart{#1}{#2}%
10943 \Hy@pstringdef\Hy@pstringURI{#2}%
10944 \expandafter\Hy@colorlink\csname @#1color\endcsname
10945 \ltx@ifundefined{@#1bordercolor}{%
10946 \let\CurrentBorderColor\relax
10947 }{%
10948 \edef\CurrentBorderColor{%
10949 \csname @#1bordercolor\endcsname
10950 }%
10951 }%
10952 \def\Hy@tempa{#1}%
10953 \ifx\Hy@tempa\@urltype
10954 \special{!%
10955 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10956 \ifHy@href@ismap
10957 /IsMap true%
10958 \fi
10959 \Hy@href@nextactionraw
10960 >%
10961 a=<%
10962 \ifHy@pdfa /F 4\fi
10963 \Hy@setpdfborder
10964 \ifx\CurrentBorderColor\relax
10965 \else
10966 /C [\CurrentBorderColor]%
10967 \fi
10968 >%
10969 }%

```



```

10970 \else
10971 \protected@edef\Hy@testname{#2}%
10972 \ifx\Hy@testname\@empty
10973 \Hy@Warning{%
10974     Empty destination name,\MessageBreak
10975     using ``\Hy@undefinedname'%
10976 }%
10977 \let\Hy@testname\Hy@undefinedname
10978 \fi
10979 \special{!%
10980     aref \expandafter\HyperDestNameFilter
10981     \expandafter{\Hy@testname};%
10982     a=<%
10983     \ifHy@pdfa /F 4\fi
10984     \Hy@setpdfborder
10985     \ifx\CurrentBorderColor\relax
10986     \else
10987     /C [\CurrentBorderColor]%
10988     \fi
10989     >%
10990 }%
10991 \fi
10992 }
10993 \def\hyper@linkend{%
10994 \special{!endaref}%
10995 \Hy@endcolorlink
10996 }
10997 \def\hyper@linkfile#1#2#3{%
10998 \leavevmode
10999 \def\Hy@pstringF{#2}%
11000 \Hy@CleanupFile\Hy@pstringF
11001 \special{!%
11002     aref <%
11003     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11004     f=\Hy@pstringF>#3;%
11005     a=<%
11006     \ifHy@pdfa /F 4\fi
11007     \Hy@setpdfborder
11008     \ifx\@filebordercolor\relax
11009     \else
11010     /C [\@filebordercolor]%
11011     \fi
11012     >%
11013 }%
11014 \Hy@colorlink\@filecolor
11015 #1\Hy@xspace@end
11016 \Hy@endcolorlink
11017 \special{!endaref}%
11018 }
11019 \def\hyper@linkurl#1#2{%
11020 \begingroup
11021 \Hy@pstringdef\Hy@pstringURI{#2}%
11022 \hyper@chars
11023 \leavevmode

```

```

11024 \special{!%
11025   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11026   \ifHy@href@ismap
11027     /IsMap true%
11028   \fi
11029   \Hy@href@nextactionraw
11030   >,%
11031   a=<%
11032   \ifHy@pdfa /F 4\fi
11033   \Hy@setpdfborder
11034   \ifx\@urlbordercolor\relax
11035   \else
11036     /C [\@urlbordercolor]%
11037   \fi
11038   >%
11039 }%
11040 \Hy@colorlink\@urlcolor
11041 #1\Hy@xspace@end
11042 \Hy@endcolorlink
11043 \special{!endaref}%
11044 \endgroup
11045 }
11046 \def\hyper@link#1#2#3{%
11047 \Hy@VerboseLinkStart{#1}{#2}%
11048 \ltx@ifundefined{@#1bordercolor}{%
11049 \let\CurrentBorderColor\relax
11050 }{%
11051 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11052 }%
11053 \leavevmode
11054 \protected@edef\Hy@testname{#2}%
11055 \ifx\Hy@testname\@empty
11056 \Hy@Warning{%
11057   Empty destination name,\MessageBreak
11058   using \Hy@undefinedname'%
11059 }%
11060 \let\Hy@testname\Hy@undefinedname
11061 \fi
11062 \special{!%
11063   aref \expandafter\HyperDestNameFilter
11064     \expandafter{\Hy@testname};%
11065   a=<%
11066   \ifHy@pdfa /F 4\fi
11067   \Hy@setpdfborder
11068   \ifx\CurrentBorderColor\relax
11069   \else
11070     /C [\CurrentBorderColor]%
11071   \fi
11072   >%
11073 }%
11074 \expandafter
11075 \Hy@colorlink\csname @#1color\endcsname
11076 #3\Hy@xspace@end
11077 \Hy@endcolorlink

```

```

11078 \special{!endaref}%
11079 }
11080 \def\hyper@image#1#2{%
11081 \hyper@linkurl{#2}{#1}%
11082 }
11083 \def\@hyper@launch run:#1\#2#3{%
11084 \Hy@pstringdef\Hy@pstringF{#1}%
11085 \Hy@pstringdef\Hy@pstringP{#3}%
11086 \leavevmode
11087 \special{!aref %
11088 <u=%
11089 /Type/Action%
11090 /S/Launch%
11091 /F(\Hy@pstringF)%
11092 \Hy@SetNewWindow
11093 \ifx\#3\%
11094 \else
11095 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11096 \fi
11097 \Hy@href@nextactionraw
11098 >,%
11099 a=<%
11100 \ifHy@pdfa /F 4\fi
11101 \Hy@setpdfborder
11102 \ifx\@runbordercolor\relax
11103 \else
11104 /C[\@runbordercolor]%
11105 \fi
11106 >%
11107 }%
11108 \Hy@colorlink\@runcolor
11109 #2\Hy@xspace@end
11110 \Hy@endcolorlink
11111 \special{!endaref}%
11112 }
11113 \def\Acrobatmenu#1#2{%
11114 \EdefEscapeName\Hy@temp@menu{#1}%
11115 \Hy@Acrobatmenu{#1}{#2}{%
11116 \special{!%
11117 aref <u=/S /Named /N /\Hy@temp@menu>;%
11118 a=<%
11119 \ifHy@pdfa /F 4\fi
11120 \Hy@setpdfborder
11121 \ifx\@menubordercolor\relax
11122 \else
11123 /C[\@menubordercolor]%
11124 \fi
11125 >%
11126 }%
11127 \Hy@colorlink\@menucolor
11128 #2\Hy@xspace@end
11129 \Hy@endcolorlink
11130 \special{!endaref}%
11131 }%

```

11132 }

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

The code below makes sense for VTeX 7.02 or later.

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

```
11133 \ifnum\Hy@VTeXversion<702 %
11134 \else
11135 \def\hyper@pagetransition{%
11136 \ifx\@pdfpagetransition\relax
11137 \else
11138 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

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

```
11139 \else
11140 \hvtex@parse@trans\@pdfpagetransition
11141 \fi
11142 \fi
11143 }%
```

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

Syntax of VTeX \special{!trans <transition_effect>}:</p>
</div>
<div>
<pre>
<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>
</pre>
</div>
<div>
<p>Transition codes:</p>
</div>
<div>
<pre>
11144 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11145 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11146 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11147 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11148 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11149 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11150 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
</pre>
</div>
<div>
<p>Optional parameters:</p>
</div>
<div>
<pre>
11151 \def\hvtex@par@dimension{/Dm}%
11152 \def\hvtex@par@direction{/Di}%
11153 \def\hvtex@par@duration{/D}%
11154 \def\hvtex@par@motion{/M}%
</pre>
</div>
<div>
<p>260</p>
</div>

Tokenizer:

```
11155 \def\hvtex@gettoken{%
11156   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11157 }%
```

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

```
11158 \def\hvtex@gettoken@#1 #2\@nil{%
11159   \edef\hvtex@token{#1}%
11160   \edef\hvtex@buffer{#2}%
11161 }%
11162 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11163   \let\hvtex@trans@code\@empty
11164   \let\hvtex@param@dimension\@empty
11165   \let\hvtex@param@direction\@empty
11166   \let\hvtex@param@duration\@empty
11167   \let\hvtex@param@motion\@empty
11168   \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11169   \hvtex@gettoken
11170   \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11171   \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11172   \else
11173     \hvtex@gettoken
11174   \fi
11175 \fi
11176 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11177   \hvtex@trans@params
11178 }%
```

Reentrant macro to parse optional parameters.

```
11179 \def\hvtex@trans@params{%
11180   \ifx\hvtex@buffer\@empty
11181   \else
11182     \hvtex@gettoken
11183     \let\hvtex@trans@par\hvtex@token
11184     \ifx\hvtex@buffer\@empty
11185     \else
11186       \hvtex@gettoken
11187       \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
11188       \let\hvtex@param@duration\hvtex@token
11189     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11190       \expandafter\edef\expandafter\hvtex@param@motion
11191       \expandafter{\expandafter\@gobble\hvtex@token}%
11192     \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```

11193      \expandafter\edef\expandafter\hvtex@param@dimension
11194      \expandafter{\expandafter\@gobble\hvtex@token}%
11195      \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).

```

11196      \let\hvtex@param@direction\hvtex@token
11197      \fi\fi\fi\fi
11198      \fi
11199      \fi
11200      \ifx\hvtex@buffer\@empty
11201      \let\next\hvtex@produce@trans
11202      \else
11203      \let\next\hvtex@trans@params
11204      \fi
11205      \next
11206      }%

```

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

```

11207 \def\hvtex@produce@trans{%
11208   \let\vtex@trans@special\@empty
11209   \if S\hvtex@trans@code
11210     \edef\vtex@trans@special{\hvtex@trans@code
11211       \hvtex@param@dimension\hvtex@param@motion}%
11212   \else\if B\hvtex@trans@code
11213     \edef\vtex@trans@special{%
11214       \hvtex@trans@code\hvtex@param@dimension
11215     }%
11216   \else\if X\hvtex@trans@code
11217     \edef\vtex@trans@special{%
11218       \hvtex@trans@code\hvtex@param@motion
11219     }%
11220   \else\if W\hvtex@trans@code
11221     \edef\vtex@trans@special{%
11222       \hvtex@trans@code\hvtex@param@direction
11223     }%
11224   \else\if D\hvtex@trans@code
11225     \let\vtex@trans@special\hvtex@trans@code
11226   \else\if R\hvtex@trans@code
11227     \let\vtex@trans@special\hvtex@trans@code
11228   \else\if G\hvtex@trans@code
11229     \edef\vtex@trans@special{%
11230       \hvtex@trans@code\hvtex@param@direction
11231     }%
11232   \fi\fi\fi\fi\fi\fi
11233   \ifx\vtex@trans@special\@empty
11234   \else
11235     \ifx\hvtex@param@duration\@empty
11236     \else
11237       \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11238      \multiply\dimen@\@m

```

```

11239 \edef\vtex@trans@special{%
11240 \vtex@trans@special,\strip@pt\dimen@
11241 }%
11242 \fi

```

And all the mess is just for this.

```

11243 \special{!trans \vtex@trans@special}%
11244 \fi
11245 }%

11246 \def\hyper@pageduration{%
11247 \ifx\@pdfpageduration\relax
11248 \else
11249 \ifx\@pdfpageduration\@empty
11250 \special{!duration-}%
11251 \else
11252 \special{!duration \@pdfpageduration}%
11253 \fi
11254 \fi
11255 }%
11256 \g@addto@macro\Hy@EveryPageBoxHook{%
11257 \hyper@pagetransition
11258 \hyper@pageduration
11259 }%
11260 \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

```

11261 \ifx\@pdfproducer\relax
11262 \def\@pdfproducer{VTeX}%
11263 \ifnum\Hy@VTeXversion>\z@
11264 \count@\VTeXversion
11265 \divide\count@ 100 %
11266 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11267 \multiply\count@ -100 %
11268 \advance\count@\VTeXversion
11269 \edef\@pdfproducer{%
11270 \@pdfproducer
11271 .\ifnum\count@<10 0\fi\the\count@
11272 \ifx\VTeXOS\@undefined\else
11273 \ifnum\VTeXOS>0 %
11274 \ifnum\VTeXOS<6 %
11275 \space(%
11276 \ifcase\VTeXOS
11277 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11278 \fi

```

```

11279         )%
11280     \fi
11281 \fi
11282 \fi
11283 ,\space
11284 \ifnum\OpMode=\@ne PDF\else PS\fi
11285 \space backend%
11286 \ifx\gexmode\@undefined\else
11287     \ifnum\gexmode>\z@\space with GeX\fi
11288 \fi
11289 }%
11290 \fi
11291 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	A uthor	String
b	C rop B ox	String
c	C reator	String
k	K eywords	String
l	P age L ayout	PS
p	P age M ode	PS
r	P roducer	String
s	S ubject	String
t	T itle	String
u	U RI	PS
v	V iew P references	PS

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

```

11292 \def\PDF@SetupDoc{%
11293     \ifx\@pdfpagescrop\@empty
11294     \else
11295         \special{!pdfinfo b=<\@pdfpagescrop>}%
11296     \fi
11297     \ifx\@pdfstartpage\@empty
11298     \else
11299         \ifx\@pdfstartview\@empty
11300         \else
11301             \special{!onopen Page\@pdfstartpage}%
11302         \fi
11303     \fi
11304     \special{!pdfinfo p=</\@pdfpagemode>}%
11305     \ifx\@baseurl\@empty
11306     \else
11307         \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11308     \fi
11309     \special{!pdfinfo v=<<<%
11310         \ifHy@pdftoolbar\else /HideToolbar true\fi
11311         \ifHy@pdfmenubar\else /HideMenubar true\fi
11312         \ifHy@pdfwindowui\else /HideWindowUI true\fi
11313         \ifHy@pdfwindow /FitWindow true\fi
11314         \ifHy@pdfcenterwindow /CenterWindow true\fi
11315         \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11316         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```



```

11317 \Hy@UseNameKey{Direction}\@pdfdirection
11318 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11319 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11320 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11321 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11322 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11323 \Hy@UseNameKey{Duplex}\@pdfduplex
11324 \ifx\@pdfpicktraybypdfsize\@empty
11325 \else
11326 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11327 \fi
11328 \ifx\@pdfprintpagerange\@empty
11329 \else
11330 /PrintPageRange[\@pdfprintpagerange]%
11331 \fi
11332 \ifx\@pdfnumcopies\@empty
11333 \else
11334 /NumCopies \@pdfnumcopies
11335 \fi
11336 >>>}%
11337 \ifx\@pdfpagelayout\@empty
11338 \else
11339 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11340 \fi
11341 }%
11342 \HyInfo@AddonUnsupportedtrue
11343 \define@key{Hyp}{pdfcreationdate}{%
11344 \Hy@Warning{%
11345 VTeX does not support pdfcreationdate.\MessageBreak
11346 Therefore its setting is ignored%
11347 }%
11348 }
11349 \define@key{Hyp}{pdfmoddate}{%
11350 \Hy@Warning{%
11351 VTeX does not support pdfmoddate.\MessageBreak
11352 Therefore its setting is ignored%
11353 }%
11354 }
11355 \def\PDF@FinishDoc{%
11356 \Hy@UseMaketitleInfos
11357 \HyInfo@TrappedUnsupported
11358 \special{!pdfinfo a=<\@pdfauthor>}%
11359 \special{!pdfinfo t=<\@pdftitle>}%
11360 \special{!pdfinfo s=<\@pdfsubject>}%
11361 \special{!pdfinfo c=<\@pdfcreator>}%
11362 \ifx\@pdfproducer\relax
11363 \else
11364 \special{!pdfinfo r=<\@pdfproducer>}%
11365 \fi
11366 \special{!pdfinfo k=<\@pdfkeywords>}%
11367 \Hy@DisableOption{pdfauthor}%
11368 \Hy@DisableOption{pdftitle}%
11369 \Hy@DisableOption{pdfsubject}%
11370 \Hy@DisableOption{pdfcreator}%

```

```

11371 \Hy@DisableOption{addtopdfcreator}%
11372 \Hy@DisableOption{pdfcreationdate}%
11373 \Hy@DisableOption{pdfcreationdate}%
11374 \Hy@DisableOption{pdfmoddate}%
11375 \Hy@DisableOption{pdfproducer}%
11376 \Hy@DisableOption{pdfkeywords}%
11377 \Hy@DisableOption{pdftrapped}%
11378 \Hy@DisableOption{pdfinfo}%
11379 }
11380 </vtx>

```

47.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

11381 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11382 <package>\providecommand*{\Hy@DistillerDestFix}{%
11383 <*pdfmark | dviwindo>
11384 \def\Hy@DistillerDestFix{%
11385   \begingroup
11386     \let\x\literalps@out

```

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

```

11387   \ifnum \@ifundefined{OpMode}{0}{%
11388     \@ifundefined{gexmode}{0}{%
11389       \ifnum\gexmode>0 \OpMode\else 0\fi
11390     }>1 %
11391   \def\x##1{%
11392     \immediate\special{!=##1}%
11393   }%
11394   \fi
11395   \x{%
11396     /product where{%
11397       pop %
11398       product(Distiller)search{%
11399         pop pop pop %
11400         version(.)search{%
11401           exch pop exch pop%
11402           (3011)eq{%
11403             gsave %
11404             newpath 0 0 moveto closepath clip%
11405             /Courier findfont 10 scalefont setfont %
11406             72 72 moveto(.)show %
11407             grestore%
11408           }if%

```

```

11409      }{pop}ifelse%
11410      }{pop}ifelse%
11411      }if%
11412      }%
11413 \endgroup
11414 }
11415 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

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

```

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

```

and the correct definitions of the following PostScript procedures:

```

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

```

```

11416 <*pdfmark>
11417 \Hy@breaklinks@unsupported
11418 \def\HyPat@ObjRef{%
11419   \[~{}]+\}%
11420 }
11421 \Hy@WrapperDef\hyper@anchor#1{%
11422   \Hy@SaveLastskip
11423   \Hy@VerboseAnchor{#1}%
11424   \begingroup
11425     \pdfmark[\anchor@spot]{%
11426       pdfmark=/DEST,%
11427       linktype=anchor,%
11428       View=/\@pdfview \@pdfviewparams,%
11429       DestAnchor={#1}%
11430     }%
11431   \endgroup
11432   \Hy@RestoreLastskip
11433 }
11434 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11435 \Hy@WrapperDef\hyper@anchorstart#1{%
11436   \Hy@SaveLastskip
11437   \Hy@VerboseAnchor{#1}%
11438   \literalps@out{H.S}%
11439   \Hy@AllowHyphens
11440   \xdef\hyper@currentanchor{#1}%
11441   \Hy@activeanchortrue
11442 }
11443 \def\hyper@anchorend{%
11444   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11445   \pdfmark{%
11446     pdfmark=/DEST,%

```

```

11447 linktype=anchor,%
11448 View=/\@pdfview \@pdfviewparams,%
11449 DestAnchor=\hyper@currentanchor,%
11450 }%
11451 \Hy@activeanchorfalse
11452 \Hy@RestoreLastskip
11453 }
11454 \def\hyper@linkstart#1#2{%
11455 \Hy@VerboseLinkStart{#1}{#2}%
11456 \ifHy@breaklinks
11457 \else
11458 \leavevmode
11459 \ifmmode
11460 \def\Hy@LinkMath{$}%
11461 \else
11462 \let\Hy@LinkMath\ltx@empty
11463 \fi
11464 \Hy@SaveSpaceFactor
11465 \hbox\bgroup
11466 \Hy@RestoreSpaceFactor
11467 \Hy@LinkMath
11468 \fi
11469 \expandafter\Hy@colorlink\csname @#1color\endcsname
11470 \literalps@out{H.S}%
11471 \Hy@AllowHyphens
11472 \xdef\hyper@currentanchor{#2}%
11473 \gdef\hyper@currentlinktype{#1}%
11474 }
11475 \def\hyper@linkend{%
11476 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11477 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11478 \let\Hy@tempcolor\relax
11479 }{%
11480 \edef\Hy@tempcolor{%
11481 \csname @\hyper@currentlinktype bordercolor\endcsname
11482 }%
11483 }%
11484 \pdfmark{%
11485 pdfmark=/ANN,%
11486 linktype=link,%
11487 Subtype=/Link,%
11488 PDFAFlags=4,%
11489 Dest=\hyper@currentanchor,%
11490 AcroHighlight=\@pdfhighlight,%
11491 Border=\@pdfborder,%
11492 BorderStyle=\@pdfborderstyle,%
11493 Color=\Hy@tempcolor,%
11494 Raw=H.B%
11495 }%
11496 \Hy@endcolorlink
11497 \ifHy@breaklinks
11498 \else
11499 \Hy@LinkMath
11500 \Hy@SaveSpaceFactor

```

```

11501 \egroup
11502 \Hy@RestoreSpaceFactor
11503 \fi
11504 }

```

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.

```

11505 \begingroup
11506 \catcode`P=12 %
11507 \catcode`T=12 %
11508 \lowercase{\endgroup
11509 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11510 }
11511 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11512 \def\hyper@pagetransition{%
11513 \ifx\@pdfpagetransition\relax
11514 \else
11515 \ifx\@pdfpagetransition\@empty
11516 % 1. Does an old entry have to be deleted?
11517 % 2. If 1=yes, how to delete?
11518 \else
11519 \pdfmark{%
11520 pdfmark=/PUT,%
11521 Raw={%
11522 \string{ThisPage\string}%
11523 <</Trans << /S /\@pdfpagetransition\space >> >>%
11524 }%
11525 }%
11526 \fi
11527 \fi
11528 }

```

`\hyper@pageduration`

```

11529 \def\hyper@pageduration{%
11530 \ifx\@pdfpageduration\relax
11531 \else
11532 \ifx\@pdfpageduration\@empty
11533 % 1. Does an old entry have to be deleted?
11534 % 2. If 1=yes, how to delete?
11535 \else
11536 \pdfmark{%
11537 pdfmark=/PUT,%
11538 Raw={%
11539 \string{ThisPage\string}%
11540 <</Dur \@pdfpageduration>>%
11541 }%
11542 }%
11543 \fi
11544 \fi
11545 }

```

```

11546 \g@addto@macro\Hy@EveryPageBoxHook{%
11547   \hyper@pagetransition
11548   \hyper@pageduration
11549 }

11550 \def\hyper@image#1#2{%
11551   \hyper@linkurl{#2}{#1}%
11552 }

11553 \def\Hy@undefinedname{UNDEFINED}
11554 \def\hyper@link#1#2#3{%
11555   \Hy@VerboseLinkStart{#1}{#2}%
11556   \ltx@ifundefined{@#1bordercolor}{%
11557     \let\Hy@tempcolor\relax
11558   }{%
11559     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11560   }%
11561   \begingroup
11562     \protected@edef\Hy@testname{#2}%
11563     \ifx\Hy@testname\@empty
11564       \Hy@Warning{%
11565         Empty destination name,\MessageBreak
11566         using ``\Hy@undefinedname'%
11567       }%
11568       \let\Hy@testname\Hy@undefinedname
11569     \fi
11570     \pdfmark[{#3}]{%
11571       Color=\Hy@tempcolor,%
11572       linktype={#1},%
11573       AcroHighlight=\@pdfhighlight,%
11574       Border=\@pdfborder,%
11575       BorderStyle=\@pdfborderstyle,%
11576       pdfmark=/ANN,%
11577       Subtype=/Link,%
11578       PDFAFlags=4,%
11579       Dest=\Hy@testname
11580     }%
11581   \endgroup
11582 }

11583 \newtoks\pdf@docset
11584 \def\PDF@FinishDoc{%
11585   \Hy@UseMaketitleInfos
11586   \HyInfo@GenerateAddons
11587   \let\Hy@temp\@empty
11588   \ifx\@pdfcreationdate\@empty
11589   \else
11590     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11591   \fi
11592   \ifx\@pdfmoddate\@empty
11593   \else
11594     \expandafter\def\expandafter\Hy@temp\expandafter{%
11595       \Hy@temp
11596       ModDate=\@pdfmoddate,%
11597     }%
11598   \fi
11599   \ifx\@pdfproducer\relax

```

```

11600 \else
11601 \expandafter\def\expandafter\Hy@temp\expandafter{%
11602 \Hy@temp
11603 Producer=\@pdfproducer,%
11604 }%
11605 \fi
11606 \expandafter
11607 \pdfmark\expandafter{%
11608 \Hy@temp
11609 pdfmark=/DOCINFO,%
11610 Title=\@pdftitle,%
11611 Subject=\@pdfsubject,%
11612 Creator=\@pdfcreator,%
11613 Author=\@pdfauthor,%
11614 Keywords=\@pdfkeywords,%
11615 Trapped=\@pdftrapped
11616 }%
11617 \ifx\HyInfo@Addons\@empty
11618 \else
11619 \pdfmark{%
11620 pdfmark=/DOCINFO,%
11621 Raw={\HyInfo@Addons}%
11622 }%
11623 \fi
11624 \Hy@DisableOption{pdfauthor}%
11625 \Hy@DisableOption{pdftitle}%
11626 \Hy@DisableOption{pdfsubject}%
11627 \Hy@DisableOption{pdfcreator}%
11628 \Hy@DisableOption{addtopdfcreator}%
11629 \Hy@DisableOption{pdfcreationdate}%
11630 \Hy@DisableOption{pdfcreationdate}%
11631 \Hy@DisableOption{pdfmoddate}%
11632 \Hy@DisableOption{pdfproducer}%
11633 \Hy@DisableOption{pdfkeywords}%
11634 \Hy@DisableOption{pdftrapped}%
11635 \Hy@DisableOption{pdfinfo}%
11636 }
11637 \def\PDF@SetupDoc{%
11638 \def\Hy@temp{}%
11639 \ifx\@pdfstartpage\@empty
11640 \else
11641 \ifx\@pdfstartview\@empty
11642 \else
11643 \edef\Hy@temp{%
11644 ,Page=\@pdfstartpage
11645 ,View=\@pdfstartview
11646 }%
11647 \fi
11648 \fi
11649 \edef\Hy@temp{%
11650 \noexpand\pdfmark{%
11651 pdfmark=/DOCVIEW,%
11652 PageMode=/\@pdfpagemode
11653 \Hy@temp

```

```

11654 }%
11655 }%
11656 \Hy@temp
11657 \ifx\@pdfpagescrop\@empty
11658 \else
11659 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11660 \fi
11661 \edef\Hy@temp{%
11662 \ifHy@pdftoolbar\else /HideToolbar true\fi
11663 \ifHy@pdfmenubar\else /HideMenubar true\fi
11664 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11665 \ifHy@pdffitwindow /FitWindow true\fi
11666 \ifHy@pdfcenterwindow /CenterWindow true\fi
11667 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11668 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11669 \Hy@UseNameKey{Direction}\@pdfdirection
11670 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11671 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11672 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11673 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11674 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11675 \Hy@UseNameKey{Duplex}\@pdfduplex
11676 \ifx\@pdfpicktraybypdfsize\@empty
11677 \else
11678 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11679 \fi
11680 \ifx\@pdfprintpagerange\@empty
11681 \else
11682 /PrintPageRange[\@pdfprintpagerange]%
11683 \fi
11684 \ifx\@pdfnumcopies\@empty
11685 \else
11686 /NumCopies \@pdfnumcopies
11687 \fi
11688 }%
11689 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11690 \pdfmark{%
11691 pdfmark=/PUT,%
11692 Raw={%
11693 \string{Catalog\string}<<%
11694 \ifx\Hy@temp\@empty
11695 \else
11696 /ViewerPreferences<<\Hy@temp>>%
11697 \fi
11698 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11699 \ifx\@pdflang\relax
11700 \else
11701 /Lang(\@pdflang)%
11702 \fi
11703 \ifx\@baseurl\@empty
11704 \else
11705 /URI<</Base(\Hy@pstringB)>>%
11706 \fi
11707 >>%

```



```

11708 }%
11709 }%
11710 }
11711 </pdfmark>
11712 <*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.

```

11713 \newif\ifHy@pdfmarkerror
11714 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11715 \def\pdfmark@[#1]#2{%
11716   \Hy@pdfmarkerrorfalse
11717   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11718   \@processme
11719   \let\pdf@type\relax
11720   \let\pdf@objdef\ltx@empty
11721   \kvsetkeys{PDF}{#2}%
11722   \ifHy@pdfmarkerror
11723   \else
11724     \ifx\pdf@type\relax
11725       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11726       \ifx\#1\%
11727         \else
11728           \pdf@rect{#1}%
11729         \fi
11730       \else
11731         \ifx\#1\%
11732           \literalps@out{%
11733             [%
11734             \ifx\pdf@objdef\ltx@empty
11735             \else
11736               /_objdef\string{\pdf@objdef\string}%
11737             \fi
11738             \the\pdf@toks\space\pdf@type\space pdfmark%
11739             }%
11740           \else
11741             \ltx@ifundefined{@\pdf@linktype color}{%
11742               \Hy@colorlink\@linkcolor
11743             }{%
11744               \expandafter\Hy@colorlink
11745               \csname @\pdf@linktype color\endcsname
11746             }%
11747             \pdf@rect{#1}%
11748           \literalps@out{%
11749             [%
11750             \ifx\pdf@objdef\ltx@empty
11751             \else
11752               /_objdef\string{\pdf@objdef\string}%
11753             \fi
11754             \the\pdf@toks\space\pdf@type\space pdfmark%

```

```

11755      }%
11756      \Hy@endcolorlink
11757      \fi
11758      \fi
11759      \fi
11760 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

11761 \newsavebox{\pdf@box}
11762 \providecommand*{\Hy@setouterhbox}{\sbox}
11763 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11764 \def\Hy@DEST{/DEST}
11765 \def\pdf@rect#1{%
11766   \begingroup
11767   \chardef\x=1 %
11768   \def\Hy@temp{#1}%
11769   \ifx\Hy@temp\ltx@empty
11770     \chardef\x=0 %
11771   \else
11772     \def\y{\anchor@spot}%
11773     \ifx\Hy@temp\y
11774       \def\y{\relax}%
11775     \ifx\anchor@spot\y
11776       \chardef\x=0 %
11777     \fi
11778   \fi
11779   \fi
11780 \expandafter\endgroup
11781 \ifcase\x
11782   \literalps@out{H.S}%
11783   \literalps@out{H.R}%
11784 \else
11785   \leavevmode
11786   \Hy@SaveSpaceFactor
11787   \ifmmode
11788     \def\Hy@LinkMath{$}%
11789   \else
11790     \let\Hy@LinkMath\ltx@empty
11791   \fi
11792   \ifHy@breaklinks
11793     \Hy@setouterhbox\pdf@box{%
11794     \Hy@RestoreSpaceFactor

```

```

11795 \Hy@LinkMath
11796 \Hy@AllowHyphens#1\Hy@xspace@end
11797 \Hy@LinkMath
11798 \Hy@SaveSpaceFactor
11799 }%
11800 \else
11801 \sbox\pdf@box{%
11802 \Hy@RestoreSpaceFactor
11803 \Hy@LinkMath
11804 #1\Hy@xspace@end
11805 \Hy@LinkMath
11806 \Hy@SaveSpaceFactor
11807 }%
11808 \fi
11809 \dimen@ \ht\pdf@box
11810 \ifdim\dp\pdf@box=\z@
11811 \literalps@out{H.S}%
11812 \else
11813 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11814 \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...).

```

11815 \ifHy@breaklinks
11816 \ifhmode
11817 \Hy@breaklinksunhbox\pdf@box
11818 \else
11819 \box\pdf@box
11820 \fi
11821 \else
11822 \expandafter\box\pdf@box
11823 \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

11824 \ifdim\dimen@=\z@
11825 \literalps@out{H.R}%
11826 \else
11827 \raise\dimen@\hbox{\literalps@out{H.R}}%
11828 \fi
11829 \Hy@RestoreSpaceFactor
11830 \fi
11831 \ifx\pdf@type\Hy@DEST
11832 \else
11833 \pdf@addtoksx{H.B}%
11834 \fi
11835 }

```

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.

```

11836 \newtoks\pdf@toks
11837 \newtoks\pdf@defaulttoks
11838 \pdf@defaulttoks={} %
11839 \def\pdf@addtoks#1#2{%
11840   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}} %
11841   \@processme
11842 }
11843 \def\pdf@addtoksx#1{%
11844   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}} %
11845   \@processme
11846 }
11847 \def\PDFdefaults#1{%
11848   \pdf@defaulttoks={#1} %
11849 }

```

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

```

11850 % what is the type of pdfmark?
11851 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11852 % what is the link type?
11853 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11854 \def\pdf@linktype{link}
11855 % named object?
11856 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11857 \let\pdf@objdef\ltx@empty
11858 % parameter is a stream of PDF
11859 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11860 % parameter is a name
11861 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11862 % parameter is a array
11863 \define@key{PDF}{Border}{%
11864   \edef\Hy@temp{#1}%
11865   \ifx\Hy@temp\@empty
11866     \else
11867       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11868     \fi
11869 }
11870 \let\Hy@BorderArrayPatch\@empty
11871 % parameter is a dictionary
11872 \define@key{PDF}{BorderStyle}{%
11873   \edef\Hy@temp{#1}%
11874   \ifx\Hy@temp\@empty
11875     \else
11876       \pdf@addtoks{<<#1>>}{BS}%
11877     \fi
11878 }
11879 % parameter is a array
11880 \define@key{PDF}{Color}{%
11881   \ifx\relax#1\relax
11882     \else
11883       \pdf@addtoks{[#1]}{Color}% hash-ok
11884     \fi
11885 }
11886 % parameter is a string
11887 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11888 % parameter is a integer

```

```

11889 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11890 % parameter is a array
11891 \define@key{PDF}{CropBox}{\pdf@addtoks{#1}{CropBox}}% hash-ok
11892 % parameter is a string
11893 \define@key{PDF}{DOSFile}{\pdf@addtoks{#1}{DOSFile}}
11894 % parameter is a string or file
11895 \define@key{PDF}{DataSource}{\pdf@addtoks{#1}{DataSource}}
11896 % parameter is a destination
11897 \define@key{PDF}{Dest}{%
11898   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11899   \ifx\Hy@pstringDest\@empty
11900     \Hy@pdfmarkerrortrue
11901     \Hy@Warning{Destination with empty name ignored}%
11902   \else
11903     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11904   \fi
11905 }
11906 \define@key{PDF}{DestAnchor}{%
11907   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11908   \ifx\Hy@pstringDest\@empty
11909     \Hy@pdfmarkerrortrue
11910     \Hy@Warning{Destination with empty name ignored}%
11911   \else
11912     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11913   \fi
11914 }
11915 % parameter is a string
11916 \define@key{PDF}{Dir}{\pdf@addtoks{#1}{Dir}}
11917 % parameter is a string
11918 \define@key{PDF}{File}{\pdf@addtoks{#1}{File}}
11919 % parameter is a int
11920 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11921 \define@key{PDF}{PDFAFlags}{%
11922   \ifHy@pdfa
11923     \pdf@addtoks{#1}{F}%
11924   \fi
11925 }
11926 % parameter is a name
11927 \define@key{PDF}{AcroHighlight}{%
11928   \begingroup
11929     \edef\x{#1}%
11930     \expandafter\endgroup\ifx\x\@empty
11931   \else
11932     \pdf@addtoks{#1}{H}%
11933   \fi
11934 }
11935 % parameter is a string
11936 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
11937 % parameter is a string
11938 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
11939 % parameter is a string
11940 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11941 % parameter is a string
11942 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}

```

```

11943 % parameter is a Boolean
11944 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11945 % parameter is a integer or name
11946 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11947 % parameter is a name
11948 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11949 % parameter is a string
11950 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11951 % parameter is a array
11952 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
11953 % parameter is a integer
11954 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11955 % parameter is a name
11956 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11957 % parameter is a string
11958 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11959 % parameter is a string
11960 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11961 % parameter is a string
11962 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11963 % parameter is an array
11964 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
11965 % parameter is a string
11966 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}
These are the keys used in the DOCINFO section.
11967 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11968 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11969 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11970 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11971 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11972 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11973 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11974 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11975 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11976 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11977 \define@key{PDF}{Trapped}{%
11978   \edef\Hy@temp{#1}%
11979   \ifx\Hy@temp\@empty
11980   \else
11981     \pdf@addtoks{/#1}{Trapped}%
11982   \fi
11983 }
11984
11985 </pdfmarkbase>
11986 <*pdfmark>
11987 \def\Acrobatmenu#1#2{%
11988   \EdefEscapeName\Hy@temp@menu{#1}%
11989   \Hy@Acrobatmenu{#1}{#2}{%
11990     \pdfmark[{#2}]{%
11991       linktype=menu,%
11992       pdfmark=/ANN,%
11993       AcroHighlight=\@pdfhighlight,%
11994       Border=\@pdfborder,%
11995       BorderStyle=\@pdfborderstyle,%

```

```

11996     Color=\@menubordercolor,%
11997     Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11998     Subtype=/Link,%
11999     PDFAFlags=4%
12000 }%
12001 }%
12002 }

```

And now for some useful examples:

```

12003 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}%
12004 \def\PDFNextPage@[#1]#2{%
12005   \pdfmark[#2]{%
12006     #1,%
12007     Border=\@pdfborder,%
12008     BorderStyle=\@pdfborderstyle,%
12009     Color=.2 .1 .5,%
12010     pdfmark=/ANN,%
12011     Subtype=/Link,%
12012     PDFAFlags=4,%
12013     Page=/Next%
12014   }%
12015 }
12016 \def\PDFPreviousPage{%
12017   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12018 }
12019 \def\PDFPreviousPage@[#1]#2{%
12020   \pdfmark[#2]{%
12021     #1,%
12022     Border=\@pdfborder,%
12023     BorderStyle=\@pdfborderstyle,%
12024     Color=.4 .4 .1,%
12025     pdfmark=/ANN,%
12026     Subtype=/Link,%
12027     PDFAFlags=4,%
12028     Page=/Prev%
12029   }%
12030 }
12031 \def\PDFOpen#1{%
12032   \pdfmark{#1,pdfmark=/DOCVIEW}%
12033 }

```

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

```

12034 \def\hyper@linkurl#1#2{%
12035   \begingroup
12036   \Hy@pstringdef\Hy@pstringURI{#2}%
12037   \hyper@chars
12038   \leavevmode
12039   \pdfmark[#1]{%
12040     pdfmark=/ANN,%
12041     linktype=url,%
12042     AcroHighlight=\@pdfhighlight,%
12043     Border=\@pdfborder,%
12044     BorderStyle=\@pdfborderstyle,%
12045     Color=\@urlbordercolor,%
12046     Action={<<%

```

```

12047     /Subtype/URI%
12048     /URI(\Hy@pstringURI)%
12049     \ifHy@href@ismap
12050     /IsMap true%
12051     \fi
12052     >>},%
12053     Subtype=/Link,%
12054     PDFAFlags=4%
12055     }%
12056 \endgroup
12057 }
12058 \def\hyper@linkfile#1#2#3{%
12059 \begingroup
12060 \def\Hy@pstringF{#2}%
12061 \Hy@CleanupFile\Hy@pstringF
12062 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12063 \Hy@pstringdef\Hy@pstringD{#3}%
12064 \Hy@MakeRemoteAction
12065 \leavevmode
12066 \pdfmark[{#1}]{%
12067 pdfmark=/ANN,%
12068 Subtype=/Link,%
12069 PDFAFlags=4,%
12070 AcroHighlight=\@pdfhighlight,%
12071 Border=\@pdfborder,%
12072 BorderStyle=\@pdfborderstyle,%
12073 linktype=file,%
12074 Color=\@filebordercolor,%
12075 Action={%
12076 <<%
12077 /S/GoToR%
12078 \Hy@SetNewWindow
12079 /F(\Hy@pstringF)%
12080 /D%
12081 \ifx\#3\%
12082 [\Hy@href@page\@pdfremotestartview]%
12083 \else
12084 (\Hy@pstringD)cvn%
12085 \fi
12086 \Hy@href@nextactionraw
12087 >>%
12088 }%
12089 }%
12090 \endgroup
12091 }
12092 \def\@hyper@launch run:#1\#2#3{%
12093 \begingroup
12094 \Hy@pstringdef\Hy@pstringF{#1}%
12095 \Hy@pstringdef\Hy@pstringP{#3}%
12096 \leavevmode
12097 \pdfmark[{#2}]{%
12098 pdfmark=/ANN,%
12099 Subtype=/Link,%
12100 PDFAFlags=4,%

```



```

12101   AcroHighlight=\@pdfhighlight,%
12102   Border=\@pdfborder,%
12103   BorderStyle=\@pdfborderstyle,%
12104   linktype=run,%
12105   Color=\@runbordercolor,%
12106   Action={%
12107     <<%
12108       /S/Launch%
12109       \Hy@SetNewWindow
12110       /F(\Hy@pstringF)%
12111       \ifx\#3\%
12112       \else
12113       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12114       \fi
12115       \Hy@href@nextactionraw
12116     >>%
12117   }%
12118 }%
12119 \endgroup
12120 }
12121 \pdfmark>

```

Unfortunately, some parts of the `pdfmark` PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

47.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its *y* axis starts at the top of the page. Other drivers can and will be different!

The work is done in `SDict`, because we add in some header definitions in a moment.

```

12122 <{*dvips}
12123 \providecommand*\XR@ext}{pdf}
12124 \let\Hy@raisedlink\ltx@empty
12125 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12126 \def\headerps@out#1{\special{! #1}}%
12127 \input{pdfmark.def}%
12128 \ifx\@pdfproducer\relax
12129   \def\@pdfproducer{dvips + Distiller}%
12130 \fi
12131 \providecommand*\@pdfborder{0 0 1}
12132 \providecommand*\@pdfborderstyle{}
12133 \providecommand*\@pdfview{XYZ}
12134 \providecommand*\@pdfviewparams{ H.V}
12135 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12136 \g@addto@macro\Hy@FirstPageHook{%
12137   \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.

```
12138 /DvipsToPDF{72.27 mul Resolution div} def%
12139 /PDFToDvips{72.27 div Resolution mul} def%
12140 /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.

```
12141 product (Ghostscript) search {pop pop pop revision 927 gt}%
12142 {pop false} ifelse%
12143 {%
12144 /BorderArrayPatch{} def%
12145 }%
12146 {%
12147 /BorderArrayPatch{%
12148 [exch{%
12149 dup dup type/integertype eq exch type/realtype eq or%
12150 {BPToDvips}if%
12151 }forall]%
12152 }def%
12153 } 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.

```
12154 /HyperBorder {1 PDFToDvips} def%
12155 /H.V {pdf@hoff pdf@voff null} def%
12156 /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

```
12157 /H.S {%
12158 currentpoint %
12159 HyperBorder add /pdf@lly exch def %
12160 dup DvipsToPDF 72 add /pdf@hoff exch def %
12161 HyperBorder sub /pdf@llx exch def%
12162 } def%
```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```
12163 /H.L {%
```

```

12164      2 sub dup%
12165      /HyperBasePt exch def %
12166      PDFToDvips /HyperBaseDvips exch def %
12167      currentpoint %
12168      HyperBaseDvips sub /pdf@ury exch def%
12169      /pdf@urx exch def%
12170      } def%
12171      /H.A {%
12172      H.L %
12173      % | /pdf@voff| = the distance from the top of the page to a point
12174      % | \baselineskip| above the current point in PDF coordinates
12175      currentpoint exch pop %
12176      vsize 72 sub exch DvipsToPDF %
12177      HyperBasePt sub % baseline skip
12178      sub /pdf@voff exch def%
12179      } def%
12180      /H.R {%
12181      currentpoint %
12182      HyperBorder sub /pdf@ury exch def %
12183      HyperBorder add /pdf@urx exch def %
12184      % | /pdf@voff| = the distance from the top of the page to the current point, in
12185      % PDF coordinates
12186      currentpoint exch pop vsize 72 sub %
12187      exch DvipsToPDF sub /pdf@voff exch def%
12188      } def%
12189      }%
12190      }
12191      \AtBeginShipoutFirst{%
12192      \ifHy@setpagesize
12193      \begingroup
12194      \@ifundefined{stockwidth}{%
12195      \ifdim\paperwidth>\z@
12196      \ifdim\paperheight>\z@
12197      \special{papersize=\the\paperwidth,\the\paperheight}%
12198      \fi
12199      \fi
12200      }{%
12201      \ifdim\stockwidth>\z@
12202      \ifdim\stockheight>\z@
12203      \special{papersize=\the\stockwidth,\the\stockheight}%
12204      \fi
12205      \fi
12206      }%
12207      \endgroup
12208      \fi
12209      \Hy@DisableOption{setpagesize}%
12210      }
12211      \def\setpdfinkmargin#1{%
12212      \begingroup
12213      \setlength{\dimen@}{#1}%
12214      \literalps@out{%
12215      /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12216      }%
12217      \endgroup

```

```

12218 }
12219 </dvips>

```

47.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

12220 <*vtexpdfmark>
12221 \providecommand*\XR@ext}{pdf}
12222 \let\Hy@raisedlink\ltx@empty
12223 \def\literalps@out#1{\special{pS:#1}}%
12224 \def\headerps@out#1{\immediate\special{pS:#1}}%
12225 \input{pdfmark.def}%
12226 \ifx\@pdfproducer\relax
12227   \ifnum\OpMode=\@one
12228     \def\@pdfproducer{VTeX}%
12229   \else
12230     \def\@pdfproducer{VTeX + Distiller}%
12231   \fi
12232 \fi
12233 \providecommand*\@pdfborder{0 0 1}
12234 \providecommand*\@pdfborderstyle{}
12235 \providecommand*\@pdfview{XYZ}
12236 \providecommand*\@pdfviewparams{ H.V}
12237 \g@addto@macro\Hy@FirstPageHook{%
12238   \headerps@out{%
12239     /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.

```

12240   /HyperBorder {1} def%
12241   /H.V {pdf@hoff pdf@voff null} def%
12242   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

12243   /H.S {%
12244     currentpoint %
12245     HyperBorder sub%
12246     /pdf@lly exch def %
12247     dup 72 add /pdf@hoff exch def %
12248     HyperBorder sub%
12249     /pdf@llx exch def%
12250   } def%

```

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

```

12251   /H.L {%
12252     2 sub%
12253     /HyperBasePt exch def %

```

```

12254     currentpoint %
12255     HyperBasePt add HyperBorder add%
12256     /pdf@ury exch def %
12257     HyperBorder add%
12258     /pdf@urx exch def%
12259   } def%
12260   /H.A {%
12261     H.L %
12262     currentpoint exch pop %
12263     vsize 72 sub exch %
12264     HyperBasePt add add%
12265     /pdf@voff exch def%
12266   } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
12267   /H.R {%
12268     currentpoint %
12269     HyperBorder add%
12270     /pdf@ury exch def %
12271     HyperBorder add%
12272     /pdf@urx exch def %
12273     currentpoint exch pop vsize 72 sub add%
12274     /pdf@voff exch def%
12275   } def%
12276 }%
12277 }

12278 \def\setpdfinkmargin#1{%
12279   \begingroup
12280     \setlength{\dimen@}{#1}%
12281     \literalps@out{%
12282       /HyperBorder{\strip@pt\dimen@}def%
12283     }%
12284   \endgroup
12285 }
12286 \</vtxpdfmark>

```

47.11 Textures

```

12287 \<*textures>
12288 \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.

```

12289 \begingroup
12290   \obeylines %
12291   \gdef\Hy@ps@CR{\noexpand
12292   }%
12293 \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`.

```
12294 \def\literalps@out#1{%
12295   \special{postscript 0 0 transform}%
12296   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12297 }%
12298 %
```

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.

```
12299 \def\headerps@out#1{%
12300   \special{%
12301     prepostscript TeXdict begin\Hy@ps@CR
12302       #1\Hy@ps@CR
12303     end%
12304   }%
12305 }%
12306 %
```

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.

```
12307 \g@addto@macro\Hy@FirstPageHook{%
12308   \headerps@out{%
12309     /betterpdfmark {%
12310       systemdict begin %
12311         dup /BP eq%
12312         {cleartomark gsave nulldevice []}%
12313         {dup /EP eq%
12314           {cleartomark cleartomark grestore}%
12315           {cleartomark}%
12316           ifelse%
12317         }ifelse %
12318       end%
12319     }def\Hy@ps@CR
12320     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12321   }% end of \headerps@out
12322 }% end of \AtBeginShipoutFirst
12323 %
12324 \input{pdfmark.def}%
12325 %
12326 \ifx\@pdfproducer\relax
12327   \def\@pdfproducer{Textures + Distiller}%
12328 \fi
```

```

12329 \providecommand*\@pdfborder{0 0 1}
12330 \providecommand*\@pdfborderstyle{}
12331 \providecommand*\@pdfview{XYZ}
12332 \providecommand*\@pdfviewparams{ H.V}
12333 %

```

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 .

```

12334 \Hy@AtBeginDocument{%
12335   \headerps@out{%

```

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

```

12336   /vsize {\Hy@pageheight} def%
12337   /DvipsToPDF {} def%
12338   /PDFToDvips {} def%
12339   /BPToDvips {} def%
12340   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12341   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12342   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12343   /H.S {%
12344     currentpoint %
12345     HyperBorder add /pdf@lly exch def %
12346     dup DvipsToPDF 72 add /pdf@hoff exch def %
12347     HyperBorder sub /pdf@llx exch def%
12348   } def\Hy@ps@CR
12349   /H.L {%
12350     2 sub %
12351     PDFToDvips /HyperBase exch def %
12352     currentpoint %
12353     HyperBase sub /pdf@ury exch def%
12354     /pdf@urx exch def%
12355   } def\Hy@ps@CR
12356   /H.A {%
12357     H.L %
12358     currentpoint exch pop %
12359     vsize 72 sub exch DvipsToPDF %
12360     HyperBase sub % baseline skip
12361     sub /pdf@voff exch def%
12362   } def\Hy@ps@CR
12363   /H.R {%
12364     currentpoint %
12365     HyperBorder sub /pdf@ury exch def %
12366     HyperBorder add /pdf@urx exch def %
12367     currentpoint exch pop vsize 72 sub %
12368     exch DvipsToPDF sub /pdf@voff exch def%
12369   } def\Hy@ps@CR
12370 }%
12371 }

12372 \def\setpdfinkmargin#1{%
12373   \begingroup

```

```

12374 \setlength{\dimen@}{#1}%
12375 \literalps@out{%
12376 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12377 }%
12378 \endgroup
12379 }

12380 \Hy@AtBeginDocument{%
12381 \ifHy@colorlinks
12382 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12383 \fi
12384 }

```

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.

```

12385 \expandafter\let\expandafter\keepPDF@SetupDoc
12386 \csname PDF@SetupDoc\endcsname
12387 \def\PDF@SetupDoc{%
12388 \ifx\@baseurl\@empty
12389 \else
12390 \special{html:<base href="\@baseurl">}%
12391 \fi
12392 \keepPDF@SetupDoc
12393 }

12394 \Hy@WrapperDef\hyper@anchor#1{%
12395 \Hy@SaveLastskip
12396 \Hy@VerboseAnchor{#1}%
12397 \begingroup
12398 \let\protect=\string
12399 \special{html:<a name=%
12400 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12401 \endgroup
12402 \Hy@activeanchortrue
12403 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12404 \special{html:</a>}%
12405 \Hy@activeanchorfalse
12406 \Hy@RestoreLastskip
12407 }

12408 \Hy@WrapperDef\hyper@anchorstart#1{%
12409 \Hy@SaveLastskip
12410 \Hy@VerboseAnchor{#1}%
12411 \begingroup
12412 \hyper@chars
12413 \special{html:<a name=%
12414 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12415 \endgroup
12416 \Hy@activeanchortrue
12417 }

12418 \def\hyper@anchorend{%
12419 \special{html:</a>}%
12420 \Hy@activeanchorfalse
12421 \Hy@RestoreLastskip
12422 }

12423 \def\@urltype{url}

```



```

12424 \def\hyper@linkstart#1#2{%
12425   \Hy@VerboseLinkStart{#1}{#2}%
12426   \expandafter\Hy@colorlink\csname @#1color\endcsname
12427   \def\Hy@tempa{#1}%
12428   \ifx\Hy@tempa\@urlltype
12429     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12430   \else
12431     \begingroup
12432       \hyper@chars
12433       \special{%
12434         html:<a href=%
12435         \hyper@quote\#\Hy@HyperDestNameFilter{#2}\hyper@quote>%
12436       }%
12437     \endgroup
12438   \fi
12439 }
12440 \def\hyper@linkend{%
12441   \special{html:</a>}%
12442   \Hy@endcolorlink
12443 }
12444 \def\hyper@linkfile#1#2#3{%
12445   \hyper@linkurl{#1}{%
12446     \Hy@linkfileprefix#2\ifx\#3\\ \else\#3\fi
12447   }%
12448 }
12449 \def\hyper@linkurl#1#2{%
12450   \leavevmode
12451   \ifHy@raiselinks
12452     \Hy@SaveSpaceFactor
12453     \Hy@SaveSavedSpaceFactor
12454     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12455     \Hy@RestoreSavedSpaceFactor
12456     \@linkdim\dp\@tempboxa
12457     \lower\@linkdim\hbox{%
12458       \hyper@chars
12459       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12460     }%
12461     \Hy@colorlink\@urlcolor
12462     \Hy@RestoreSpaceFactor
12463     #1\Hy@xspace@end
12464     \Hy@SaveSpaceFactor
12465     \@linkdim\ht\@tempboxa
12466     \advance\@linkdim by -6.5\p@
12467     \raise\@linkdim\hbox{\special{html:</a>}}%
12468     \Hy@endcolorlink
12469     \Hy@RestoreSpaceFactor
12470   \else
12471     \begingroup
12472       \hyper@chars
12473       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12474       \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12475       \special{html:</a>}%
12476       \Hy@endcolorlink
12477     \endgroup

```

```

12478 \fi
12479 }
Very poor implementation of \hyper@link without considering #1.
12480 \def\hyper@link#1#2#3{%
12481 \Hy@VerboseLinkStart{#1}{#2}%
12482 \hyper@linkurl{#3}{\#}\HyperDestNameFilter{#2}}%
12483 }
12484 \def\hyper@image#1#2{%
12485 \begingroup
12486 \hyper@chars
12487 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12488 \endgroup
12489 }
12490 </textures>

```

47.12 dvipsone

```

12491 % \subsection{dvipsone driver}
12492 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12493 % |\special| commands.
12494 (*dvipsone)
12495 \providecommand*\XR@ext}{pdf}
12496 \let\Hy@raisedlink\ltx@empty
12497 \providecommand*\@pdfborder{0 0 1}
12498 \providecommand*\@pdfborderstyle{}
12499 \def\literalps@out#1{\special{ps:#1}}%
12500 \def\headerps@out#1{\special{headertext=#1}}%
12501 \input{pdfmark.def}%
12502 \HyInfo@AddonUnsupportedtrue
12503 \def\PDF@FinishDoc{%
12504 \Hy@UseMaketitleInfos
12505 \HyInfo@TrappedUnsupported
12506 \special{PDF: Keywords \@pdfkeywords}%
12507 \special{PDF: Title \@pdftitle}%
12508 \special{PDF: Creator \@pdfcreator}%
12509 \ifx\@pdfcreationdate\@empty
12510 \else
12511 \special{PDF: CreationDate \@pdfcreationdate}%
12512 \fi
12513 \ifx\@pdfmoddate\@empty
12514 \else
12515 \special{PDF: ModDate \@pdfmoddate}%
12516 \fi
12517 \special{PDF: Author \@pdfauthor}%
12518 \ifx\@pdfproducer\relax
12519 \else
12520 \special{PDF: Producer \@pdfproducer}%
12521 \fi
12522 \special{PDF: Subject \@pdfsubject}%
12523 \Hy@DisableOption{pdfauthor}%
12524 \Hy@DisableOption{pdftitle}%
12525 \Hy@DisableOption{pdfsubject}%
12526 \Hy@DisableOption{pdfcreator}%

```

```

12527 \Hy@DisableOption{addtopdfcreator}%
12528 \Hy@DisableOption{pdfcreationdate}%
12529 \Hy@DisableOption{pdfcreationdate}%
12530 \Hy@DisableOption{pdfmoddate}%
12531 \Hy@DisableOption{pdfproducer}%
12532 \Hy@DisableOption{pdfkeywords}%
12533 \Hy@DisableOption{pdftrapped}%
12534 \Hy@DisableOption{pdfinfo}%
12535 }
12536 \def\PDF@SetupDoc{%
12537 \def\Hy@temp{}%
12538 \ifx\@pdfstartpage\@empty
12539 \else
12540 \ifx\@pdfstartview\@empty
12541 \else
12542 \edef\Hy@temp{%
12543 ,Page=\@pdfstartpage
12544 ,View=\@pdfstartview
12545 }%
12546 \fi
12547 \fi
12548 \edef\Hy@temp{%
12549 \noexpand\pdfmark{%
12550 pdfmark=/DOCVIEW,%
12551 PageMode=/\@pdfpagemode
12552 \Hy@temp
12553 }%
12554 }%
12555 \Hy@temp
12556 \ifx\@pdfpagescrop\@empty
12557 \else
12558 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12559 \fi
12560 \edef\Hy@temp{%
12561 \ifHy@pdftoolbar\else /HideToolbar true\fi
12562 \ifHy@pdfmenubar\else /HideMenubar true\fi
12563 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12564 \ifHy@pdfwindow /FitWindow true\fi
12565 \ifHy@pdfcenterwindow /CenterWindow true\fi
12566 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12567 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12568 \Hy@UseNameKey{Direction}\@pdfdirection
12569 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12570 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12571 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12572 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12573 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12574 \Hy@UseNameKey{Duplex}\@pdfduplex
12575 \ifx\@pdfpicktraybypdfsize\@empty
12576 \else
12577 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12578 \fi
12579 \ifx\@pdfprintpagerange\@empty
12580 \else

```

```

12581      /PrintPageRange[\@pdfprintpagerange]%
12582      \fi
12583      \ifx\@pdfnumcopies\@empty
12584      \else
12585      /NumCopies \@pdfnumcopies
12586      \fi
12587    }%
12588    \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12589    \pdfmark{%
12590      pdfmark=/PUT,%
12591      Raw={%
12592        \string{Catalog\string}<<%
12593        \ifx\Hy@temp\@empty
12594        \else
12595        /ViewerPreferences<<\Hy@temp>>%
12596        \fi
12597        \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12598        \ifx\@pdflang\relax
12599        \else
12600        /Lang(\@pdflang)%
12601        \fi
12602        \ifx\@baseurl\@empty
12603        \else
12604        /URI<</Base(\Hy@pstringB)>>%
12605        \fi
12606        >>%
12607      }%
12608    }%
12609  }
12610  \providecommand*\@pdfview{XYZ}
12611  \providecommand*\@pdfviewparams{ %
12612    gsave revscl currentpoint grestore %
12613    72 add exch pop null exch null%
12614  }
12615  \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 .

```

12616  \g@addto@macro\Hy@FirstPageHook{%
12617    \headerps@out{%

```

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

```

12618    /DvipsToPDF { 65781 div } def%
12619    /PDFToDvips { 65781 mul } def%
12620    /BPTToDvips{65781 mul}def%
12621    /HyperBorder { 1 PDFToDvips } def%
12622    /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.

```

12623    /BorderArrayPatch{%

```

```

12624 [exch{%
12625     dup dup type/integertype eq exch type/realttype eq or%
12626     {BPToDvips}if%
12627     }forall]%
12628 }def%
12629 /H.S {%
12630     currentpoint %
12631     HyperBorder add /pdf@lly exch def %
12632     dup DvipsToPDF 72 add /pdf@hoff exch def %
12633     HyperBorder sub /pdf@llx exch def%
12634 } def%
12635 /H.L {%
12636     2 sub %
12637     PDFToDvips /HyperBase exch def %
12638     currentpoint %
12639     HyperBase sub /pdf@ury exch def%
12640     /pdf@urx exch def%
12641 } def%
12642 /H.A {%
12643     H.L %
12644     currentpoint exch pop %
12645     HyperBase sub % baseline skip
12646     DvipsToPDF /pdf@voff exch def%
12647 } def%
12648 /H.R {%
12649     currentpoint %
12650     HyperBorder sub /pdf@ury exch def %
12651     HyperBorder add /pdf@urx exch def %
12652     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12653 } def%
12654 }%
12655 }
12656 \def\setpdfinkmargin#1{%
12657     \begingroup
12658     \setlength{\dimen@}{#1}%
12659     \literalps@out{%
12660         /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12661     }%
12662     \endgroup
12663 }
12664 </dvipsone>

```

47.13 TeX4ht

```

12665 <*tex4ht>
12666 \providecommand*\XR@ext{\html}
12667 \let\Hy@raisedlink\ltx@empty
12668 \@ifpackageloaded{tex4ht}{%
12669     \Hy@InfoNoLine{tex4ht is already loaded}%
12670 }{%
12671     \RequirePackage[hhtex4ht]{tex4ht}%
12672 }
12673 \hyperlinkfileprefix{}
12674 \let\PDF@FinishDoc\ltx@empty

```

```

12675 \def\PDF@SetupDoc{%
12676   \ifx\@baseurl\@empty
12677   \else
12678     \special{t4ht=<base href="\@baseurl">}%
12679   \fi
12680 }
12681 \Hy@WrapperDef\hyper@anchor#1{%
12682   \Hy@SaveLastskip
12683   \Hy@VerboseAnchor{#1}%
12684   \begingroup
12685     \let\protect=\string
12686     \special{t4ht=<a name=%
12687       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12688   \endgroup
12689   \Hy@Activeanchortrue
12690   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12691   \special{t4ht=</a>}%
12692   \Hy@Activeanchorfalse
12693   \Hy@RestoreLastskip
12694 }
12695 \Hy@WrapperDef\hyper@anchorstart#1{%
12696   \Hy@SaveLastskip
12697   \Hy@VerboseAnchor{#1}%
12698   \begingroup
12699     \hyper@chars\special{t4ht=<a name=%
12700       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12701   \endgroup
12702   \Hy@Activeanchortrue
12703 }
12704 \def\hyper@anchorend{%
12705   \special{t4ht=</a>}%
12706   \Hy@Activeanchorfalse
12707   \Hy@RestoreLastskip
12708 }
12709 \def\@urltype{url}
12710 \def\hyper@linkstart#1#2{%
12711   \Hy@VerboseLinkStart{#1}{#2}%
12712   \expandafter\Hy@colorlink\csname @#1color\endcsname
12713   \def\Hy@tempa{#1}%
12714   \ifx\Hy@tempa\@urltype
12715     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12716   \else
12717     \begingroup
12718       \hyper@chars
12719       \special{t4ht=<a href=%
12720         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12721     \endgroup
12722   \fi
12723 }
12724 \def\hyper@linkend{%
12725   \special{t4ht=</a>}%
12726   \Hy@endcolorlink
12727 }
12728 \def\hyper@linkfile#1#2#3{%

```

```

12729 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12730 }
12731 \def\hyper@linkurl#1#2{%
12732 \leavevmode
12733 \ifHy@raiselinks
12734 \Hy@SaveSpaceFactor
12735 \Hy@SaveSavedSpaceFactor
12736 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12737 \Hy@RestoreSavedSpaceFactor
12738 \@linkdim\dp\@tempboxa
12739 \lower\@linkdim\hbox{%
12740 \begingroup
12741 \hyper@chars
12742 \special{%
12743 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12744 }%
12745 \endgroup
12746 }%
12747 \Hy@colorlink\@urlcolor
12748 \Hy@RestoreSpaceFactor
12749 #1\Hy@xspace@end
12750 \Hy@SaveSpaceFactor
12751 \Hy@endcolorlink
12752 \@linkdim\ht\@tempboxa
12753 \advance\@linkdim by -6.5\p@
12754 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12755 \Hy@RestoreSpaceFactor
12756 \else
12757 \begingroup
12758 \hyper@chars
12759 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12760 \Hy@colorlink\@urlcolor
12761 #1\Hy@xspace@end
12762 \Hy@endcolorlink
12763 \special{t4ht=</a>}%
12764 \endgroup
12765 \fi
12766 }

```

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

```

12767 \def\hyper@link#1#2#3{%
12768 \Hy@VerboseLinkStart{#1}{#2}%
12769 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
12770 }
12771 \def\hyper@image#1#2{%
12772 \begingroup
12773 \hyper@chars
12774 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12775 \endgroup
12776 }
12777 \let\autoref\ref
12778 \ifx \rEfLiNK \UnDef
12779 \def\rEfLiNK #1#2{#2}%
12780 \fi
12781 \let\backref\ltx@gobble

```

```

Fix for tex4ht.
12782 \AtBeginDocument{%
12783   \expandafter
12784   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12785   \expandafter\def\csname Make:Label\endcsname#1#2{%
12786     \ifhmode
12787       \Hy@SaveSpaceFactor
12788     \else
12789       \global\Hy@SavedSpaceFactor=1000 %
12790     \fi
12791     \Hy@OrgMakeLabel{#1}{%
12792       \Hy@RestoreSpaceFactor
12793       #2\Hy@xspace@end%
12794       \Hy@SaveSpaceFactor
12795     }%
12796     \Hy@RestoreSpaceFactor
12797   }%
12798 }
12799 </tex4ht>
12800 <*tex4htcfg>
12801 \IfFileExists{\jobname.cfg}{\endinput}{}
12802 \Preamble{html}
12803   \begin{document}%
12804 \EndPreamble
12805 \def\TeX{\TeX}
12806 \def\OMEGA{\Omega}
12807 \def\LaTeX{\LaTeX}
12808 \def\LaTeXe{\LaTeX2e}
12809 \def\eTeX{e-TeX}
12810 \def\MF{Metafont}
12811 \def\MP{MetaPost}
12812 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```

12813 <*pdfmark>
12814 \long\def\@Form[#1]{%
12815   \g@addto@macro\Hy@FirstPageHook{%
12816     \headerps@out{%
12817 [%
12818   /__objdef{pdfDocEncoding}%
12819   /type/dict%
12820 /OBJ pdfmark%
12821 [%
12822   {pdfDocEncoding}%
12823   <<%
12824   /Type/Encoding%
12825   /Differences[%
12826     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12827     /tilde %
12828     39/quotesingle %

```


12829 96/grave %
 12830 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
 12831 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
 12832 /quotedblbase/quotedblleft/quotedblright/quoteleft%
 12833 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
 12834 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
 12835 160/Euro %
 12836 164/currency %
 12837 166/brokenbar %
 12838 168/dieresis/copyright/ordfeminine %
 12839 172/logicalnot/.notdef/registered/macron/degree/plusminus%
 12840 /twosuperior/threesuperior/acute/mu %
 12841 183/periodcentered/cedilla/onesuperior/ordmasculine %
 12842 188/onequarter/onehalf/threequarters %
 12843 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
 12844 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
 12845 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
 12846 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
 12847 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
 12848 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
 12849 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
 12850 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
 12851 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
 12852 /ucircumflex/udieresis/yacute/thorn/ydieresis%
 12853]%
 12854 >>%
 12855 /PUT pdfmark%
 12856 [%
 12857 /_objdef{ZaDb}%
 12858 /type/dict%
 12859 /OBJ pdfmark%
 12860 [%
 12861 {ZaDb}%
 12862 <<%
 12863 /Type/Font%
 12864 /Subtype/Type1%
 12865 /Name/ZaDb%
 12866 /BaseFont/ZapfDingbats%
 12867 >>%
 12868 /PUT pdfmark%
 12869 [%
 12870 /_objdef{Helv}%
 12871 /type/dict%
 12872 /OBJ pdfmark%
 12873 [%
 12874 {Helv}%
 12875 <<%
 12876 /Type/Font%
 12877 /Subtype/Type1%
 12878 /Name/Helv%
 12879 /BaseFont/Helvetica%
 12880 /Encoding{pdfDocEncoding}%
 12881 >>%
 12882 /PUT pdfmark%

```

12883 [%
12884  /__objdef{aform}%
12885  /type/dict%
12886  /OBJ pdfmark%
12887  [%
12888  /__objdef{afields}%
12889  /type/array%
12890  /OBJ pdfmark%
12891  [%
12892  /__objdef{corder}%
12893  /type/array%
12894  /OBJ pdfmark%
12895  {%
12896  [%
12897    /BBox[0 0 100 100]%
12898    /__objdef{Check}%
12899    /BP pdfmark %
12900    1 0 0 setrgbcolor%
12901    /ZapfDingbats 80 selectfont %
12902    20 20 moveto%
12903    (4)show%
12904    [/EP pdfmark%
12905    [%
12906      /BBox[0 0 100 100]%
12907      /__objdef{Cross}%
12908      /BP pdfmark %
12909      1 0 0 setrgbcolor%
12910      /ZapfDingbats 80 selectfont %
12911      20 20 moveto%
12912      (8)show%
12913      [/EP pdfmark%
12914      [%
12915        /BBox[0 0 250 100]%
12916        /__objdef{Submit}%
12917        /BP pdfmark %
12918        0.6 setgray %
12919        0 0 250 100 rectfill %
12920        1 setgray %
12921        2 2 moveto %
12922        2 98 lineto %
12923        248 98 lineto %
12924        246 96 lineto %
12925        4 96 lineto %
12926        4 4 lineto %
12927        fill %
12928        0.34 setgray %
12929        248 98 moveto %
12930        248 2 lineto %
12931        2 2 lineto %
12932        4 4 lineto %
12933        246 4 lineto %
12934        246 96 lineto %
12935        fill%
12936        /Helvetica 76 selectfont %

```

```

12937 0 setgray %
12938 8 22.5 moveto%
12939 (Submit)show%
12940 [/EP pdfmark%
12941 [%
12942 /BBox[0 0 250 100]%
12943 /_objdef{SubmitP}%
12944 /BP pdfmark %
12945 0.6 setgray %
12946 0 0 250 100 rectfill %
12947 0.34 setgray %
12948 2 2 moveto %
12949 2 98 lineto %
12950 248 98 lineto %
12951 246 96 lineto %
12952 4 96 lineto %
12953 4 4 lineto %
12954 fill %
12955 1 setgray %
12956 248 98 moveto %
12957 248 2 lineto %
12958 2 2 lineto %
12959 4 4 lineto %
12960 246 4 lineto %
12961 246 96 lineto %
12962 fill%
12963 /Helvetica 76 selectfont %
12964 0 setgray %
12965 10 20.5 moveto%
12966 (Submit)show%
12967 [/EP pdfmark%
12968 } ?pdfmark%
12969 [%
12970 {aform}%
12971 <<%
12972 /Fields{afields}%
12973 /DR<<%
12974 /Font<<%
12975 /ZaDb{ZaDb}%
12976 /Helv{Helv}%
12977 >>%
12978 >>%
12979 /DA(/Helv 10 Tf 0 g)%
12980 /CO{corder}%
12981 \ifHy@pdfa
12982 \else
12983 \ifHyField@NeedAppearances
12984 /NeedAppearances true%
12985 \fi
12986 \fi
12987 >>%
12988 /PUT pdfmark%
12989 [%
12990 {Catalog}%

```

```

12991 <<%
12992   /AcroForm{aform}%
12993 >>%
12994 /PUT pdfmark%
12995 }}%
12996 \kvsetkeys{Form}{#1}%
12997 }
12998 \let\@endForm\ltx@empty
12999 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13000 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13001 }

13002 \newcount\HyField@AnnotCount
13003 \HyField@AnnotCount=\z@
13004 \def\HyField@AdvanceAnnotCount{%
13005 \global\advance\HyField@AnnotCount\@ne
13006 }
13007 \def\HyField@TheAnnotCount{%
13008 \the\HyField@AnnotCount
13009 }

13010 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13011 \def\HyField@AddToFields#1{%
13012 \pdfmark{%
13013 pdfmark=/APPEND,%
13014 Raw={%
13015 \string{afields\string}%
13016 \string{#1\HyField@TheAnnotCount\string}%
13017 }%
13018 }%
13019 \ifx\Fld@calculate@code\ltx@empty
13020 \else
13021 \pdfmark{%
13022 pdfmark=/APPEND,%
13023 Raw={%
13024 \string{corder\string}%
13025 \string{#1\HyField@TheAnnotCount\string}%
13026 }%
13027 }%
13028 \fi
13029 }

13030 \def\@TextField[#1]#2{% parameters, label
13031 \def\Fld@name{#2}%
13032 \let\Fld@default\ltx@empty
13033 \let\Fld@value\@empty
13034 \def\Fld@width{\DefaultWidthofText}%
13035 \def\Fld@height{%
13036 \ifFld@multiline
13037 \DefaultHeightofTextMultiline
13038 \else
13039 \DefaultHeightofText
13040 \fi
13041 }%
13042 \begingroup
13043 \expandafter\HyField@SetKeys\expandafter{%

```

```

13044 \DefaultOptionsofText,#1%
13045 }%
13046 \HyField@FlagsText
13047 \ifFld@hidden\def\Fld@width{1sp}\fi
13048 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13049 \HyField@AdvanceAnnotCount
13050 \LayoutTextField{#2}{%
13051 \leavevmode
13052 \Hy@escapeform\PDFForm@Text
13053 \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13054 pdfmark=/ANN,%
13055 objdef=text\HyField@TheAnnotCount,%
13056 Raw={\PDFForm@Text}%
13057 }%
13058 }%
13059 \HyField@AddToFields{text}%
13060 \endgroup
13061 }
13062 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13063 \def\Fld@name{#2}%
13064 \let\Fld@default\relax
13065 \let\Fld@value\relax
13066 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13067 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13068 \begingroup
13069 \Fld@menulength=0 %
13070 \@tempdima\z@
13071 \@for\@curropt:=#3\do{%
13072 \expandafter\Fld@checkequals\@curropt==\%
13073 \Hy@StepCount\Fld@menulength
13074 \settowidth{\@tempdimb}{\@currDisplay}%
13075 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13076 }%
13077 \advance\@tempdima by 15\p@
13078 \begingroup
13079 \HyField@SetKeys{#1}%
13080 \edef\x{\endgroup
13081 \noexpand\expandafter
13082 \noexpand\HyField@SetKeys
13083 \noexpand\expandafter{%
13084 \expandafter\noexpand\cname DefaultOptionsof%
13085 \ifFld@radio
13086 Radio%
13087 \else
13088 \ifFld@combo
13089 \ifFld@popdown
13090 PopdownBox%
13091 \else
13092 ComboBox%
13093 \fi
13094 \else
13095 ListBox%
13096 \fi
13097 \fi

```

```

13098     \endcsname
13099   }%
13100 } \x
13101 \HyField@SetKeys{#1}%
13102 \ifFld@hidden\def\Fld@width{1sp}\fi
13103 \ifx\Fld@value\relax
13104   \let\Fld@value\Fld@default
13105 \fi
13106 \LayoutChoiceField{#2}{%
13107   \ifFld@radio
13108     \HyField@FlagsRadioButton
13109     \@@Radio{#3}%
13110   \else
13111     \begingroup
13112     \HyField@FlagsChoice
13113     \ifdim\Fld@width<\@tempdima
13114       \ifdim\@tempdima<1cm\@tempdima1cm\fi
13115       \edef\Fld@width{\the\@tempdima}%
13116     \fi
13117     \ifFld@combo
13118     \else
13119       \@tempdima=\the\Fld@menulength\Fld@charsize
13120       \advance\@tempdima by \Fld@borderwidth bp %
13121       \advance\@tempdima by \Fld@borderwidth bp %
13122       \edef\Fld@height{\the\@tempdima}%
13123     \fi
13124     \@@ListBox{#3}%
13125   \endgroup
13126 \fi
13127 }%
13128 \endgroup
13129 }
13130 \def\@@Radio#1{%
13131   \Fld@listcount=0 %
13132   \EdefEscapeName\Fld@default{\Fld@default}%
13133   \@for\@curropt:=#1\do{%
13134     \expandafter\Fld@checkequals\@curropt==\%
13135     \EdefEscapeName\@currValue{\@currValue}%
13136     \Hy@StepCount\Fld@listcount
13137     \@currDisplay\space
13138     \Hy@escapeform\PDFForm@Radio
13139     \ifnum\Fld@listcount=1 %
13140       \HyField@AdvanceAnnotCount
13141     \fi
13142     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13143       pdfmark=/ANN,%
13144       objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13145       Raw={%
13146         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13147       }%
13148   } % deliberate space between radio buttons
13149   \ifnum\Fld@listcount=1 %
13150     \HyField@AddToFields{radio}%
13151   \fi

```

```

13152 }%
13153 }
13154 \newcount\Fld@listcount
13155 \def\@@ListBox#1{%
13156   \HyField@PDFChoices{#1}%
13157   \Hy@escapeform\PDFForm@List
13158   \HyField@AdvanceAnnotCount
13159   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13160     pdfmark=/ANN,%
13161     objdef=list\HyField@TheAnnotCount,%
13162     Raw={\PDFForm@List}%
13163   }%
13164   \HyField@AddToFields{list}%
13165 }
13166 \def\@PushButton[#1]#2{% parameters, label
13167   \def\Fld@name{#2}%
13168   \begingroup
13169     \expandafter\HyField@SetKeys\expandafter{%
13170       \DefaultOptionsofPushButton,#1%
13171     }%
13172     \ifHy@pdfa
13173       \Hy@Error{%
13174         PDF/A: Push button with JavaScript is prohibited%
13175       } \@ehc
13176       \LayoutPushButtonField{%
13177         \leavevmode
13178         \MakeButtonField{#2}%
13179       }%
13180     \else
13181       \HyField@FlagsPushButton
13182       \ifFld@hidden\def\Fld@width{1sp}\fi
13183       \HyField@AdvanceAnnotCount
13184       \LayoutPushButtonField{%
13185         \leavevmode
13186         \Hy@escapeform\PDFForm@Push
13187         \pdfmark[\MakeButtonField{#2}]{%
13188           pdfmark=/ANN,%
13189           objdef=push\HyField@TheAnnotCount,%
13190           Raw={\PDFForm@Push}%
13191         }%
13192       }%
13193       \HyField@AddToFields{push}%
13194     \fi
13195   \endgroup
13196 }
13197 \def\@Submit[#1]#2{%
13198   \def\Fld@width{\DefaultWidthofSubmit}%
13199   \def\Fld@height{\DefaultHeightofSubmit}%
13200   \begingroup
13201     \expandafter\HyField@SetKeys\expandafter{%
13202       \DefaultOptionsofSubmit,#1%
13203     }%
13204     \HyField@FlagsPushButton
13205     \HyField@FlagsSubmit

```

```

13206 \ifFld@hidden\def\Fld@width{1sp}\fi
13207 \Hy@escapeform\PDFForm@Submit
13208 \HyField@AdvanceAnnotCount
13209 \pdfmark[\MakeButtonField{#2}]{%
13210   pdfmark=/ANN,%
13211   objdef=submit\HyField@TheAnnotCount,%
13212   Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13213 }%
13214 \HyField@AddToFields{submit}%
13215 \endgroup
13216 }
13217 \def\@Reset[#1]#2{%
13218   \def\Fld@width{\DefaultWidthofReset}%
13219   \def\Fld@height{\DefaultHeightofReset}%
13220   \begingroup
13221     \expandafter\HyField@SetKeys\expandafter{%
13222       \DefaultOptionsofReset,#1%
13223     }%
13224     \leavevmode
13225     \ifHy@pdfa
13226       \Hy@Error{%
13227         PDF/A: Reset action is prohibited%
13228       }\@ehc
13229       \MakeButtonField{#2}%
13230     \else
13231       \HyField@FlagsPushButton
13232       \ifFld@hidden\def\Fld@width{1sp}\fi
13233       \Hy@escapeform\PDFForm@Reset
13234       \HyField@AdvanceAnnotCount
13235       \pdfmark[\MakeButtonField{#2}]{%
13236         pdfmark=/ANN,%
13237         objdef=reset\HyField@TheAnnotCount,%
13238         Raw={\PDFForm@Reset}%
13239       }%
13240       \HyField@AddToFields{reset}%
13241     \fi
13242   \endgroup
13243 }%
13244 \def\@CheckBox[#1]#2{% parameters, label
13245   \def\Fld@name{#2}%
13246   \def\Fld@default{0}%
13247   \begingroup
13248     \def\Fld@width{\DefaultWidthofCheckBox}%
13249     \def\Fld@height{\DefaultHeightofCheckBox}%
13250     \expandafter\HyField@SetKeys\expandafter{%
13251       \DefaultOptionsofCheckBox,#1%
13252     }%
13253     \HyField@FlagsCheckBox
13254     \ifFld@hidden\def\Fld@width{1sp}\fi
13255     \HyField@AdvanceAnnotCount
13256     \LayoutCheckField{#2}{%
13257       \leavevmode
13258       \Hy@escapeform\PDFForm@Check
13259       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%

```



```

13260 pdfmark=/ANN,%
13261 objdef=check\HyField@TheAnnotCount,%
13262 Raw={\PDFForm@Check}%
13263 }%
13264 }%
13265 \HyField@AddToFields{check}%
13266 \endgroup
13267 }
13268 </pdfmark>

```

48.2 HyperTeX

```

13269 <*hypertex>
13270 \def\@Form[#1]{%
13271 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13272 }
13273 \let\@endForm\ltx@empty
13274 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13275 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13276 }
13277 \def\@TextField[#1]#2{% parameters, label
13278 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13279 }
13280 \def\@CheckBox[#1]#2{% parameters, label
13281 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13282 }
13283 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13284 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13285 }
13286 \def\@PushButton[#1]#2{% parameters, label
13287 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13288 }
13289 \def\@Reset[#1]#2{%
13290 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13291 }
13292 \def\@Submit[#1]#2{%
13293 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13294 }
13295 </hypertex>

```

48.3 TeX4ht

```

13296 <*tex4ht>
13297 \def\@Form[#1]{%
13298 \kvsetkeys{Form}{#1}%
13299 \HCode{<form action="\Form@action" method="\Form@method">}%
13300 }
13301 \def\@endForm{\HCode{</form>}}
13302 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13303 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13304 }
13305 \def\@TextField[#1]#2{% parameters, label
13306 \let\Hy@reserved@a\@empty
13307 \def\Fld@name{#2}%
13308 \let\Fld@default\ltx@empty

```

```

13309 \bgroup
13310 \Field@toks={ }%
13311 \kvsetkeys{Field}{#1}%
13312 \HCode{<label for="\Fld@name">#2</label>}%
13313 \ifFld@password
13314 \@@PasswordField
13315 \else
13316 \@@TextField
13317 \fi
13318 \egroup
13319 }
13320 \def\@@PasswordField{%
13321 \HCode{%
13322 <input type="password" %
13323 id="\Fld@name" %
13324 name="\Fld@name" %
13325 \ifFld@hidden type="hidden" \fi
13326 value="\Fld@default" %
13327 \the\Field@toks
13328 >%
13329 }%
13330 }
13331 \def\@@TextField{%
13332 \ifFld@multiline
13333 \HCode{<textarea %
13334 \ifFld@readonly readonly \fi
13335 id="\Fld@name" %
13336 name="\Fld@name" %
13337 \ifFld@hidden type="hidden" \fi
13338 \the\Field@toks>%
13339 }%
13340 \Fld@default
13341 \HCode{</textarea>}%
13342 \else
13343 \HCode{<input type="text" %
13344 \ifFld@readonly readonly \fi
13345 id="\Fld@name" %
13346 name="\Fld@name" %
13347 \ifFld@hidden type="hidden" \fi
13348 value="\Fld@default" %
13349 \the\Field@toks>%
13350 }%
13351 \fi
13352 }
13353 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13354 \def\Fld@name{#2}%
13355 \let\Fld@default\tx@empty
13356 \let\Hy@reserved@a\relax
13357 \begingroup
13358 \expandafter\Fld@findlength#3\\%
13359 \Field@toks={ }%
13360 \kvsetkeys{Field}{#1}%
13361 #2%
13362 \ifFld@radio

```

```

13363     \expandafter\@@Radio#3\\%
13364     \else
13365         \expandafter\@@Menu#3\\%
13366     \fi
13367 \endgroup
13368 }
13369 \def\Fld@findlength#1\\{%
13370     \Fld@menulength=0 %
13371     \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13372 }
13373 \def\@@Menu#1\\{%
13374     \HCode{<select size="\the\Fld@menulength" %
13375         name="\Fld@name" %
13376         \the\Field@toks>%
13377     }%
13378     \@for\@curropt:=#1\do{%
13379         \expandafter\Fld@checkequals\@curropt==\\%
13380         \HCode{<option %
13381             \ifx\@curropt\Fld@default selected \fi
13382             value="\@currValue">\@currDisplay</option>%
13383         }%
13384     }%
13385     \HCode{</select>}%
13386 }
13387 \def\@@Radio#1\\{%
13388     \@for\@curropt:=#1\do{%
13389         \expandafter\Fld@checkequals\@curropt==\\%
13390         \HCode{<input type="radio" %
13391             \ifx\@curropt\Fld@default checked \fi
13392             name="\Fld@name" %
13393             value="\@currValue" %
13394             \the\Field@toks>%
13395         }%
13396         \@currDisplay
13397     }%
13398 }
13399 \def\@PushButton[#1]#2{% parameters, label
13400     \def\Fld@name{#2}%
13401     \bgroup
13402     \Field@toks={ }%
13403     \kvsetkeys{Field}{#1}%
13404     \HCode{<input type="button" %
13405         name="\Fld@name" %
13406         value="#2" %
13407         \the\Field@toks>%
13408     }%
13409     \HCode{</button>}%
13410     \egroup
13411 }
13412 \def\@Submit[#1]#2{%
13413     \HCode{<button type="submit">#2</button>}%
13414 }
13415 \def\@Reset[#1]#2{%
13416     \HCode{<button type="reset">#2</button>}%

```

```

13417 }
13418 \def\@CheckBox[#1]#2{% parameters, label
13419 \let\Hy@reserved@a\@empty
13420 \def\Fld@name{#2}%
13421 \def\Fld@default{0}%
13422 \bgroup
13423 \Field@toks={ }%
13424 \kvsetkeys{Field}{#1}%
13425 \HCode{<input type="checkbox" %
13426 \ifFld@checked checked \fi
13427 \ifFld@disabled disabled \fi
13428 \ifFld@readonly readonly \fi
13429 name="\Fld@name" %
13430 \ifFld@hidden type="hidden" \fi
13431 value="\Fld@default" %
13432 \the\Field@toks>%
13433 #2%
13434 }%
13435 \egroup
13436 }
13437 </tex4ht>

```

48.4 pdfTeX

```

13438 (*pdfTeX)
13439 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13440 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13441 }
13442 \def\MakeFieldObject#1#2{\sbox0{#1}%
13443 \immediate\pdfxform0 %
13444 \expandafter\edef\csname #2Object\endcsname{%
13445 \the\pdfastxform\space 0 R%
13446 }%
13447 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13448 }%
13449 \let\HyField@afields\ltx@empty
13450 \let\HyField@cofields\ltx@empty
13451 \begingroup\expandafter\expandafter\expandafter\endgroup
13452 \expandafter\ifx\csname pdfastlink\endcsname\relax
13453 \let\HyField@AddToFields\relax
13454 \PackageInfo{hyperref}{%
13455 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13456 \MessageBreak
13457 Adobe Reader/Acrobat accepts an empty /Field array,%
13458 \MessageBreak
13459 but other PDF viewers might complain%
13460 }%
13461 \else
13462 \let\HyField@AuxAddToFields\ltx@gobble
13463 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13464 \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.

```

13465 \def\HyField@ABD@AuxAddToCoFields#1#2{%

```

```

13466 \begingroup
13467 \Hy@safe@activetrue
13468 \let\ltx@secondoftwo\relax
13469 \ifx\HyField@cofields\ltx@empty
13470 \xdef\HyField@cofields{%
13471 \ltx@secondoftwo{#1}{ #2 0 R}%
13472 }%
13473 \else
13474 \let\ltx@secondoftwo\relax
13475 \def\HyField@AddCoField##1##2###3{%
13476 \ifx##1\ltx@empty
13477 \ltx@secondoftwo{#1}{ #2 0 R}%
13478 \expandafter\ltx@gobble
13479 \else
13480 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13481 \ltx@secondoftwo{#1}{ #2 0 R}%
13482 \ltx@secondoftwo{##2}{##3}%
13483 \expandafter\expandafter\expandafter\ltx@gobble
13484 \else
13485 \ltx@secondoftwo{##2}{##3}%
13486 \fi
13487 \fi
13488 \HyField@AddCoField
13489 }%
13490 \xdef\HyField@cofields{%
13491 \expandafter\HyField@AddCoField
13492 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13493 }%
13494 \fi
13495 \endgroup
13496 }%
13497 \Hy@AtBeginDocument{%
13498 \if@filesw
13499 \immediate\write\@mainaux{%
13500 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13501 }%
13502 \immediate\write\@mainaux{%
13503 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13504 }%
13505 \fi
13506 \let\HyField@AfterAuxOpen\@firstofone
13507 \def\HyField@AuxAddToFields#1{%
13508 \xdef\HyField@afields{%
13509 \ifx\HyField@afields\@empty
13510 \else
13511 \HyField@afields
13512 \space
13513 \fi
13514 #1 0 R%
13515 }%
13516 }%
13517 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13518 }%
13519 \def\HyField@AddToFields{%

```

```

13520 \expandafter\HyField@@AddToFields\expandafter{%
13521 \the\pdfastlink
13522 }%
13523 \ifx\Fld@calculate@code\ltx@empty
13524 \else
13525 \begingroup
13526 \Hy@safe@activetrue
13527 \edef\Hy@temp{%
13528 \endgroup
13529 \if@filesw
13530 \write\@mainaux{%
13531 \string\HyField@AuxAddToCoFields{%
13532 \Fld@calculate@sortkey
13533 }{%
13534 \the\pdfastlink
13535 }%
13536 }%
13537 \fi
13538 }%
13539 \Hy@temp
13540 \fi
13541 }%
13542 \def\HyField@@AddToFields#1{%
13543 \HyField@AfterAuxOpen{%
13544 \if@filesw
13545 \write\@mainaux{%
13546 \string\HyField@AuxAddToFields{#1}%
13547 }%
13548 \fi
13549 }%
13550 }%
13551 \fi
13552 \def\@Form[#1]{%
13553 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13554 \kvsetkeys{Form}{#1}%
13555 \pdf@ifdraftmode{}{%
13556 \Hy@FormObjects
13557 \ifnum\pdfTeXversion>13 %
13558 \pdfrefobj\OBJ@pdfdocencoding
13559 \pdfrefobj\OBJ@ZaDb
13560 \pdfrefobj\OBJ@Helv
13561 \fi
13562 \AtVeryEndDocument{%
13563 \immediate\pdfobj{%
13564 <<%
13565 /Fields[\HyField@afields]%
13566 \ifx\HyField@cofields\ltx@empty
13567 \else
13568 /CO[\romannumeral-`\Q\HyField@cofields]%
13569 \fi
13570 /DR<<%
13571 /Font<<%
13572 /ZaDb \OBJ@ZaDb\space 0 R%
13573 /Helv \OBJ@Helv\space 0 R%

```

```

13574         >>%
13575     >>%
13576     /DA(/Helv 10 Tf 0 g)%
13577     \ifHy@pdfa
13578     \else
13579         \ifHyField@NeedAppearances
13580         /NeedAppearances true%
13581     \fi
13582     \fi
13583     >>%
13584 }%
13585 \edef\OBJ@acroform{\the\pdflastobj}%
13586 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13587 }%
13588 }%
13589 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13590 \begingroup
13591     \fontfamily{pzd}%
13592     \fontencoding{U}%
13593     \fontseries{m}%
13594     \fontshape{n}%
13595     \selectfont
13596     \char123 %
13597 \endgroup
13598 }{Ding}%
13599 \MakeFieldObject{%
13600     \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13601 }{Submit}%
13602 \MakeFieldObject{%
13603     \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13604 }{SubmitP}%
13605 }
13606 \let\@endForm\ltx@empty
13607 \let\HyAnn@AbsPageLabel\ltx@empty
13608 \let\Fld@pageobjref\ltx@empty
13609 \ltx@ifUndefined{pdfpageref}{%
13610 }{%
13611     \ltx@ifpackageloaded{zref-abspage}{%
13612         \newcount\HyAnn@Count
13613         \HyAnn@Count=\ltx@zero
13614         \def\HyAnn@AbsPageLabel{%
13615             \global\advance\HyAnn@Count by\ltx@one
13616             \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13617             \zref@refused{HyAnn@\the\HyAnn@Count}%
13618         }%
13619         \def\Fld@pageobjref{%
13620             \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13621             }{%
13622                 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13623                     /P \pdfpageref
13624                     \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13625                     \space 0 R%
13626                 }{%

```

```

13627     }%
13628     }%
13629     }%
13630 }{%
13631 }%
13632 }

13633 \def\@TextField[#1]#2{% parameters, label
13634   \def\Fld@name{#2}%
13635   \let\Fld@default\ltx@empty
13636   \let\Fld@value\@empty
13637   \def\Fld@width{\DefaultWidthofText}%
13638   \def\Fld@height{%
13639     \ifFld@multiline
13640       \DefaultHeightofTextMultiline
13641     \else
13642       \DefaultHeightofText
13643     \fi
13644   }%
13645   \begingroup
13646     \expandafter\HyField@SetKeys\expandafter{%
13647       \DefaultOptionsofText,#1%
13648     }%
13649     \PDFForm@Name
13650     \HyField@FlagsText
13651     \ifFld@hidden\def\Fld@width{1sp}\fi
13652     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13653     \LayoutTextField{#2}{%
13654       \leavevmode
13655       \HyAnn@AbsPageLabel
13656       \Hy@escapeform\PDFForm@Text
13657       \pdfstartlink user {\PDFForm@Text}\relax
13658       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13659       \HyField@AddToFields
13660     }%
13661   \endgroup
13662 }

13663 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13664   \def\Fld@name{#2}%
13665   \let\Fld@default\relax
13666   \let\Fld@value\relax
13667   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13668   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13669   \begingroup
13670     \Fld@menulength=0 %
13671     \@tempdima\z@
13672     \@for\@curropt:=#3\do{%
13673       \expandafter\Fld@checkequals\@curropt==\%
13674       \Hy@StepCount\Fld@menulength
13675       \settowidth{\@tempdimb}{\@currDisplay}%
13676       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13677     }%
13678     \advance\@tempdima by 15\p@
13679   \begingroup
13680     \HyField@SetKeys{#1}%

```



```

13681 \edef\x{\endgroup
13682 \noexpand\expandafter
13683 \noexpand\HyField@SetKeys
13684 \noexpand\expandafter{%
13685 \expandafter\noexpand\csname DefaultOptionsof%
13686 \ifFld@radio
13687 Radio%
13688 \else
13689 \ifFld@combo
13690 \ifFld@popdown
13691 PopdownBox%
13692 \else
13693 ComboBox%
13694 \fi
13695 \else
13696 ListBox%
13697 \fi
13698 \fi
13699 \endcsname
13700 }%
13701 }\x
13702 \HyField@SetKeys{#1}%
13703 \PDFForm@Name
13704 \ifFld@hidden\def\Fld@width{1sp}\fi
13705 \ifx\Fld@value\relax
13706 \let\Fld@value\Fld@default
13707 \fi
13708 \LayoutChoiceField{#2}{%
13709 \ifFld@radio
13710 \HyField@FlagsRadioButton
13711 \@@Radio{#3}%
13712 \else
13713 \begingroup
13714 \HyField@FlagsChoice
13715 \ifdim\Fld@width<\@tempdima
13716 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13717 \edef\Fld@width{\the\@tempdima}%
13718 \fi
13719 \ifFld@combo
13720 \else
13721 \@tempdima=\the\Fld@menulength\Fld@charsize
13722 \advance\@tempdima by \Fld@borderwidth bp %
13723 \advance\@tempdima by \Fld@borderwidth bp %
13724 \edef\Fld@height{\the\@tempdima}%
13725 \fi
13726 \@@ListBox{#3}%
13727 \endgroup
13728 \fi
13729 }%
13730 \endgroup
13731 }
13732 \def\@@Radio#1{%
13733 \Fld@listcount=0 %
13734 \EdefEscapeName\Fld@default{\Fld@default}%

```

```

13735 \@for\@curropt:=#1\do{%
13736   \expandafter\Fld@checkequals\@curropt==\\%
13737   \EdefEscapeName\@currValue{\@currValue}%
13738   \Hy@StepCount\Fld@listcount
13739   \@currDisplay\space
13740   \leavevmode
13741   \HyAnn@AbsPageLabel
13742   \Hy@escapeform\PDFForm@Radio
13743   \pdfstartlink user {%
13744     \PDFForm@Radio
13745     /AP<<%
13746     /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.

```

13747     /\@currValue\space \DingObject
13748     >>%
13749     >>%
13750   }%
13751   \relax
13752   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13753   \ifnum\Fld@listcount=1 %
13754     \HyField@AddToFields
13755   \fi
13756   \space % deliberate space between radio buttons
13757 }%
13758 }
13759 \newcount\Fld@listcount
13760 \def\@@Listbox#1{%
13761   \HyField@PDFChoices{#1}%
13762   \leavevmode
13763   \HyAnn@AbsPageLabel
13764   \Hy@escapeform\PDFForm@List
13765   \pdfstartlink user {\PDFForm@List}\relax
13766   \MakeChoiceField{\Fld@width}{\Fld@height}%
13767   \pdfendlink
13768   \HyField@AddToFields
13769 }
13770 \def\@PushButton[#1]#2{% parameters, label
13771   \def\Fld@name{#2}%
13772   \begingroup
13773     \expandafter\HyField@SetKeys\expandafter{%
13774       \DefaultOptionsofPushButton,#1%
13775     }%
13776     \PDFForm@Name
13777     \ifHy@pdfa
13778       \Hy@Error{%
13779         PDF/A: Push button with JavaScript is prohibited%
13780       }\@ehc
13781     \LayoutPushButtonField{%
13782       \leavevmode
13783       \MakeButtonField{#2}%
13784     }%

```

```

13785 \else
13786 \HyField@FlagsPushButton
13787 \ifFld@hidden\def\Fld@width{1sp}\fi
13788 \LayoutPushButtonField{%
13789 \leavevmode
13790 \HyAnn@AbsPageLabel
13791 \Hy@escapeform\PDFForm@Push
13792 \pdfstartlink user {\PDFForm@Push}\relax
13793 \MakeButtonField{#2}%
13794 \pdfendlink
13795 \HyField@AddToFields
13796 }%
13797 \fi
13798 \endgroup
13799 }
13800 \def\@Submit[#1]#2{%
13801 \def\Fld@width{\DefaultWidthofSubmit}%
13802 \def\Fld@height{\DefaultHeightofSubmit}%
13803 \beginngroup
13804 \expandafter\HyField@SetKeys\expandafter{%
13805 \DefaultOptionsofSubmit,#1%
13806 }%
13807 \HyField@FlagsPushButton
13808 \HyField@FlagsSubmit
13809 \ifFld@hidden\def\Fld@width{1sp}\fi
13810 \leavevmode
13811 \HyAnn@AbsPageLabel
13812 \Hy@escapeform\PDFForm@Submit
13813 \pdfstartlink user {%
13814 \PDFForm@Submit
13815 /AP<</N \SubmitObject/D \SubmitPObject>>%
13816 }%
13817 \relax
13818 \MakeButtonField{#2}%
13819 \pdfendlink
13820 \HyField@AddToFields
13821 \endgroup
13822 }
13823 \def\@Reset[#1]#2{%
13824 \def\Fld@width{\DefaultWidthofReset}%
13825 \def\Fld@height{\DefaultHeightofReset}%
13826 \beginngroup
13827 \expandafter\HyField@SetKeys\expandafter{%
13828 \DefaultOptionsofReset,#1%
13829 }%
13830 \leavevmode
13831 \ifHy@pdfa
13832 \Hy@Error{%
13833 PDF/A: Reset action is prohibited%
13834 }\@ehc
13835 \MakeButtonField{#2}%
13836 \else
13837 \HyField@FlagsPushButton
13838 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13839 \HyAnn@AbsPageLabel
13840 \Hy@escapeform\PDFForm@Reset
13841 \pdfstartlink user {\PDFForm@Reset}\relax
13842 \MakeButtonField{#2}%
13843 \pdfendlink
13844 \HyField@AddToFields
13845 \fi
13846 \endgroup
13847 }
13848 \def\@CheckBox[#1]#2{% parameters, label
13849 \def\Fld@name{#2}%
13850 \def\Fld@default{0}%
13851 \begingroup
13852 \def\Fld@width{\DefaultWidthofCheckBox}%
13853 \def\Fld@height{\DefaultHeightofCheckBox}%
13854 \expandafter\HyField@SetKeys\expandafter{%
13855 \DefaultOptionsofCheckBox,#1%
13856 }%
13857 \PDFForm@Name
13858 \HyField@FlagsCheckBox
13859 \ifFld@hidden\def\Fld@width{1sp}\fi
13860 \LayoutCheckField{#2}{%
13861 \leavevmode
13862 \HyAnn@AbsPageLabel
13863 \Hy@escapeform\PDFForm@Check
13864 \pdfstartlink user {\PDFForm@Check}\relax
13865 \MakeCheckField{\Fld@width}{\Fld@height}%
13866 \pdfendlink
13867 \HyField@AddToFields
13868 }%
13869 \endgroup
13870 }
13871 \def\Hy@FormObjects{%
13872 \pdfobj {%
13873 <<%
13874 /Type/Encoding%
13875 /Differences[%
13876 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13877 /ring/tilde %
13878 39/quotesingle %
13879 96/grave %
13880 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13881 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13882 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13883 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13884 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13885 160/Euro %
13886 164/currency %
13887 166/brokenbar %
13888 168/dieresis/copyright/ordfeminine %
13889 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13890 /twosuperior/threesuperior/acute/mu %
13891 183/periodcentered/cedilla/onesuperior/ordmasculine %
13892 188/onequarter/onehalf/threequarters %

```

```

13893      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13894      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13895      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13896      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13897      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13898      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13899      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13900      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13901      /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
13902      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13903      ]%
13904      >>%
13905      }%
13906      \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13907      \pdfobj{%
13908      <<%
13909      /Type/Font%
13910      /Subtype/Type1%
13911      /Name/ZaDb%
13912      /BaseFont/ZapfDingbats%
13913      >>%
13914      }%
13915      \xdef\OBJ@ZaDb{\the\pdfastobj}%
13916      \pdfobj{%
13917      <<%
13918      /Type/Font%
13919      /Subtype/Type1%
13920      /Name/Helv%
13921      /BaseFont/Helvetica%
13922      /Encoding \OBJ@pdfdocencoding\space 0 R%
13923      >>%
13924      }%
13925      \xdef\OBJ@Helv{\the\pdfastobj}%
13926      \global\let\Hy@FormObjects\relax
13927      }
13928      </pdfTeX>

```

48.5 dvipdfm, xetex

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

```
13929 <*dvipdfm | xetex>
```

\@Gauge

```

13930 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13931   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13932 }

```

\@Form

```

13933 \def\@Form[#1]{%
13934   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13935   \kvsetkeys{Form}{#1}%
13936   \Hy@FormObjects
13937   \@pdfm@mark{obj @afields []}%

```

```

13938 \@pdfm@mark{obj @corder []}%
13939 \@pdfm@mark{%
13940   obj @aform <<%
13941   /Fields @afields%
13942   /DR<<%
13943   /Font<<%
13944   /ZaDb @OBJZaDb%
13945   /Helv @OBJHelv%
13946   >>%
13947   >>%
13948   /DA(/Helv 10 Tf 0 g)%
13949   /CO @corder%
13950   \ifHy@pdfa
13951   \else
13952     \ifHyField@NeedAppearances
13953       /NeedAppearances true%
13954     \fi
13955   \fi
13956   >>%
13957 }%
13958 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13959 }

\@endForm

13960 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
13961 \def\dvipdfm@setdim{%
13962   height \the\ht\pdfm@box\space
13963   width \the\wd\pdfm@box\space
13964   depth \the\dp\pdfm@box\space
13965 }

\HyField@AnnotCount
13966 \newcount\HyField@AnnotCount
13967 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
13968 \def\HyField@AdvanceAnnotCount{%
13969   \global\advance\HyField@AnnotCount\@ne
13970 }

\HyField@TheAnnotCount
13971 \def\HyField@TheAnnotCount{%
13972   \the\HyField@AnnotCount
13973 }

\Fld@pageobjref
13974 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
13975 \def\HyField@AddToFields#1{%
13976   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%

```

```

13977 \ifx\Fld@calculate@code\ltx@empty
13978 \else
13979 \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13980 \fi
13981 }

```

\@TextField

```

13982 \def\@TextField[#1]#2{% parameters, label
13983 \def\Fld@name{#2}%
13984 \let\Fld@default\ltx@empty
13985 \let\Fld@value\@empty
13986 \def\Fld@width{\DefaultWidthofText}%
13987 \def\Fld@height{%
13988 \ifFld@multiline
13989 \DefaultHeightofTextMultiline
13990 \else
13991 \DefaultHeightofText
13992 \fi
13993 }%
13994 \begingroup
13995 \expandafter\HyField@SetKeys\expandafter{%
13996 \DefaultOptionsofText,#1%
13997 }%
13998 \PDFForm@Name
13999 \HyField@FlagsText
14000 \ifFld@hidden\def\Fld@width{1sp}\fi
14001 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14002 \setbox\pdfm@box=\hbox{%
14003 \MakeTextField{\Fld@width}{\Fld@height}%
14004 }%
14005 \HyField@AdvanceAnnotCount
14006 \LayoutTextField{#2}{%
14007 \leavevmode
14008 \Hy@escapeform\PDFForm@Text
14009 \@pdfm@mark{%
14010 ann @text\HyField@TheAnnotCount\space
14011 \dvipdfm@setdim << \PDFForm@Text >>%
14012 }%
14013 }%
14014 \unhbox\pdfm@box
14015 \HyField@AddToFields{text}%
14016 % record in @afields array
14017 \endgroup
14018 }

```

\@ChoiceMenu

```

14019 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14020 \def\Fld@name{#2}%
14021 \let\Fld@default\relax
14022 \let\Fld@value\relax
14023 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14024 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14025 \begingroup
14026 \Fld@menulength=0 %

```

```

14027 \@tempdima\z@
14028 \@for\@curropt:=#3\do{%
14029   \expandafter\Fld@checkequals\@curropt==\\%
14030   \Hy@StepCount\Fld@menulength
14031   \settowidth{\@tempdimb}{\@currDisplay}%
14032   \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14033 }%
14034 \advance\@tempdima by 15\p@
14035 \begingroup
14036   \HyField@SetKeys{#1}%
14037 \edef\x{\endgroup
14038   \noexpand\expandafter
14039   \noexpand\HyField@SetKeys
14040   \noexpand\expandafter{%
14041     \expandafter\noexpand\csname DefaultOptionsof%
14042       \ifFld@radio
14043         Radio%
14044       \else
14045         \ifFld@combo
14046           \ifFld@popdown
14047             PopdownBox%
14048           \else
14049             ComboBox%
14050           \fi
14051         \else
14052           ListBox%
14053         \fi
14054       \fi
14055     \endcsname
14056   }%
14057 }\x
14058 \HyField@SetKeys{#1}%
14059 \PDFForm@Name
14060 \ifFld@hidden\def\Fld@width{1sp}\fi
14061 \ifx\Fld@value\relax
14062   \let\Fld@value\Fld@default
14063 \fi
14064 \LayoutChoiceField{#2}{%
14065   \ifFld@radio
14066     \HyField@FlagsRadioButton
14067     \@@Radio{#3}%
14068   \else
14069     \begingroup
14070     \HyField@FlagsChoice
14071     \ifdim\Fld@width<\@tempdima
14072       \ifdim\@tempdima<1cm\@tempdima1cm\fi
14073       \edef\Fld@width{\the\@tempdima}%
14074     \fi
14075     \ifFld@combo
14076     \else
14077       \@tempdima=\the\Fld@menulength\Fld@charsize
14078       \advance\@tempdima by \Fld@borderwidth bp %
14079       \advance\@tempdima by \Fld@borderwidth bp %
14080       \edef\Fld@height{\the\@tempdima}%

```



```

14081         \fi
14082         \@@Listbox{#3}%
14083     \endgroup
14084     \fi
14085 }%
14086 \endgroup
14087 }

\@@Radio
14088 \def\@@Radio#1{%
14089     \Fld@listcount=0 %
14090     \EdefEscapeName\Fld@default{\Fld@default}%
14091     \setbox\pdfm@box=\hbox{%
14092         \MakeRadioField{\Fld@width}{\Fld@height}%
14093     }%
14094     \@for\@curropt:=#1\do{%
14095         \expandafter\Fld@checkequals\@curropt==\%
14096         \EdefEscapeName\@currValue{\@currValue}%
14097         \Hy@StepCount\Fld@listcount
14098         \@currDisplay\space
14099         \leavevmode
14100         \Hy@escapeform\PDFForm@Radio
14101         \ifnum\Fld@listcount=1 %
14102             \HyField@AdvanceAnnotCount
14103         \fi
14104         \@pdfm@mark{%
14105             ann %
14106             \ifnum\Fld@listcount=1 %
14107                 @radio\HyField@TheAnnotCount%
14108             \space
14109         \fi
14110         \dvipdfm@setdim
14111         <<%
14112         \PDFForm@Radio
14113         /AP<</N<</\@currValue /null>>>>%
14114         >>%
14115     }%
14116     \unhcopy\pdfm@box\space% deliberate space between radio buttons
14117     \ifnum\Fld@listcount=1 %
14118         \HyField@AddToFields{radio}%
14119     \fi
14120 }%
14121 }

\Fld@listcount
14122 \newcount\Fld@listcount

\@@Listbox
14123 \def\@@Listbox#1{%
14124     \HyField@PDFChoices{#1}%
14125     \setbox\pdfm@box=\hbox{%
14126         \MakeChoiceField{\Fld@width}{\Fld@height}%
14127     }%
14128     \leavevmode

```

```

14129 \Hy@escapeform\PDFForm@List
14130 \HyField@AdvanceAnnotCount
14131 \@pdfm@mark{%
14132   ann @list\HyField@TheAnnotCount\space
14133   \dvipdfm@setdim
14134   <<\PDFForm@List>>%
14135 }%
14136 \unhbox\pdfm@box
14137 \HyField@AddToFields{list}%
14138 }

```

\@PushButton

```

14139 \def\@PushButton[#1]#2{% parameters, label
14140   \def\Fld@name{#2}%
14141   \begingroup
14142     \expandafter\HyField@SetKeys\expandafter{%
14143       \DefaultOptionsofPushButton,#1%
14144     }%
14145     \PDFForm@Name
14146     \ifHy@pdfa
14147       \Hy@Error{%
14148         PDF/A: Push button with JavaScript is prohibited%
14149       }\@ehc
14150       \LayoutPushButtonField{%
14151         \leavevmode
14152         \MakeButtonField{#2}%
14153       }%
14154     \else
14155       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14156       \HyField@FlagsPushButton
14157       \ifFld@hidden\def\Fld@width{1sp}\fi
14158       \HyField@AdvanceAnnotCount
14159       \LayoutPushButtonField{%
14160         \leavevmode
14161         \Hy@escapeform\PDFForm@Push
14162         \@pdfm@mark{%
14163           ann @push\HyField@TheAnnotCount\space
14164           \dvipdfm@setdim
14165           <<\PDFForm@Push>>%
14166         }%
14167       }%
14168       \unhbox\pdfm@box
14169       \HyField@AddToFields{push}%
14170     \fi
14171   \endgroup
14172 }

```

\@Submit

```

14173 \def\@Submit[#1]#2{%
14174   \def\Fld@width{\DefaultWidthofSubmit}%
14175   \def\Fld@height{\DefaultHeightofSubmit}%
14176   \begingroup
14177     \expandafter\HyField@SetKeys\expandafter{%
14178       \DefaultOptionsofSubmit,#1%

```

```

14179 }%
14180 \HyField@FlagsPushButton
14181 \HyField@FlagsSubmit
14182 \ifFld@hidden\def\Fld@width{1sp}\fi
14183 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14184 \leavevmode
14185 \Hy@escapeform\PDFForm@Submit
14186 \HyField@AdvanceAnnotCount
14187 \@pdfm@mark{%
14188   ann @submit\HyField@TheAnnotCount\space
14189   \dvi pdfm@setdim
14190   <<\PDFForm@Submit>>%
14191 }%
14192 \unhbox\pdfm@box%
14193 \HyField@AddToFields{submit}%
14194 \endgroup
14195 }

```

\@Reset

```

14196 \def\@Reset[#1]#2{%
14197   \def\Fld@width{\DefaultWidthofReset}%
14198   \def\Fld@height{\DefaultHeightofReset}%
14199   \begingroup
14200     \expandafter\HyField@SetKeys\expandafter{%
14201       \DefaultOptionsofReset,#1%
14202     }%
14203     \leavevmode
14204     \ifHy@pdfa
14205       \Hy@Error{%
14206         PDF/A: Reset action is prohibited%
14207       }\@ehc
14208       \MakeButtonField{#2}%
14209     \else
14210       \HyField@FlagsPushButton
14211       \ifFld@hidden\def\Fld@width{1sp}\fi
14212       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14213       \Hy@escapeform\PDFForm@Reset
14214       \HyField@AdvanceAnnotCount
14215       \@pdfm@mark{%
14216         ann @reset\HyField@TheAnnotCount\space
14217         \dvi pdfm@setdim
14218         <<\PDFForm@Reset>>%
14219       }%
14220       \unhbox\pdfm@box
14221       \HyField@AddToFields{reset}%
14222     \fi
14223   \endgroup
14224 }

```

\@CheckBox

```

14225 \def\@CheckBox[#1]#2{% parameters, label
14226   \def\Fld@name{#2}%
14227   \def\Fld@default{0}%
14228   \begingroup

```

```

14229 \def\Fld@width{\DefaultWidthofCheckBox}%
14230 \def\Fld@height{\DefaultHeightofCheckBox}%
14231 \expandafter\HyField@SetKeys\expandafter{%
14232   \DefaultOptionsofCheckBox,#1%
14233 }%
14234 \PDFForm@Name
14235 \HyField@FlagsCheckBox
14236 \ifFld@hidden\def\Fld@width{1sp}\fi
14237 \setbox\pdfm@box=\hbox{%
14238   \MakeCheckField{\Fld@width}{\Fld@height}%
14239 }%
14240 \HyField@AdvanceAnnotCount
14241 \LayoutCheckField{#2}{%
14242   \leavevmode
14243   \Hy@escapeform\PDFForm@Check
14244   \@pdfm@mark{%
14245     ann @check\HyField@TheAnnotCount\space
14246     \dvi pdfm@setdim
14247     <<\PDFForm@Check>>%
14248   }%
14249   \unhbox\pdfm@box
14250   \HyField@AddToFields{check}%
14251 }%
14252 \endgroup
14253 }

14254 \def\Hy@FormObjects{%
14255   \@pdfm@mark{obj @OBJpdfdocencoding%
14256     <<%
14257       /Type/Encoding%
14258       /Differences[%
14259         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14260         39/quotesingle %
14261         96/grave %
14262         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14263         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14264         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14265         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14266         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14267         160/Euro %
14268         164/currency %
14269         166/brokenbar %
14270         168/dieresis/copyright/ordfeminine %
14271         172/logicalnot/.notdef/registered/macron/degree/plusminus%
14272         /twosuperior/threesuperior/acute/mu %
14273         183/periodcentered/cedilla/onesuperior/ordmasculine %
14274         188/onequarter/onehalf/threequarters %
14275         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14276         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14277         /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14278         /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14279         /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14280         /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14281         /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%

```

```

14282      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
14283      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14284      /thorn/ydieresis%
14285      ]%
14286      >>%
14287      }%
14288      \@pdfm@mark{obj @OBJZaDb%
14289      <<%
14290      /Type/Font%
14291      /Subtype/Type1%
14292      /Name/ZaDb%
14293      /BaseFont/ZapfDingbats%
14294      >>%
14295      }%
14296      \@pdfm@mark{obj @OBJHelv%
14297      <<%
14298      /Type/Font%
14299      /Subtype/Type1%
14300      /Name/Helv%
14301      /BaseFont/Helvetica%
14302      /Encoding @OBJpdfdocencoding%
14303      >>%
14304      }%
14305      \global\let\Hy@FormObjects\relax
14306      }
14307      </dvipdfm | xetex>

```

48.6 Common forms part

```

14308 (*pdfform)

\Fld@pageobjref

14309 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

14310 \begingroup\expandafter\expandafter\expandafter\endgroup
14311 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14312   \let\Hy@escapestring\@firstofone
14313   \def\Hy@escapeform#1{%
14314     \ifHy@pdfescapeform
14315       \def\Hy@escapestring###1{%
14316         \noexpand\Hy@escapestring{\noexpand###1}%
14317       }%
14318       \edef\Hy@temp{#1}%
14319       \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14320     \def\Hy@escapestring###1{%
14321       \@ifundefined{Hy@esc@\string###1}{%
14322         ###1%
14323         \ThisShouldNotHappen
14324       }{%
14325         \csname Hy@esc@\string###1\endcsname
14326       }%
14327     }%
14328   \else

```

```

14329     \let\Hy@escapestring\@firstofone
14330     \fi
14331 }%
14332 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14333     \ifx\|#3\|
14334     \else
14335     \expandafter
14336     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14337     \ltx@ReturnAfterFi{%
14338     \Hy@@escapeform#3\@nil
14339     }%
14340     \fi
14341 }%
14342 \else
14343 \def\Hy@escapeform#1{%
14344     \ifHy@pdfescapeform
14345     \let\Hy@escapestring\pdfescapestring
14346     \else
14347     \let\Hy@escapestring\@firstofone
14348     \fi
14349 }%
14350 \Hy@escapeform{}%
14351 \fi

```

\PDFForm@Name

```

14352 \def\PDFForm@Name{%
14353     \PDFForm@@Name\Fld@name
14354     \ifx\Fld@altname\relax
14355     \else
14356     \PDFForm@@Name\Fld@altname
14357     \fi
14358     \ifx\Fld@mappingname\relax
14359     \else
14360     \PDFForm@@Name\Fld@mappingname
14361     \fi
14362 }

```

\PDFForm@@Name

```

14363 \def\PDFForm@@Name#1{%
14364     \begingroup
14365     \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
14366     \ifHy@unicode
14367     \Hy@unicodetrue
14368     \fi
14369     \fi
14370     \pdfstringdef\Hy@gtemp#1%
14371     \endgroup
14372     \let#1\Hy@gtemp
14373 }

```

\Fld@additionalactions

```

14374 \def\Fld@@additionalactions{%
    K input (keystroke) format

```

```

14375 \ifx\Fld@keystroke@code\@empty
14376 \else
14377 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14378 \fi

F display format
14379 \ifx\Fld@format@code\@empty
14380 \else
14381 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14382 \fi

V validation
14383 \ifx\Fld@validate@code\@empty
14384 \else
14385 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14386 \fi

C calculation
14387 \ifx\Fld@calculate@code\@empty
14388 \else
14389 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14390 \fi

Fo receiving the input focus
14391 \ifx\Fld@onfocus@code\@empty
14392 \else
14393 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14394 \fi

Bl loosing the input focus (blurred)
14395 \ifx\Fld@onblur@code\@empty
14396 \else
14397 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14398 \fi

D pressing the mouse button (down)
14399 \ifx\Fld@onmousedown@code\@empty
14400 \else
14401 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14402 \fi

U releasing the mouse button (up)
14403 \ifx\Fld@onmouseup@code\@empty
14404 \else
14405 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14406 \fi

E cursor enters the annotation's active area.
14407 \ifx\Fld@onenter@code\@empty
14408 \else
14409 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14410 \fi

X cursor exits the annotation's active area.
14411 \ifx\Fld@onexit@code\@empty
14412 \else
14413 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14414 \fi

```

```

14415 }
14416 \def\Fld@additionalactions{%
14417 \if-\Fld@@additionalactions-%
14418 \else
14419 \ifHy@pdfa
14420 \else
14421 /AA<<\Fld@@additionalactions>>%
14422 \fi
14423 \fi
14424 }

```

\Fld@annotnames

```

14425 \def\Fld@annotnames{%
14426 /T(\Fld@name)%
14427 \ifx\Fld@altname\relax
14428 \else
14429 /TU(\Fld@altname)%
14430 \fi
14431 \ifx\Fld@mappingname\relax
14432 \else
14433 /TM(\Fld@mappingname)%
14434 \fi
14435 }

```

\PDFForm@Check

```

14436 \def\PDFForm@Check{%
14437 /Subtype/Widget%
14438 \Fld@annotflags
14439 \Fld@pageobjref
14440 \Fld@annotnames
14441 /FT/Btn%
14442 \Fld@flags
14443 /Q \Fld@align
14444 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14445 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14446 /MK<<%
14447 \ifnum\Fld@rotation=\z@
14448 \else
14449 /R \Fld@rotation
14450 \fi
14451 \ifx\Fld@bordercolor\relax
14452 \else
14453 /BC[\Fld@bordercolor]%
14454 \fi
14455 \ifx\Fld@bcolor\relax
14456 \else
14457 /BG[\Fld@bcolor]%
14458 \fi
14459 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14460 >>%
14461 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14462 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14463 /H/P%
14464 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi

```



```

14465 \Fld@additionalactions
14466 }

```

\PDFForm@Push

```

14467 \ifHy@pdfa
14468 \else
14469 \def\PDFForm@Push{%
14470 /Subtype/Widget%
14471 \Fld@annotflags
14472 \Fld@pageobjref
14473 \Fld@annotnames
14474 /FT/Btn%
14475 \Fld@flags
14476 /H/P%
14477 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14478 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14479 \ifx\Fld@bordercolor\relax\else 1\fi
14480 \space
14481 \else
14482 /MK<<%
14483 \ifnum\Fld@rotation=\z@
14484 \else
14485 /R \Fld@rotation
14486 \fi
14487 \ifx\Fld@bordercolor\relax
14488 \else
14489 /BC[\Fld@bordercolor]%
14490 \fi
14491 >>%
14492 \fi
14493 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14494 \Fld@additionalactions
14495 }%
14496 \fi

```

\PDFForm@List

```

14497 \def\PDFForm@List{%
14498 /Subtype/Widget%
14499 \Fld@annotflags
14500 \Fld@pageobjref
14501 \Fld@annotnames
14502 /FT/Ch%
14503 \Fld@flags
14504 /Q \Fld@align
14505 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14506 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14507 \ifx\Fld@bordercolor\relax\else 1\fi
14508 \ifx\Fld@bcolor\relax \else 1\fi
14509 \space
14510 \else
14511 /MK<<%
14512 \ifnum\Fld@rotation=\z@
14513 \else
14514 /R \Fld@rotation

```

```

14515     \fi
14516     \ifx\Fld@bordercolor\relax
14517     \else
14518         /BC[\Fld@bordercolor]%
14519     \fi
14520     \ifx\Fld@bcolor\relax
14521     \else
14522         /BG[\Fld@bcolor]%
14523     \fi
14524     >>%
14525 \fi
14526 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14527     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14528 \Fld@choices
14529 \Fld@additionalactions
14530 }

```

\PDFForm@Radio

```

14531 \def\PDFForm@Radio{%
14532 /Subtype/Widget%
14533 \Fld@annotflags
14534 \Fld@pageobjref
14535 \Fld@annotnames
14536 /FT/Btn%
14537 \Fld@flags
14538 /H/P%
14539 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14540 /MK<<%
14541     \ifnum\Fld@rotation=\z@
14542     \else
14543         /R \Fld@rotation
14544     \fi
14545     \ifx\Fld@bordercolor\relax
14546     \else
14547         /BC[\Fld@bordercolor]%
14548     \fi
14549     \ifx\Fld@bcolor\relax
14550     \else
14551         /BG[\Fld@bcolor]%
14552     \fi
14553     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14554     >>%
14555 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14556     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14557 \ifx\Fld@default\@empty
14558     /V/Off%
14559     /DV/Off%
14560 \else
14561     /V/\Fld@default
14562     /DV/\Fld@default
14563 \fi
14564 \Fld@additionalactions
14565 }

```

\PDFForm@Text

```
14566 \def\PDFForm@Text{%
14567 /Subtype/Widget%
14568 \Fld@annotflags
14569 \Fld@pageobjref
14570 \Fld@annotnames
14571 /FT/Tx%
14572 \Fld@flags
14573 /Q \Fld@align
14574 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14575 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14576     \ifx\Fld@bordercolor\relax\else 1\fi
14577     \ifx\Fld@bcolor\relax \else 1\fi
14578     \space
14579 \else
14580 /MK<<%
14581     \ifnum\Fld@rotation=\z@
14582     \else
14583     /R \Fld@rotation
14584     \fi
14585     \ifx\Fld@bordercolor\relax
14586     \else
14587     /BC[\Fld@bordercolor]%
14588     \fi
14589     \ifx\Fld@bcolor\relax
14590     \else
14591     /BG[\Fld@bcolor]%
14592     \fi
14593 >>%
14594 \fi
14595 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14596     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14597 /DV(\Hy@escapestring{\Fld@default})%
14598 /V(\Hy@escapestring{\Fld@value})%
14599 \Fld@additionalactions
14600 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14601 }
```

\PDFForm@Submit

```
14602 \def\PDFForm@Submit{%
14603 /Subtype/Widget%
14604 \Fld@annotflags
14605 \Fld@pageobjref
14606 \Fld@annotnames
14607 /FT/Btn%
14608 \Fld@flags
14609 /H/P%
14610 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14611 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14612     \ifx\Fld@bordercolor\relax\else 1\fi
14613     \space
14614 \else
14615 /MK<<%
14616     \ifnum\Fld@rotation=\z@
```

```

14617     \else
14618         /R \Fld@rotation
14619     \fi
14620     \ifx\Fld@bordercolor\relax
14621     \else
14622         /BC[\Fld@bordercolor]%
14623     \fi
14624     >>%
14625 \fi
14626 /A<<%
14627 /S/SubmitForm%
14628 /F<<%
14629 /FS/URL%
14630 /F(\Hy@escapestring{\Form@action})%
14631 >>%
14632 \Fld@submitflags
14633 >>%
14634 \Fld@additionalactions
14635 }

```

\PDFForm@Reset

```

14636 \ifHy@pdfa
14637 \else
14638     \def\PDFForm@Reset{%
14639         /Subtype/Widget%
14640         \Fld@annotflags
14641         \Fld@pageobjref
14642         \Fld@annotnames
14643         /FT/Btn%
14644         \Fld@flags
14645         /H/P%
14646         /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14647         \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14648             \ifx\Fld@bordercolor\relax\else 1\fi
14649             \space
14650     \else
14651         /MK<<%
14652         \ifnum\Fld@rotation=\z@
14653         \else
14654             /R \Fld@rotation
14655         \fi
14656         \ifx\Fld@bordercolor\relax
14657         \else
14658             /BC[\Fld@bordercolor]%
14659         \fi
14660 %         /CA (Clear)
14661 %         /AC (Done)
14662         >>%
14663     \fi
14664     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14665     /A<</S/ResetForm>>%
14666     \Fld@additionalactions
14667 }%
14668 \fi

```

```

14669 </pdfform>
14670 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

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

```

14671 \def\phantomsection{%
14672   \Hy@MakeCurrentHrefAuto{section*}%
14673   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14674 }
14675 </package>

```

49.1 Bookmarks

```

14676 <*outlines>

```

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

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

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

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

```

14677 \def\Hy@writebookmark#1#2#3#4#5{%
14678   % section number, text, label, level, file
14679   \ifx\WriteBookmarks\relax%
14680     \else
14681       \ifnum#4>\Hy@bookmarksdepth\relax
14682       \else
14683         \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14684       \fi
14685     \fi
14686   }
14687 \def\Hy@currentbookmarklevel{0}
14688 \def\Hy@numberline#1{#1 }

```

```

14689 \def\@@writetorep#1#2#3#4#5{%
14690   \begingroup
14691     \edef\Hy@tempa{#5}%
14692     \ifx\Hy@tempa\Hy@bookmarkstype
14693       \edef\Hy@level{#4}%
14694       \ifx\Hy@levelcheck Y%
14695         \@tempcnta\Hy@level\relax
14696         \advance\@tempcnta by -1 %
14697         \ifnum\Hy@currentbookmarklevel<\@tempcnta
14698           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14699           \advance\@tempcnta by 1 %
14700           \Hy@Warning{%
14701             Difference (\the\@tempcnta) between bookmark levels is %
14702             greater \MessageBreak than one, level fixed%
14703           }%
14704           \@tempcnta\Hy@currentbookmarklevel
14705           \advance\@tempcnta by 1 %
14706           \edef\Hy@level{\the\@tempcnta}%
14707         \fi
14708       \else
14709         \global\let\Hy@levelcheck Y%
14710       \fi
14711       \global\let\Hy@currentbookmarklevel\Hy@level
14712       \@tempcnta\Hy@level\relax
14713       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14714       \advance\@tempcnta by -1 %
14715       \edef\Hy@tempa{#3}%
14716       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14717       \ifx\Hy@tempa\Hy@tempb
14718         \Hy@Warning{%
14719           The anchor of a bookmark and its parent's must not%
14720           \MessageBreak be the same. Added a new anchor%
14721         }%
14722       \phantomsection
14723     \fi
14724     \ifHy@bookmarksnumbered
14725       \let\numberline\Hy@numberline
14726       \let\booknumberline\Hy@numberline
14727       \let\partnumberline\Hy@numberline
14728       \let\chapternumberline\Hy@numberline
14729     \else
14730       \let\numberline\@gobble
14731       \let\booknumberline\@gobble
14732       \let\partnumberline\@gobble
14733       \let\chapternumberline\@gobble
14734     \fi
14735     \pdfstringdef\Hy@tempa{#2}%
14736     \HyPsd@SanitizeForOutFile\Hy@tempa
14737     \if@filesw
14738       \stepcounter{bookmark@seq@number}%
14739       \@ifundefined{@outlinefile}{%
14740       }{%
14741         \protected@write\@outlinefile{}{%
14742           \protect\BOOKMARK

```

```

14743      [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14744      {\Hy@tempa}{\Hy@tempb}%
14745      \@percentchar\space\thebookmark@seq@number
14746      }%
14747      }%
14748      \fi
14749      \fi
14750      \endgroup
14751      }
14752      \newcounter{bookmark@seq@number}

14753      \begingroup
14754      \lccode`(`=`{%
14755      \lccode`)`=`}%
14756      \lccode`1`=\z@
14757      \lccode`2`=\z@
14758      \lccode`3`=\z@
14759      \lccode`5`=\z@
14760      \lccode`7`=\z@
14761      \lccode`\#`=\z@
14762      \lccode`\` `=\z@
14763      \lccode`\{`=\z@
14764      \lccode`\}`=\z@
14765      \lowercase{%
14766      \endgroup
14767      \def\HyPsd@SanitizeForOutFile#1{%
14768      \@onelevel@sanitize\Hy@tempa
14769      \escapechar`\\%
14770      \edef\Hy@tempa{%
14771      \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14772      }%
14773      \edef\Hy@tempa{%
14774      \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14775      }%
14776      }%
14777      \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14778      #1%
14779      \ifx\\#2\\%
14780      \expandafter\ltx@gobble
14781      \else
14782      \expandafter\ltx@firstofone
14783      \fi
14784      {%
14785      \string\173%
14786      \HyPsd@SanitizeOut@BraceLeft#2\@nil
14787      }%
14788      }%
14789      \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14790      #1%
14791      \ifx\\#2\\%
14792      \expandafter\ltx@gobble
14793      \else
14794      \expandafter\ltx@firstofone
14795      \fi
14796      {%

```

```

14797 \string\175%
14798 \HyPsd@SanitizeOut@BraceRight#2\@nil
14799 }%
14800 }%
14801 }

```

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

```

14802 \newcommand{\currentpdfbookmark}{%
14803 \pdfbookmark[\Hy@currentbookmarklevel]%
14804 }
14805 \newcommand{\subpdfbookmark}{%
14806 \@tempcnta\Hy@currentbookmarklevel
14807 \Hy@StepCount\@tempcnta
14808 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14809 }
14810 \newcommand{\belowpdfbookmark}[2]{%
14811 \@tempcnta\Hy@currentbookmarklevel
14812 \Hy@StepCount\@tempcnta
14813 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14814 \advance\@tempcnta by -1 %
14815 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14816 }

```

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.

```

14817 \renewcommand\pdfbookmark[3][0]{%
14818 \Hy@writebookmark[{#2}]{#3.#1}{#1}{toc}%
14819 \hyper@anchorstart{#3.#1}\hyper@anchorend
14820 }
14821 \def\BOOKMARK{%
14822 \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14823 }
14824 \def\@BOOKMARK[#1]{%
14825 \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
14826 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14827 \RequirePackage{rerunfilecheck}[2009/12/10]
14828 \def\Hy@OutlineRerunCheck{%
14829 \RerunFileCheck{\jobname.out}{%
14830 \immediate\closeout\@outlinefile
14831 }{%
14832 Rerun to get outlines right\MessageBreak
14833 or use package `bookmark'%
14834 }%
14835 }

```


49.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

14836 (*vtx)

14837 \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.

14838 \begingroup

14839 \catcode\`=12 %

14840 \ifnum\Hy@VTeXversion<650 %

14841 \catcode\`=12 %

14842 \gdef\hv@pdf@char#1#2#3{%

14843 \char

14844 \ifcase'#1#2#3 %

14845 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%

14846 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%

14847 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%

14848 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%

14849 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%

14850 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%

14851 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%

14852 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%

14853 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%

14854 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

14855 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%

14856 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%

14857 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%

14858 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%

14859 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%

14860 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%

14861 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%

14862 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%

14863 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%

14864 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%

14865 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%

14866 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%

14867 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%

14868 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%

14869 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%

14870 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%

14871 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%

14872 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%

14873 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%

14874 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%

14875 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%

14876 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%

14877 \fi

14878 }%

```

14879 \else
14880 \gdef\hv@pdf@char{\char'}%
14881 \fi
14882 \endgroup

```

\@@BOOKMARK

```

14883 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14884 \expandafter\edef\csname @count@#3\endcsname{%
14885 \the\@serial@counter
14886 }%
14887 \edef\@mycount{\the\@serial@counter}%
14888 \Hy@StepCount\@serial@counter
14889 \edef\@parcount{%
14890 \expandafter\ifx\csname @count@#5\endcsname\relax
14891 0%
14892 \else
14893 \csname @count@#5\endcsname
14894 \fi
14895 }%
14896 \immediate\special{%
14897 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14898 s=\ifx#2-c\else o\fi,t=#4%
14899 }%
14900 }%

```

\ReadBookmarks

```

14901 \def\ReadBookmarks{%
14902 \begingroup
14903 \def\0{\hv@pdf@char 0}%
14904 \def\1{\hv@pdf@char 1}%
14905 \def\2{\hv@pdf@char 2}%
14906 \def\3{\hv@pdf@char 3}%
14907 \def\({}%
14908 \def\)}%
14909 \def\do##1{%
14910 \ifnum\catcode`\##1=\active
14911 \@makeother##1%
14912 \else
14913 \ifnum\catcode`\##1=6 %
14914 \@makeother##1%
14915 \fi
14916 \fi
14917 }%
14918 \dospecials
14919 \Hy@safe@activetrue
14920 \InputIfFileExists{jobname.out}{\}{\}%
14921 \endgroup
14922 \ifx\WriteBookmarks\relax
14923 \else
14924 \if@filesw
14925 \newwrite\@outlinefile
14926 \Hy@OutlineRerunCheck
14927 \immediate\openout\@outlinefile=jobname.out\relax
14928 \ifHy@typexml

```

```

14929     \immediate\write\@outlinefile{<relaxxml>\relax}%
14930     \fi
14931     \fi
14932     \fi
14933 }

14934 </vtx>
14935 <*\vtx>
14936 \def\ReadBookmarks{%
14937   \pdf@ifdraftmode{}{%
14938     \begingroup
14939     \def\do##1{%
14940       \ifnum\catcode`##1=\active
14941         \@makeother##1%
14942       \else
14943         \ifnum\catcode`##1=6 %
14944           \@makeother##1%
14945         \fi
14946       \fi
14947     }%
14948     \dospecials
14949     \Hy@safe@activetrue
14950     \escapechar=`\%
14951     \def\@@BOOKMARK[##1][##2]##3##4##5{%
14952       \calc@bm@number{##5}%
14953     }%
14954     \InputIfFileExists{\jobname.out}{-}{-}%
14955     \ifx\WriteBookmarks\relax
14956       \global\let\WriteBookmarks\relax
14957     \fi
14958     \def\@@BOOKMARK[##1][##2]##3##4##5{%
14959       \def\Hy@temp{##4}%
14960     }%
14961     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14962     \Hy@OutlineName{}\Hy@pstringName{%
14963       ##2\check@bm@number{##3}%
14964     }{%
14965       \expandafter\strip@prefix\meaning\Hy@temp
14966     }%
14967   }%
14968 }%
14969 \pdfmark{%
14970   pdfmark=/OUT,%
14971   Count={##2\check@bm@number{##3}},%
14972   Dest={##3},%
14973   Title=\expandafter\strip@prefix\meaning\Hy@temp
14974 }%
14975 </pdfmark>
14976 <*\dvi pdfm | xetex>
14977 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14978 \@pdfm@mark{%
14979   outline \ifHy@DvipdfmxOutlineOpen
14980     [%
14981     \ifnum##21>\z@

```

```

14982         \else
14983         -%
14984         \fi
14985         ] %
14986         \fi
14987         ##1<<%
14988         /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14989         /A<<%
14990         /S/GoTo%
14991         /D(\Hy@pstringName)%
14992         >>%
14993         >>%
14994         }%
14995     </dvipdfm | xetex>
14996     }%
14997     \begingroup
14998     \def\WriteBookmarks{0}%
14999     \InputIfFileExists{\jobname.out}{-}{-}%
15000     \endgroup
15001     %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15002     \endgroup
15003     }%
15004     \ifx\WriteBookmarks\relax
15005     \else
15006     \if@filesw
15007     \newwrite\@outlinefile
15008     \Hy@OutlineRerunCheck
15009     \immediate\openout\@outlinefile=\jobname.out\relax
15010     \ifHy@typexml
15011     \immediate\write\@outlinefile{<relaxxml>\relax}%
15012     \fi
15013     \fi
15014     \fi
15015     }
15016     <*\pdfTeX>
15017     \def\Hy@OutlineName#1#2#3#4{%
15018     \pdfoutline goto name{#2}count#3{#4}%
15019     }
15020     </pdfTeX>
15021     \def\check@bm@number#1{%
15022     \expandafter\ifx\csname B_#1\endcsname\relax
15023     0%
15024     \else
15025     \csname B_#1\endcsname
15026     \fi
15027     }
15028     \def\calc@bm@number#1{%
15029     \@tempcnta=\check@bm@number{#1}\relax
15030     \advance\@tempcnta by 1 %
15031     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15032     }
15033     </!vTeX>
15034     \ifHy@implicit
15035     \else

```

```

15036 \expandafter\endinput
15037 \fi

15038 </outlines>
15039 <*outlines | hypertex>

15040 \newlength\Hy@SectionHShift
15041 \def\Hy@SectionAnchorHref#1{%
15042   \ifx\protect\@typeset@protect
15043     \Hy@@SectionAnchor{#1}%
15044   \fi
15045 }
15046 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
15047   \leavevmode
15048   \hbox to 0pt{%
15049     \kern-\Hy@SectionHShift
15050     \Hy@raisedlink{%
15051       \hyper@anchorstart{#1}\hyper@anchorend
15052     }%
15053     \hss
15054   }%
15055 }
15056 \let\H@old@ssect\@ssect
15057 \def\@ssect#1#2#3#4#5{%
15058   \Hy@MakeCurrentHrefAuto{section*}%
15059   \setlength{\Hy@SectionHShift}{#1}%
15060   \begingroup
15061     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15062     \toks\tw@\expandafter{%
15063       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15064       #5%
15065     }%
15066   \edef\x{\endgroup
15067     \the\toks@\the\toks\tw@}%
15068   }\x
15069 }
15070 \let\H@old@schapter\@schapter
15071 \def\@schapter#1{%
15072   \begingroup
15073     \let\@mkboth\@gobbletwo
15074     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15075     \Hy@raisedlink{%
15076       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15077     }%
15078   \endgroup
15079   \H@old@schapter{#1}%
15080 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then the counting by `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

15081 \ltx@ifundefined{@chapter}{}{%
15082   \let\Hy@org@chapter\@chapter
15083   \def\@chapter{%
15084     \def\Hy@next{%

```

```

15085 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15086 \Hy@raisedlink{%
15087 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15088 }%
15089 }%
15090 \ifnum\c@secnumdepth>\m@ne
15091 \ltx@ifundefined{if@mainmatter}%
15092 \iftrue{\csname if@mainmatter\endcsname}%
15093 \let\Hy@next\relax
15094 \fi
15095 \fi
15096 \Hy@next
15097 \Hy@org@chapter
15098 }%
15099 }

15100 \let\H@old@part\@part
15101 \begingroup\expandafter\expandafter\expandafter\endgroup
15102 \expandafter\ifx\csname chapter\endcsname\relax
15103 \let\Hy@secnum@part\z@
15104 \else
15105 \let\Hy@secnum@part\m@ne
15106 \fi
15107 \def\@part{%
15108 \ifnum\Hy@secnum@part>\c@secnumdepth
15109 \phantomsection
15110 \fi
15111 \H@old@part
15112 }

15113 \let\H@old@spart\@spart
15114 \def\@spart#1{%
15115 \Hy@MakeCurrentHrefAuto{part*}%
15116 \Hy@raisedlink{%
15117 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15118 }%
15119 \H@old@spart{#1}%
15120 }

15121 \let\H@old@sect\@sect
15122 \def\@sect#1#2#3#4#5#6[#7]#8{%
15123 \ifnum #2>\c@secnumdepth
15124 \expandafter\@firstoftwo
15125 \else
15126 \expandafter\@secondoftwo
15127 \fi
15128 {%
15129 \Hy@MakeCurrentHrefAuto{section*}%
15130 \setlength{\Hy@SectionHShift}{#3}%
15131 \begingroup
15132 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15133 \toks\tw@\expandafter{%
15134 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15135 #8%
15136 }%
15137 \edef\x{\endgroup

```

```

15138 \the\toks@{\the\toks\tw@}%
15139 }\x
15140 }{%
15141 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15142 }%
15143 }

15144 </outlines | hypertex>
15145 <*outlines>

15146 \expandafter\def\csname Parent-4\endcsname{}
15147 \expandafter\def\csname Parent-3\endcsname{}
15148 \expandafter\def\csname Parent-2\endcsname{}
15149 \expandafter\def\csname Parent-1\endcsname{}
15150 \expandafter\def\csname Parent0\endcsname{}
15151 \expandafter\def\csname Parent1\endcsname{}
15152 \expandafter\def\csname Parent2\endcsname{}
15153 \expandafter\def\csname Parent3\endcsname{}
15154 \expandafter\def\csname Parent4\endcsname{}

15155 </outlines>

```

50 Compatibility with koma-script classes

```

15156 <*outlines | hypertex>

```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

15157 \def\Hy@tempa{%
15158 \def\@addchap{##1}##2{%
15159 \typeout{##2}%
15160 \if@twoside
15161 \@mkboth{##1}{}%
15162 \else
15163 \@mkboth{}{##1}%
15164 \fi
15165 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15166 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15167 \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
15168 \Hy@raisedlink{%
15169 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15170 }%
15171 \if@twocolumn
15172 \@topnewpage[\@makeschapterhead{##2}]%
15173 \else
15174 \@makeschapterhead{##2}%
15175 \@afterheading
15176 \fi
15177 \addcontentsline{toc}{chapter}{##1}%
15178 }%
15179 }

15180 \@ifclassloaded{scrbook}{%
15181 \@ifclasslater{scrbook}{2001/01/01}{%

```

```

15182 \let\Hy@tempa\@empty
15183 }{}%
15184 }{%
15185 \@ifclassloaded{scrreprt}{%
15186 \@ifclasslater{scrreprt}{2001/01/01}{%
15187 \let\Hy@tempa\@empty
15188 }{}%
15189 }{%
15190 \let\Hy@tempa\@empty
15191 }%
15192 }%
15193 \Hy@tempa
15194 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15195 <*pd1enc>
15196 \DeclareFontEncoding{PD1}{}{}

Accents
15197 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15198 \DeclareTextAccent{\'}{PD1}{\textacute}
15199 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15200 \DeclareTextAccent{\~}{PD1}{\texttilde}
15201 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15202 \DeclareTextAccent{\r}{PD1}{\textring}
15203 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15204 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15205 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15206 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15207 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15208 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15209 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15210 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15211 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15212 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15213 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15214 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15215 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15216 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15217 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15218 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15219 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15220 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15221 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15222 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15223 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15224 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15225 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}

```



```

15226 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textstring}
15227 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15228 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15229 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15230 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15231 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15232 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15233 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15234 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15235 \DeclareTextCommand{\newtie}{PD1}[1]{%
15236   \TextSymbolUnavailable{\newtie{#1}}#1%
15237 }

```

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

```

15238 % U+0009 (CHARACTER TABULATION)
15239 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15240 % U+000A (LINE FEED)
15241 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15242 % U+000D (CARRIAGE RETURN)
15243 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15244 % U+02D8 BREVE; breve
15245 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15246 % U+02C7 CARON; caron
15247 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15248 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15249 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15250 % U+02D9 DOT ABOVE; dotaccent
15251 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15252 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15253 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15254 % U+02DB OGONEK; ogonek
15255 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15256 % U+02DA RING ABOVE; ring
15257 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15258 % U+02DC SMALL TILDE; ilde, *tilde
15259 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

15260 % U+0022 QUOTATION MARK; quotedbl

```

```

15261 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022

```

```

15262 % U+0023 NUMBER SIGN; numbersign

```

```

15263 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

```

```

15264 % U+0024 DOLLAR SIGN; dollar

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```

15265 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024

```

```

15266 % U+0025 PERCENT SIGN; percent

```

```

15267 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025

```

```

15268 % U+0026 AMPERSAND; ampersand

```

```

15269 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

```

15270 % U+0028 LEFT PARENTHESIS; parenleft

```

15271 \DeclareTextCommand{\textparenleft}{PD1}{\string\(\}% \050 U+0028
 15272 % U+0029 RIGHT PARENTHESIS; parenright
 15273 \DeclareTextCommand{\textparenright}{PD1}{\string\)}% \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
 15274 % U+002E FULL STOP; period
 15275 \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
 15276 % U+003C LESS-THAN SIGN; less
 15277 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15278 % U+003E GREATER-THAN SIGN; greater
 15279 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 15280 % U+005C REVERSE SOLIDUS; backslash
 15281 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15282 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15283 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15284 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15285 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15286 % U+005F LOW LINE; underscore
 15287 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15288 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15289 % U+0060 GRAVE ACCENT; grave
 15290 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15291 % U+0069 LATIN SMALL LETTER I; i
 15292 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15293 % U+007B LEFT CURLY BRACKET; braceleft
 15294 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15295 % U+007C VERTICAL LINE; *bar, verticalbar

15296 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15297 % U+007D RIGHT CURLY BRACKET; braceright
 15298 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15299 % U+007E TILDE; asciitilde
 15300 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15301 % U+2022 BULLET; bullet
 15302 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15303 % U+2020 DAGGER; dagger
 15304 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15305 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15306 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15307 \DeclareTextCommand{\textddagger}{PD1}{\textdagger}
 15308 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15309 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15310 % U+2014 EM DASH; emdash
 15311 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15312 % U+2013 EN DASH; endash
 15313 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15314 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15315 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15316 % U+2044 FRACTION SLASH; fraction
 15317 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15318 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15319 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 15320 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 15321 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 15322 % U+2212 MINUS SIGN; minus
 15323 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15324 % U+2030 PER MILLE SIGN; perthousand
 15325 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15326 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15327 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15328 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15329 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15330 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15331 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15332 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15333 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15334 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15335 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15336 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15337 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15338 % U+2122 TRADE MARK SIGN; trademark
 15339 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15340 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15341 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15342 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15343 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15344 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15345 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15346 % U+0152 LATIN CAPITAL LIGATURE OE; OE

15347 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15348 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15349 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15350 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15351 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 15352 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15353 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15354 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15355 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15356 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15357 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15358 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15359 % U+0153 LATIN SMALL LIGATURE OE; oe
 15360 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15361 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15362 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15363 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15364 \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.
 15365 % U+20AC EURO SIGN; *Euro, euro
 15366 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15367 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15368 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15369 % U+00A2 CENT SIGN; cent
 15370 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15371 % U+00A3 POUND SIGN; sterling
 15372 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15373 % U+00A4 CURRENCY SIGN; currency
 15374 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15375 % U+00A5 YEN SIGN; yen
 15376 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15377 % U+00A6 BROKEN BAR; brokenbar
 15378 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15379 % U+00A7 SECTION SIGN; section
 15380 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15381 % U+00A8 DIAERESIS; dieresis
 15382 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15383 % U+00A9 COPYRIGHT SIGN; copyright
 15384 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15385 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15386 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15387 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15388 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15389 % U+00AC NOT SIGN; logicalnot
 15390 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15391 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15392 % U+00AE REGISTERED SIGN; registered
 15393 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15394 % U+00AF MACRON; *macron, overscore
 15395 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF

15396 % U+00B0 DEGREE SIGN; degree
15397 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15398 % U+00B1 PLUS-MINUS SIGN; plusminus
15399 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15400 % U+00B2 SUPERSCRIPT TWO; twosuperior
15401 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15402 % U+00B3 SUPERSCRIPT THREE; threesuperior
15403 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15404 % U+00B4 ACUTE ACCENT; acute
15405 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15406 % U+00B5 MICRO SIGN; mu, mu1
15407 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15408 % U+00B6 PILCROW SIGN; paragraph
15409 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15410 % U+00B7 MIDDLE DOT; middot, *periodcentered
15411 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15412 % U+00B8 CEDILLA; cedilla
15413 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15414 % U+00B9 SUPERSCRIPT ONE; onesuperior
15415 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15416 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15417 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15418 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15419 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15420 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15421 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15422 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15423 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15424 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15425 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15426 % U+00BF INVERTED QUESTION MARK; questiondown
15427 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15428 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15429 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15430 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15431 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15432 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15433 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15434 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15435 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15436 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15437 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
15438 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15439 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15440 % U+00C6 LATIN CAPITAL LETTER AE; AE
15441 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15442 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15443 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15444 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15445 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15446 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15447 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15448 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex

15449 \DeclareTextCompositeCommand{\`}{PD1}{E}{\312}% U+00CA
15450 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15451 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15452 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15453 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15454 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15455 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15456 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15457 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15458 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15459 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15460 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15461 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15462 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15463 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15464 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15465 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15466 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15467 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15468 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15469 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15470 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15471 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15472 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15473 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15474 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15475 % U+00D7 MULTIPLICATION SIGN; multiply
15476 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15477 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15478 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15479 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15480 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15481 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15482 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15483 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15484 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15485 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15486 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15487 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15488 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15489 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15490 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15491 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15492 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15493 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15494 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15495 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15496 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15497 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15498 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15499 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15500 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15501 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15502 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis

15503 \DeclareTextCompositeCommand{\`}{PD1}{a}{\344}% U+00E4
15504 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15505 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15506 % U+00E6 LATIN SMALL LETTER AE; ae
15507 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15508 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15509 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15510 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15511 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15512 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15513 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15514 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15515 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15516 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15517 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15518 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15519 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15520 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15521 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15522 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15523 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15524 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15525 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15526 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15527 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15528 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15529 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15530 % U+00F0 LATIN SMALL LETTER ETH; eth
15531 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15532 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15533 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15534 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15535 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15536 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15537 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15538 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15539 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15540 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15541 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15542 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15543 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15544 % U+00F7 DIVISION SIGN; divide
15545 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15546 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15547 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15548 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15549 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15550 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15551 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15552 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15553 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15554 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15555 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15556 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute

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15557 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15558 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15559 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15560 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15561 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15562 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15563 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

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Glyphs that consist of several characters.

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15564 \DeclareTextCommand{\SS}{PD1}{SS}%
15565 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

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Aliases (german.sty)

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15566 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15567 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15568 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15569 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15570 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15571 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15572 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15573 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

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Aliases (math names)

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15574 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15575 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15576 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15577 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15578 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15579 \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).

```

15580 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15581 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15582 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15583 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15584 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15585 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15586 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15587 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15588 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15589 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15590 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15591 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15592 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15593 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15594 </pd1enc>

```

51.2 PU encoding

```

15595 <*puenc>
15596 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15597 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb

```


15598 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15599 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15600 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15601 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15602 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15603 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15604 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15605 % U+0304 COMBINING MACRON; macroncmb
15606 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15607 % U+0306 COMBINING BREVE; brevecmb
15608 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15609 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15610 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15611 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15612 % U+0308 COMBINING DIAERESIS; dieresiscmb
15613 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15614 % U+030A COMBINING RING ABOVE; ringcmb
15615 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15616 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15617 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15618 % U+030C COMBINING CARON; caroncmb
15619 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15620 (/puenc)
15621 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
15622 {puextra}\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15623 (*puenc)
15624 \ifx\CYRDZE\@undefined \else
15625 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15626 \fi
15627 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15628 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15629 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15630 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15631 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15632 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
15633 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15634 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15635 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15636 % U+0327 COMBINING CEDILLA; cedillacmb
15637 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15638 % U+0328 COMBINING OGONEK; ogonekcmb
15639 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15640 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15641 % \textsubcircum (tipa)
15642 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15643 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15644 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15645 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15646 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15647 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15648 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15649 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb

```

15650 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15651 % U+20DD COMBINING ENCLOSING CIRCLE
15652 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.
15653 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15654 \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.
15655 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15656 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15657 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%
15658 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15659 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15660 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15661 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15662 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15663 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15664 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15665 </puenc>
15666 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15667 <*puenc>
15668 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15669 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15670 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15671 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}% U+0311
15672 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\83\044}% U+0324
15673 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15674 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
low}%
15675 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\83\056}% U+032E
15676 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15677 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15678 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15679 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15680 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15681 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15682 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\83\001\83\004}% U+0301 U
15683 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\83\000\83\004}% U+0300 U
15684 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15685 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15686 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
15687 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15688 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15689 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15690 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15691 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15692 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15693 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15694 </puenc>
15695 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15696 <*puenc>
15697 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15698 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%

```

```

15699 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15700 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{{ \83\021}}% U+0311
15701 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{{ \83\044}}% U+0324
15702 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\texttringlow}%
15703 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15704 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{{ \83\056}}% U+032E
15705 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\textttildelow}%
15706 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15707 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15708 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15709 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15710 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15711 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{{ \83\001\83\004}}% U+0301 U+0304
15712 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{{ \83\000\83\004}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

15713 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15714 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15715 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15716 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15717 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15718 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15719 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15720 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15721 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15722 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15723 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15724 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15725 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}%
15726 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15727 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

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

Special white space escape characters.

```

15728 % U+0009 (CHARACTER TABULATION)
15729 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15730 % U+000A (LINE FEED)
15731 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15732 % U+000D (CARRIAGE RETURN)
15733 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
15734 % U+0022 QUOTATION MARK; quotedbl
15735 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15736 % U+0023 NUMBER SIGN; numbersign
15737 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15738 % U+0024 DOLLAR SIGN; dollar
15739 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
15740 %* \textdollar -> \mathdollar
15741 %* \textdollar -> \EyesDollar (marvosym)
15742 % U+0025 PERCENT SIGN; percent
15743 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15744 % U+0026 AMPERSAND; ampersand
15745 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026

```

15746 %* \textampersand -> \binampersand (stmaryrd)
15747 %* \textampersand -> \with (cml)
15748 % U+0027 APOSTROPHE; quotesingle
15749 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15750 % U+0028 LEFT PARENTHESIS; parenleft
15751 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15752 % U+0029 RIGHT PARENTHESIS; parenright
15753 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15754 % U+002A ASTERISK; asterisk; (?)
15755 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15756 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15757 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15758 % U+002C COMMA; comma; \MVComma (marvosym)
15759 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15760 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15761 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15762 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15763 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15764 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15765 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15766 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15767 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15768 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15769 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15770 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15771 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15772 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15773 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15774 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15775 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15776 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15777 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15778 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15779 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15780 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15781 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15782 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15783 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15784 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15785 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon
15786 % U+003C LESS-THAN SIGN; less
15787 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
15788 % U+003E GREATER-THAN SIGN; greater
15789 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
\80\077: U+003F QUESTION MARK; question
15790 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
15791 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
\80\101: U+0041 LATIN CAPITAL LETTER A; A
...

$\backslash 80\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 80\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
15792 % U+005C REVERSE SOLIDUS; backslash
15793 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}\{\text{PU}\}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
15794 % U+005E CIRCUMFLEX ACCENT; asciicircum
15795 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}\{\text{PU}\}\{\backslash 80\backslash 136\}\%$ U+005E
15796 % U+005F LOW LINE; underscore
15797 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}\{\text{PU}\}\{\backslash 80\backslash 137\}\%$ U+005F
15798 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
15799 % U+0060 GRAVE ACCENT; grave
15800 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}\{\text{PU}\}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
15801 % U+0069 LATIN SMALL LETTER I; i
15802 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \cdot\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
15803 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \cdot\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
15804 % U+007B LEFT CURLY BRACKET; braceleft
15805 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
15806 % U+007C VERTICAL LINE; *bar, verticalbar
15807 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\text{|}\}\%$ $\backslash 80\backslash 174$ U+007C
15808 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvertline}$ (tipa)
15809 % U+007D RIGHT CURLY BRACKET; braceright
15810 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
15811 % U+007E TILDE; asciitilde
15812 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

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

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15813 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15814 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
15815 % U+00A2 CENT SIGN; cent
15816 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242\}\%$ U+00A2
15817 % U+00A3 POUND SIGN; sterling
15818 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243\}\%$ U+00A3
15819 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)
15820 %* $\backslash \text{textsterling} \rightarrow \backslash \text{pounds}$ (LaTeX)
15821 % U+00A4 CURRENCY SIGN; currency
15822 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcurrency}\}\{\text{PU}\}\{\backslash 80\backslash 244\}\%$ U+00A4
15823 % U+00A5 YEN SIGN; yen
15824 $\backslash \text{DeclareTextCommand}\{\backslash \text{textyen}\}\{\text{PU}\}\{\backslash 80\backslash 245\}\%$ U+00A5
15825 % U+00A6 BROKEN BAR; brokenbar
15826 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbrokenbar}\}\{\text{PU}\}\{\backslash 80\backslash 246\}\%$ U+00A6
15827 %* $\backslash \text{textbrokenbar} \rightarrow \backslash \text{brokenvert}$ (wasysym)
15828 % U+00A7 SECTION SIGN; section
15829 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsection}\}\{\text{PU}\}\{\backslash 80\backslash 247\}\%$ U+00A7

15830 %* \textsection -> \mathsection (LaTeX)
15831 %* \textsection -> \S (LaTeX)
15832 % U+00A8 DIAERESIS; dieresis
15833 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15834 % U+00A9 COPYRIGHT SIGN; copyright
15835 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15836 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15837 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15838 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
15839 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15840 % U+00AC NOT SIGN; logicalnot
15841 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15842 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15843 % U+00AE REGISTERED SIGN; registered
15844 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15845 % U+00AF MACRON; *macron, overscore
15846 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15847 % U+00B0 DEGREE SIGN; degree
15848 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15849 % U+00B1 PLUS-MINUS SIGN; plusminus
15850 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15851 % U+00B2 SUPERSCRIPT TWO; twosuperior
15852 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15853 % U+00B3 SUPERSCRIPT THREE; threesuperior
15854 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15855 % U+00B4 ACUTE ACCENT; acute
15856 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15857 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15858 % U+00B5 MICRO SIGN; mu, mul
15859 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15860 % U+00B6 PILCROW SIGN; paragraph
15861 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15862 %* \textparagraph -> \mathparagraph (LaTeX)
15863 % U+00B7 MIDDLE DOT; middot, *periodcentered
15864 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15865 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15866 %* \textperiodcentered -> \Squaredot (marvosym)
15867 % U+00B8 CEDILLA; cedilla
15868 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15869 % U+00B9 SUPERSCRIPT ONE; onesuperior
15870 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15871 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15872 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15873 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
15874 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15875 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15876 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15877 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15878 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15879 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15880 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE

15881 % U+00BF INVERTED QUESTION MARK; questiondown
15882 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15883 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15884 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15885 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15886 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15887 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15888 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15889 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15890 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15891 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15892 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15893 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15894 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15895 % U+00C6 LATIN CAPITAL LETTER AE; AE
15896 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15897 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15898 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15899 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15900 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15901 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15902 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15903 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15904 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15905 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15906 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15907 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15908 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15909 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15910 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15911 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15912 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15913 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15914 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15915 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15916 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15917 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15918 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15919 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15920 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15921 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15922 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15923 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15924 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15925 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15926 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15927 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15928 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15929 % U+00D7 MULTIPLICATION SIGN; multiply
15930 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15931 %* \textmultiply -> \vartimes (stmaryrd)
15932 %* \textmultiply -> \MVMultiplication (marvosym)
15933 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15934 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8

15935 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15936 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15937 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15938 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15939 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15940 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15941 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15942 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15943 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15944 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15945 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15946 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15947 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15948 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15949 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15950 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15951 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15952 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15953 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15954 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15955 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15956 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15957 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15958 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15959 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15960 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15961 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15962 % U+00E6 LATIN SMALL LETTER AE; ae
15963 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15964 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15965 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15966 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15967 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15968 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15969 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15970 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15971 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15972 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15973 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15974 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15975 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15976 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15977 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15978 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15979 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15980 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15981 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15982 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15983 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15984 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15985 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15986 % U+00F0 LATIN SMALL LETTER ETH; eth
15987 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15988 %* \dh -> \eth (wsuipa, phonetic)

15989 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 15990 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 15991 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15992 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 15993 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15994 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 15995 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15996 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 15997 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 15998 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 15999 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16000 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 16001 % U+00F7 DIVISION SIGN; divide
 16002 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16003 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 16004 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16005 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16006 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 16007 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16008 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 16009 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16010 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 16011 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16012 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 16013 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16014 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 16015 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16016 % \th, \thorn (wasysym), \textthorn (tipa)
 16017 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16018 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16019 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16020 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

16021 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16022 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16023 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 16024 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 16025 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 16026 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 16027 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 16028 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 16029 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 16030 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 16031 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 16032 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 16033 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 16034 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 16035 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 16036 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 16037 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 16038 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 16039 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex

16040 \DeclareTextCompositeCommand{\~}{PU}{c}{\81\011}% U+0109
16041 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16042 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16043 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16044 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16045 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16046 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16047 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16048 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16049 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16050 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16051 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16052 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16053 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16054 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16055 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16056 % \textcrd (tipa)
16057 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16058 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16059 %* \textcrd -> \crossd (wsuipa)
16060 % An alternate glyph with the stroke through the bowl:
16061 %* \textcrd -> \textbard (tipa)
16062 %* \textcrd -> \bard (wsuipa)
16063 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16064 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16065 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16066 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16067 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16068 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16069 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16070 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16071 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16072 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16073 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16074 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16075 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16076 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16077 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16078 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16079 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16080 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16081 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16082 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16083 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16084 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16085 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16086 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16087 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16088 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16089 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16090 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16091 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent

16092 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16093 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16094 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16095 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16096 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16097 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16098 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16099 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16100 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16101 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16102 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16103 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16104 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16105 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16106 \DeclareTextCommand{\textthbar}{PU}{\81\047}%* U+0127
16107 %* \textthbar -> \textcrh (tipa)
16108 %* \textthbar -> \crossh (wsuipa)
16109 %* \textthbar -> \planck (phonetic)
16110 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16111 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16112 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16113 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16114 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16115 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16116 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16117 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16118 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16119 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16120 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16121 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16122 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16123 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16124 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16125 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16126 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16127 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16128 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16129 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16130 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16131 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16132 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16133 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16134 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16135 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16136 % U+0133 LATIN SMALL LIGATURE IJ; ij
16137 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16138 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16139 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16140 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16141 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16142 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16143 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent

16144 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 16145 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 16146 \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.

16147 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 16148 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 16149 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 16150 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 16151 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 16152 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 16153 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
 cent
 16154 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 16155 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 16156 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 16157 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 16158 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 16159 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 16160 \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.

16161 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
 cent
 16162 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16163 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16164 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16165 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16166 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16167 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16168 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16169 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16170 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16171 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16172 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16173 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent
 16174 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16175 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16176 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16177 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16178 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16179 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16180 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16181 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16182 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16183 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16184 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16185 % U+014B LATIN SMALL LETTER ENG; eng
 16186 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B

16187 %* \ng -> \eng (wsuipa)
 16188 %* \ng -> \engma (phonetic)
 16189 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16190 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16191 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16192 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16193 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16194 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16195 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16196 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16197 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 16198 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16199 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 16200 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16201 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16202 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16203 % U+0153 LATIN SMALL LIGATURE OE; oe
 16204 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16205 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16206 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16207 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16208 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16209 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 16210 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16211 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16212 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16213 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16214 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16215 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16216 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16217 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16218 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16219 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16220 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16221 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16222 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16223 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16224 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16225 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16226 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16227 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16228 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16229 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16230 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16231 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16232 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16233 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 16234 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 16235 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 16236 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163

16237 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 16238 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 16239 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 16240 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 16241 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 16242 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 16243 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 16244 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 16245 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 16246 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 16247 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 16248 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 16249 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 16250 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 16251 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 16252 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16253 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16254 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16255 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16256 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16257 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16258 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16259 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16260 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16261 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Uddblacute, Uhungarumlaut
 16262 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16263 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; uddblacute, uhungarumlaut
 16264 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16265 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16266 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16267 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16268 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16269 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16270 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16271 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16272 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16273 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16274 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16275 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16276 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16277 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16278 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16279 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16280 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16281 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16282 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16283 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16284 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16285 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16286 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16287 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16288 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D

16289 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16290 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16291 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16292 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

16293 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16294 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16295 %* \textcrb -> \crossb (wsuipa)
 16296 % An alternate glyph with the stroke through the bowl:
 16297 %* \textcrb -> \textbarb (tipa)
 16298 %* \textcrb -> \barb (wsuipa)
 16299 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 16300 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
 16301 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16302 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16303 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
 16304 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
 16305 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 16306 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 16307 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 16308 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 16309 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 16310 %* \textflorin -> \Florin (marvosym)
 16311 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 16312 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 16313 %* \texthvlig -> \hv (wsuipa)
 16314 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
 16315 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
 16316 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 16317 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 16318 %* \texthtk -> \hausak (phonetic)
 16319 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 16320 % \textbarl (tipa), \barl (wsuipa)
 16321 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 16322 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 16323 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
 16324 % \textcrlambda (tipa)
 16325 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 16326 %* \textcrlambda -> \crossnilambda (wsuipa)
 16327 %* \textcrlambda -> \barlambd (phonetic)
 16328 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 16329 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
 16330 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
 16331 % \textnrleg (tipx)
 16332 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 16333 %* \textPUnrleg -> \textnrleg (tipx)
 16334 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
 16335 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
 16336 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;

16337 % \textlhookt (tipa)
16338 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16339 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16340 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16341 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16342 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16343 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16344 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16345 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16346 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16347 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16348 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16349 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16350 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16351 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16352 % \textpipe (tipa)
16353 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16354 %* \textpipe -> \textpipevar (tipx)
16355 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16356 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16357 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16358 %* \textdoublepipe -> \textdoublepipevar (tipx)
16359 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16360 % clickalveolar; \textdoublebarpipe (tipa)
16361 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16362 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16363 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16364 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16365 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
16366 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16367 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16368 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16369 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
16370 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16371 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16372 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16373 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16374 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16375 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16376 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16377 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16378 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16379 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16380 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16381 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16382 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16383 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16384 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16385 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16386 %* \textgslash -> \textcrg (tipa)
16387 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16388 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6

16389 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 16390 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 16391 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 16392 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 16393 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 16394 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 16395 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 16396 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 16397 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 16398 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 16399 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 16400 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 16401 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 16402 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 16403 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 16404 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 16405 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 16406 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 16407 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 16408 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 16409 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 16410 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 16411 \DeclareTextCompositeCommand{\`}{PU}{\AE}{\81\374}% U+01FC
 16412 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
 16413 \DeclareTextCompositeCommand{\`}{PU}{\ae}{\81\375}% U+01FD
 16414 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
 16415 % *Oslashacute, Ostrokeacut
 16416 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
 16417 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
 16418 % *oslashacute, ostrokeacute
 16419 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 16420 </puenc>
 16421 <*puextra>
 16422 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 16423 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 16424 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 16425 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 16426 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 16427 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 16428 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 16429 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 16430 </puextra>
 16431 <*puenc>
 16432 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
 edbreve
 16433 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
 16434 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
 breve
 16435 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
 16436 </puenc>
 16437 <*puextra>
 16438 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 16439 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 16440 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave

16441 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16442 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16443 </puextra>
16444 <*puenc>
16445 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; iinverted-
breve
16446 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16447 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16448 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16449 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16450 </puenc>
16451 <*puextra>
16452 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16453 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16454 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16455 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16456 </puextra>
16457 <*puenc>
16458 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16459 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16460 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-
breve
16461 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16462 </puenc>
16463 <*puextra>
16464 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16465 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16466 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16467 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16468 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16469 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16470 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16471 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16472 </puextra>
16473 <*puenc>
16474 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16475 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16476 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinvert-
breve
16477 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16478 % U+021E LATIN CAPITAL LETTER H WITH CARON
16479 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16480 % U+021F LATIN SMALL LETTER H WITH CARON
16481 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16482 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
16483 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
16484 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
16485 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
16486 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
16487 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
16488 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE

16489 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16490 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16491 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16492 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16493 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16494 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16495 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16496 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16497 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16498 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16499 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16500 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16501 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16502 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16503 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16504 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16505 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16506 % U+0237 LATIN SMALL LETTER DOTLESS J
 16507 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16508 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16509 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16510 %* \textPUdblig -> \textdblig (tipx)
 16511 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16512 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16513 %* \textPUqplig -> \textqplig (tipx)
 16514 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16515 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16516 %* \textslashc -> \textcentoldstyle (textcomp)
 16517 % With bar instead of stroke:
 16518 %* \textslashc -> \textbarc (tipa)

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

16519 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16520 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16521 %* \textturna -> \inva (wasysym)
 16522 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16523 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16524 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16525 %* \textscripta -> \vara (phonetic)
 16526 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16527 % \textturnscripta (tipa)
 16528 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16529 %* \textturnscripta -> \invscripta (wsuipa)
 16530 %* \textturnscripta -> \rotvara (phonetic)
 16531 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16532 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16533 %* \texthtb -> \hookb (wsuipa)
 16534 %* \texthtb -> \hausab (phonetic)
 16535 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16536 % \textopeno (tipa), \openo (wasysym)
 16537 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16538 %* \textopeno -> \varopeno (phonetic)
 16539 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16540 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255

16541 %* \textctc -> \curlyc (wsuipa)
 16542 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16543 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16544 %* \textrtaild -> \taild (wsuipa)
 16545 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16546 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16547 %* \texthtd -> \hookd (wsuipa)
 16548 %* \texthtd -> \hausad (phonetic)
 16549 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16550 % \textreve (tipa), \reve (wsuipa)
 16551 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16552 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16553 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16554 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16555 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16556 % \textrhookschwa (tipa)
 16557 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16558 %* \textrhookschwa -> \er (wsuipa)
 16559 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16560 % \niepsilon (wsuipa)
 16561 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16562 %* \textniepsilon -> \epsi (phonetic)
 16563 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16564 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16565 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16566 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16567 % \textrhookrevepsilon (tipa)
 16568 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
 16569 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16570 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16571 % \textcloserevepsilon (tipa)
 16572 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16573 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16574 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16575 % \textbardotlessj (tipa)
 16576 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16577 %* \textbardotlessj -> \barj (phonetic)
 16578 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16579 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16580 %* \texthtg -> \hookg (wsuipa)
 16581 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16582 % \textscriptg (tipa), \scriptg (wsuipa)
 16583 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16584 %* \textscriptg -> \varg (phonetic)
 16585 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16586 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16587 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
 16588 % \ipagamma (wsuipa), \vod (phonetic)
 16589 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16590 %* \textipagamma -> \vod (pnonetic)

16591 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16592 % \babygamma (wsuipa)
 16593 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16594 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16595 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16596 %* \textturnh -> \invh (wsuipa)
 16597 %* \textturnh -> \udesc (phonetic)
 16598 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16599 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16600 %* \texthth -> \hookh (wsuipa)
 16601 %* \texthth -> \voicedh (phonetic)
 16602 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
 16603 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16604 %* \texththeng -> \hookheng (wsuipa)
 16605 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16606 % \textbari (tipa), \bari (wsuipa)
 16607 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16608 %* \textbari -> \ibar (phonetic)
 16609 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16610 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16611 %* \textniiota -> \vari (phonetic)
 16612 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16613 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16614 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16615 % \textltilde (tipa)
 16616 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16617 %* \textltilde -> \tildel (wsuipa)
 16618 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16619 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16620 %* \textbeltl -> \latfric (wsuipa)
 16621 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16622 % \hookretroflex; \textrtaill (tipa)
 16623 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
 16624 %* \textrtaill -> \taill (wsuipa)
 16625 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
 16626 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
 16627 %* \textlyoghlig -> \lz (wsuipa)
 16628 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
 16629 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
 16630 %* \textturnm -> \invm (wsuipa)
 16631 %* \textturnm -> \rotm (phonetic)
 16632 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlonglegturned;
 16633 % \textturnmrleg (tipa)
 16634 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
 16635 %* \textturnmrleg -> \legm (wsuipa)
 16636 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
 16637 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
 16638 %* \textltailm -> \labdentals (wsuipa)
 16639 %* \textltailm -> \emgma (phonetic)
 16640 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
 16641 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272

16642 %* \textltailn -> \nj (wsuipa)
16643 %* \textltailn -> \nya (phonetic)
16644 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16645 % nhookretroflex; \textrtailn (tipa)
16646 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16647 %* \textrtailn -> \tailn (wsuipa)
16648 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16649 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16650 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16651 % LATIN CAPITAL LETTER BARRED O; obarred;
16652 % \textbaro (tipa), \baro (wsuipa)
16653 % But \baro from stmaryrd is different!
16654 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16655 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16656 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16657 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16658 % \textcloseomega (tipa)
16659 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16660 %* \textcloseomega -> \closedniomega (wsuipa)
16661 %* \textcloseomega -> \varomega (phonetic)
16662 % U+0278 LATIN SMALL LETTER PHI; philatin; \nippi (wsuipa)
16663 \DeclareTextCommand{\textnippi}{PU}{\82\170}%* U+0278
16664 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16665 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16666 %* \textturnr -> \invr (wsuipa)
16667 %* \textturnr -> \rotr (phonetic)
16668 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16669 % rlonglegturned; \textturnlonglegr (tipa)
16670 \DeclareTextCommand{\textturnlonglegr}{PU}{\82\172}% U+027A
16671 %* \textturnlonglegr -> \invlegr (wsuipa)
16672 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhoorturned;
16673 % \textturnrrtail (tipa)
16674 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16675 %* \textturnrrtail -> \tailinvr (wsuipa)
16676 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
16677 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
16678 %* \textlonglegr -> \legr (wsuipa)
16679 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoortail; \textrtailr (tipa)
16680 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16681 %* \textrtailr -> \tailr (wsuipa)
16682 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16683 % \textfishhookr (tipa)
16684 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16685 %* \textfishhookr -> \flapr (wsuipa)
16686 %* \textfishhookr -> \flap (phonetic)
16687 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16688 % \textlhtlongi (tipa)
16689 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16690 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16691 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16692 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16693 % \textinvscr (tipa), \invscr (wsuipa)

16694 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16695 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16696 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16697 %* \textrtails -> \tails (wsuipa)
16698 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16699 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16700 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16701 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16702 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16703 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
versed;
16704 % \textvibyi (tipa)
16705 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16706 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16707 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16708 %* \textctesh -> \curlyesh (wsuipa)
16709 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16710 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16711 %* \textturnt -> \clickt (wsuipa)
16712 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
16713 % \textrtailt (tipa)
16714 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16715 %* \textrtailt -> \tailt (wsuipa)
16716 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16717 % \textbaru (tipa), \baru (wsuipa)
16718 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16719 %* \textbaru -> \ubar (phonetic)
16720 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16721 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16722 %* \textniupsilon -> \rotOmega (phonetic)
16723 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
16724 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16725 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16726 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16727 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16728 %* \textturnv -> \invv (wsuipa)
16729 %* \textturnv -> \pwedge (phonetic)
16730 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16731 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16732 %* \textturnw -> \invw (wsuipa)
16733 %* \textturnw -> \rotw (phonetic)
16734 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16735 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16736 %* \textturny -> \invy (wsuipa)
16737 %* \textturny -> \roty (phonetic)
16738 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16739 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16740 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-
hook;
16741 % \textrtailz (tipa)
16742 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16743 %* \textrtailz -> \tailz (wsuipa)

16744 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16745 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16746 %* \textctz -> \curlyz (wsuipa)
16747 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16748 % \textyogh (tipa), \yogh (wsuipa)
16749 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16750 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16751 % ezhcurl; \textctyogh (tipa)
16752 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16753 %* \textctyogh -> \curlyyogh (wsuipa)
16754 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16755 % \textglotstop (tipa), \glotstop (wsuipa)
16756 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16757 %* \textglotstop -> \ejective (wsuipa)
16758 %* \textglotstop -> \glottal (phonetic)
16759 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16760 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16761 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16762 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16763 %* \textrevglotstop -> \reveject (wsuipa)
16764 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16765 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16766 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16767 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16768 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16769 %* \textstretchc -> \clickc (wsuipa)
16770 %* \textstretchc -> \textstretchcvar (tipx)
16771 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16772 % \textbullseye (tipa)
16773 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16774 %* \textbullseye -> \clickb (wsuipa)
16775 %* \textbullseye -> \textObullseye (tipx)
16776 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16777 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16778 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16779 % \textclosepsilon (tipa)
16780 \DeclareTextCommand{\textclosepsilon}{PU}{\82\232}% U+029A
16781 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16782 % \texthtscg (tipa)
16783 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16784 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16785 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16786 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail; \textcdj (tipa)
16787 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16788 %* \textctj -> \textctjvar (tipx)
16789 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16790 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16791 %* \textturnk -> \textturnsck (tipx)
16792 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16793 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16794 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16795 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0

16796 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-stroke;
 16797 % \textbarglotstop (tipa)
 16798 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 16799 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16800 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokereversed;
 16801 % \textbarrevglotstop (tipa)
 16802 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16803 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16804 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16805 %* \textdzlig -> \dz (wsupipa)
 16806 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 16807 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16808 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16809 % \textdctzlig (tipa)
 16810 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16811 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16812 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16813 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 16814 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 16815 %* \textteshlig -> \tesh (wsuipa)
 16816 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16817 % \texttctclig (tipa)
 16818 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16819 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16820 % \textlhtlongy (tipa)
 16821 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16822 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16823 % \textvibyy (tipa)
 16824 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

16825 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16826 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16827 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16828 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16829 % \textraiseglotstop (tipa)
 16830 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16831 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16832 % \textlptr (tipa)
 16833 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16834 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16835 % \textrptr (tipa)
 16836 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16837 % U+02C7 CARON; caron
 16838 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16839 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16840 % \textprimstress (tipa)
 16841 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16842 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16843 % \textsecstress (tipa)
 16844 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC

16845 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 16846 % \textlengthmark (tipa)
 16847 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16848 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 16849 % \texthalflength (tipa)
 16850 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 16851 % U+02D8 BREVE; breve
 16852 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16853 % U+02D9 DOT ABOVE; dotaccent
 16854 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16855 % U+02DA RING ABOVE; ring
 16856 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16857 % U+02DB OGONEK; ogonek
 16858 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 16859 % U+02DC SMALL TILDE; ilde, *tilde
 16860 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 16861 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 16862 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 16863 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 16864 % U+02F3 MODIFIER LETTER LOW RING
 16865 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 16866 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 16867 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 16868 % U+02F7 MODIFIER LETTER LOW TILDE
 16869 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 16870 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 16871 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 16872 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 16873 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

16874 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 16875 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 16876 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 16877 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 16878 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 16879 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 16880 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16881 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 16882 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 16883 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

Greek is only loaded if \textBeta is defined.

16884 \ifx\textBeta\@undefined \else
 16885 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16886 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16887 \DeclareTextCommand{\textdexiakeraia}{PU}{\83\164}% U+0374
 16888 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16889 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16890 \DeclareTextCommand{\textaristerikeraia}{PU}{\83\165}% U+0375
 16891 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphonos

16892 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
16893 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
16894 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
16895 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
16896 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
16897 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
16898 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
16899 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
16900 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
16901 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
16902 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
16903 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
16904 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
16905 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
16906 % iotadieresis
16907 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
16908 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
16909 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
16910 % U+0392 GREEK CAPITAL LETTER BETA; Beta
16911 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
16912 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
16913 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
16914 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
16915 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
16916 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
16917 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
16918 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
16919 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
16920 % U+0397 GREEK CAPITAL LETTER ETA; Eta
16921 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
16922 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
16923 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
16924 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
16925 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
16926 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
16927 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
16928 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
16929 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
16930 % U+039C GREEK CAPITAL LETTER MU; Mu
16931 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
16932 % U+039D GREEK CAPITAL LETTER NU; Nu
16933 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
16934 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16935 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16936 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16937 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16938 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16939 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16940 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16941 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16942 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16943 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3

16944 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16945 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16946 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16947 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16948 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16949 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16950 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16951 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16952 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16953 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16954 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16955 % \Omega (LaTeX)
16956 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16957 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16958 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16959 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16960 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
16961 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16962 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
16963 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16964 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
16965 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16966 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
16967 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16968 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
16969 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16970 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16971 % AND TONOS; upsilondieresis
16972 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
16973 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16974 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16975 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16976 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
16977 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
16978 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
16979 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
16980 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
16981 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
16982 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
16983 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
16984 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
16985 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
16986 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
16987 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
16988 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
16989 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
16990 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
16991 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
16992 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
16993 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
16994 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
16995 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
16996 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC

16997 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
16998 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
16999 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17000 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17001 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17002 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17003 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17004 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17005 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17006 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17007 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17008 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17009 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17010 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17011 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17012 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17013 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17014 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17015 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17016 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17017 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17018 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17019 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17020 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17021 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17022 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17023 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17024 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17025 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silonadieresis
17026 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17027 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17028 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17029 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17030 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17031 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17032 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17033 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17034 % U+03D8 GREEK LETTER ARCHAIC KOPPA;
17035 \DeclareTextCommand{\textQoppa}{PU}{\83\330}% U+03D8
17036 % U+03D9 GREEK SMALL LETTER ARCHAIC KOPPA;
17037 \DeclareTextCommand{\textqoppa}{PU}{\83\331}% U+03D9
17038 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17039 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
17040 \DeclareTextCommand{\textStigma}{PU}{\83\332}% U+03DA
17041 % U+03DB GREEK SMALL LETTER STIGMA
17042 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17043 \DeclareTextCommand{\textstigma}{PU}{\83\333}% U+03DB
17044 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17045 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17046 \DeclareTextCommand{\textDigamma}{PU}{\83\334}% U+03DC
17047 % U+03DD GREEK SMALL LETTER DIGAMMA
17048 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17049 \DeclareTextCommand{\textdigamma}{PU}{\83\335}% U+03DD

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17050 %* \textdigammagreek -> \digamma (AmS)
17051 % U+03DE GREEK LETTER KOPPA; Koppagreek
17052 \DeclareTextCommand{\textKoppa}{PU}{\83\336}% U+03DE
17053 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17054 % U+03DF GREEK SMALL LETTER KOPPA
17055 \DeclareTextCommand{\textkoppa}{PU}{\83\337}% U+03DF
17056 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17057 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17058 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17059 \DeclareTextCommand{\textSampi}{PU}{\83\340}% U+03E0
17060 % U+03E1 GREEK SMALL LETTER SAMPI
17061 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17062 \DeclareTextCommand{\textsampi}{PU}{\83\341}% U+03E1
17063 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17064 % \backepsilon (AmS)
17065 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6
17066 \fi

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51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names. Cyrillic only loaded if \CYRDZE is defined.

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17067 \ifx\CYRDZE\@undefined \else
17068 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17069 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17070 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
17071 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17072 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17073 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17074 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17075 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17076 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17077 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
17078 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17079 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17080 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17081 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17082 % Icyrillic, *afii10055
17083 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17084 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17085 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17086 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17087 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17088 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17089 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17090 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17091 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17092 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17093 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17094 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17095 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17096 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17097 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17098 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D

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17099 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17100 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17101 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17102 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17103 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17104 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17105 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17106 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17107 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17108 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17109 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17110 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17111 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17112 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17113 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17114 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17115 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17116 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17117 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17118 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17119 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17120 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17121 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17122 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17123 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17124 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17125 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17126 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17127 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17128 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17129 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17130 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17131 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17132 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17133 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17134 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17135 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17136 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17137 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17138 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17139 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17140 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17141 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17142 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17143 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17144 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17145 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17146 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17147 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17148 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17149 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17150 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17151 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17152 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427

17153 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17154 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17155 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17156 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17157 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17158 % Hardsigncyrillic, *afii10044
17159 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17160 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17161 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17162 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17163 % Softsigncyrillic, *afii10046
17164 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17165 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17166 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17167 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17168 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17169 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17170 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17171 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17172 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17173 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17174 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17175 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17176 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17177 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17178 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17179 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17180 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17181 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17182 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17183 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17184 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17185 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17186 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17187 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17188 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17189 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17190 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17191 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17192 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17193 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17194 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17195 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
17196 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17197 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17198 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17199 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17200 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17201 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17202 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17203 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17204 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17205 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17206 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic

17207 \DeclareTextCommand{\cyrst}{PU}{\84\101}% U+0441
17208 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17209 \DeclareTextCommand{\cyrst}{PU}{\84\102}% U+0442
17210 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17211 \DeclareTextCommand{\cyrst}{PU}{\84\103}% U+0443
17212 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17213 \DeclareTextCommand{\cyrst}{PU}{\84\104}% U+0444
17214 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17215 \DeclareTextCommand{\cyrst}{PU}{\84\105}% U+0445
17216 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17217 \DeclareTextCommand{\cyrst}{PU}{\84\106}% U+0446
17218 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17219 \DeclareTextCommand{\cyrst}{PU}{\84\107}% U+0447
17220 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17221 \DeclareTextCommand{\cyrst}{PU}{\84\110}% U+0448
17222 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17223 \DeclareTextCommand{\cyrst}{PU}{\84\111}% U+0449
17224 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17225 \DeclareTextCommand{\cyrst}{PU}{\84\112}% U+044A
17226 %* \cyrst -> \hardsign (tipa)
17227 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17228 \DeclareTextCommand{\cyrst}{PU}{\84\113}% U+044B
17229 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17230 \DeclareTextCommand{\cyrst}{PU}{\84\114}% U+044C
17231 %* \cyrst -> \softsign (tipa)
17232 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17233 \DeclareTextCommand{\cyrst}{PU}{\84\115}% U+044D
17234 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17235 \DeclareTextCommand{\cyrst}{PU}{\84\116}% U+044E
17236 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17237 \DeclareTextCommand{\cyrst}{PU}{\84\117}% U+044F
17238 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17239 \DeclareTextCompositeCommand{\cyrst}{PU}{\cyrst}{\84\120}% U+0450
17240 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17241 \DeclareTextCommand{\cyrst}{PU}{\84\121}% U+0451
17242 \DeclareTextCompositeCommand{\cyrst}{PU}{\cyrst}{\84\121}% U+0451
17243 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17244 \DeclareTextCommand{\cyrst}{PU}{\84\122}% U+0452
17245 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17246 \DeclareTextCompositeCommand{\cyrst}{PU}{\cyrst}{\84\123}% U+0453
17247 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17248 \DeclareTextCommand{\cyrst}{PU}{\84\124}% U+0454
17249 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17250 \DeclareTextCommand{\cyrst}{PU}{\84\125}% U+0455
17251 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
17252 %
17253 \DeclareTextCommand{\cyrst}{PU}{\84\126}% U+0456
17254 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17255 \DeclareTextCommand{\cyrst}{PU}{\84\127}% U+0457
17256 \DeclareTextCompositeCommand{\cyrst}{PU}{\cyrst}{\84\127}% U+0457
17257 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17258 \DeclareTextCommand{\cyrst}{PU}{\84\130}% U+0458
17259 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic

17260 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
17261 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17262 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17263 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17264 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17265 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17266 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17267 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17268 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17269 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17270 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17271 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17272 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17273 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17274 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17275 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17276 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17277 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17278 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17279 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17280 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17281 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17282 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17283 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17284 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17285 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17286 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17287 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17288 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17289 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17290 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17291 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17292 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17293 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17294 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17295 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17296 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17297 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17298 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17299 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17300 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17301 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17302 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17303 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17304 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17305 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17306 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17307 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17308 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17309 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471

17310 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17311 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17312 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
17313 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17314 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
17315 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17316 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
17317 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17318 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
17319 % GRAVE ACCENT; Izhitsadblgravecyrillic
17320 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17321 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
17322 % GRAVE ACCENT; izhitsadblgravecyrillic
17323 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17324 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17325 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17326 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17327 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17328 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
17329 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17330 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17331 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17332 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
locyrillic
17333 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
17334 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
cyrillic
17335 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
17336 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
17337 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
17338 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
17339 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
17340 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
17341 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
17342 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
17343 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
17344 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
17345 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-
cyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneu-
matacyrilliccmb
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-
acyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
17346 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
17347 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
17348 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
17349 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B

17350 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17351 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17352 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17353 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17354 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17355 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17356 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17357 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17358 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17359 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17360 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17361 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17362 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17363 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17364 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17365 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17366 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17367 % Ghemiddlehookcyrillic
 17368 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17369 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17370 % ghemiddlehookcyrillic
 17371 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17372 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17373 % Zhedescendercyrillic
 17374 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17375 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17376 % zhedescendercyrillic
 17377 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17378 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17379 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17380 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17381 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17382 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17383 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17384 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17385 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17386 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 17387 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17388 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17389 % Kavertikalstrokecyrillic
 17390 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17391 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17392 % kavertikalstrokecyrillic
 17393 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17394 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17395 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17396 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic

17397 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
17398 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
17399 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
17400 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
17401 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
17402 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
17403 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
17404 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescen-
dercyrillic
17405 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
17406 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
17407 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
17408 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
17409 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
17410 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
17411 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
17412 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
17413 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
17414 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
17415 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
17416 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
17417 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
17418 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
17419 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
17420 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
17421 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescen-
dercyrillic
17422 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
17423 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
17424 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
17425 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
17426 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
dercyrillic
17427 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
17428 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17429 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17430 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17431 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17432 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
17433 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17434 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
17435 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17436 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
dercyrillic
17437 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17438 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-

dercyrillic
 17439 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17440 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17441 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17442 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17443 \DeclareTextCommand{\cyr tetse}{PU}{\84\265}% U+04B5
 17444 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17445 % Chedescendercyrillic
 17446 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17447 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 17448 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 17449 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17450 % Cheverticalstrokecyrillic
 17451 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17452 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17453 % cheverticalstrokecyrillic
 17454 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17455 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17456 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17457 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17458 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17459 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 17460 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17461 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 17462 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17463 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 17464 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17465 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 17466 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 17467 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17468 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17469 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17470 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17471 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17472 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17473 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17474 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 17475 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17476 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17477 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17478 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17479 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17480 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17481 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17482 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17483 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17484 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17485 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17486 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8

17487 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17488 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17489 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17490 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17491 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17492 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17493 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17494 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17495 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17496 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17497 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17498 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17499 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
 lic
 17500 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17501 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17502 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17503 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17504 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17505 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17506 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17507 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17508 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17509 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17510 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17511 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17512 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17513 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17514 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17515 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17516 % Schwadiescyrillic
 17517 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17518 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17519 % schwadiescyrillic
 17520 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 17521 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedie-
 riscyrillic
 17522 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17523 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 17524 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17525 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 17526 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 17527 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieriscyri-
 lic
 17528 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 17529 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 17530 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17531 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyril-

lic

17532 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1

17533 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

17534 \DeclareTextCompositeCommand{\=} {PU}{\CYRI}{\84\342}% U+04E2

17535 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

17536 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3

17537 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic

17538 \DeclareTextCompositeCommand{\"} {PU}{\CYRI}{\84\344}% U+04E4

17539 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic

17540 \DeclareTextCompositeCommand{\"} {PU}{\cyri}{\84\345}% U+04E5

17541 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic

lic

17542 \DeclareTextCompositeCommand{\"} {PU}{\CYRO}{\84\346}% U+04E6

17543 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17544 \DeclareTextCompositeCommand{\"} {PU}{\cyro}{\84\347}% U+04E7

17545 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

17546 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

17547 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

17548 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9

17549 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;

17550 % Obarreddieresiscyrillic

17551 \DeclareTextCompositeCommand{\"} {PU}{\CYROTLD}{\84\352}% U+04EA

17552 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;

17553 % obarreddieresiscyrillic

17554 \DeclareTextCompositeCommand{\"} {PU}{\cyrotld}{\84\353}% U+04EB

17555 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS

17556 \DeclareTextCompositeCommand{\"} {PU}{\CYREREV}{\84\354}% U+04EC

17557 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

17558 \DeclareTextCompositeCommand{\"} {PU}{\cyreref}{\84\355}% U+04ED

17559 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic

17560 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE

17561 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

17562 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF

17563 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic

lic

17564 \DeclareTextCompositeCommand{\"} {PU}{\CYRU}{\84\360}% U+04F0

17565 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

17566 \DeclareTextCompositeCommand{\"} {PU}{\cyru}{\84\361}% U+04F1

17567 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

17568 \DeclareTextCompositeCommand{\H} {PU}{\CYRU}{\84\362}% U+04F2

17569 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic

17570 \DeclareTextCompositeCommand{\H} {PU}{\cyru}{\84\363}% U+04F3

17571 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

17572 \DeclareTextCompositeCommand{\"} {PU}{\CYRCH}{\84\364}% U+04F4

17573 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic

17574 \DeclareTextCompositeCommand{\"} {PU}{\cyrch}{\84\365}% U+04F5

17575 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER

17576 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6

17577 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER

17578 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

17579 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 17580 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 17581 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 17582 \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
 17583 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 17584 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 17585 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 17586 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 17587 \fi
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`. hebrew is only loaded if `\hebdalet` is defined

17588 \ifx\hebdalet\@undefined\else
 17589 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
 17590 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
 17591 % U+05D0 HEBREW LETTER ALEF
 17592 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
 17593 % U+05D1 HEBREW LETTER BET
 17594 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
 17595 % U+05D2 HEBREW LETTER GIMEL
 17596 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
 17597 % U+05D3 HEBREW LETTER DALET
 17598 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
 17599 % U+05D4 HEBREW LETTER HE
 17600 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
 17601 % U+05D5 HEBREW LETTER VAV
 17602 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
 17603 % U+05D6 HEBREW LETTER ZAYIN
 17604 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
 17605 % U+05D7 HEBREW LETTER HET
 17606 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
 17607 % U+05D8 HEBREW LETTER TET
 17608 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
 17609 % U+05D9 HEBREW LETTER YOD
 17610 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
 17611 % U+05DA HEBREW LETTER FINAL KAF
 17612 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17613 % U+05DB HEBREW LETTER KAF
 17614 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
 17615 % U+05DC HEBREW LETTER LAMED
 17616 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17617 % U+05DD HEBREW LETTER FINAL MEM

17618 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17619 % U+05DE HEBREW LETTER MEM
 17620 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17621 % U+05DF HEBREW LETTER FINAL NUN
 17622 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17623 % U+05E0 HEBREW LETTER NUN
 17624 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17625 % U+05E1 HEBREW LETTER SAMEKH
 17626 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17627 % U+05E2 HEBREW LETTER AYIN
 17628 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17629 % U+05E3 HEBREW LETTER FINAL PE
 17630 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17631 % U+05E4 HEBREW LETTER PE
 17632 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17633 % U+05E5 HEBREW LETTER FINAL TSADI
 17634 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17635 % U+05E6 HEBREW LETTER TSADI
 17636 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17637 % U+05E7 HEBREW LETTER QOF
 17638 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17639 % U+05E8 HEBREW LETTER RESH
 17640 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17641 % U+05E9 HEBREW LETTER SHIN
 17642 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17643 %* \hebshin -> \hebsin (he8)
 17644 % U+05EA HEBREW LETTER TAV
 17645 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17646 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17647 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17648 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17649 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17650 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17651 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 17652 \fi

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

17653 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17654 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

17655 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 17656 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 17657 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17658 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17659 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 17660 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 17661 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 17662 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 17663 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17664 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17665 %* \textPUscK -> \textscK (tipx)
 17666 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)

17667 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17668 %* \textPUscm -> \textscm (tipx)
 17669 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 17670 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 17671 %* \textPUscp -> \textscp (tipx)
 17672 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17673 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17674 %* \textPUrevscr -> \textrevscr (tipx)
 17675 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 17676 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 17677 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17678 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17679 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17680 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17681 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17682 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17683 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17684 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17685 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17686 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 17687 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17688 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 17689 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17690 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 17691 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17692 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17693 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17694 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17695 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17696 % \barsci (wsuipa)
 17697 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17698 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17699 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17700 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17701 % \barscu (wsuipa)
 17702 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

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

17703 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17704 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
 17705 %* \textPUrhooka -> \textrhooka (tipx)
 17706 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 17707 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17708 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 17709 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
 17710 %* \textPUrhooke -> \textrhooke (tipx)
 17711 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17712 % \textrhookepsilon (tipx)
 17713 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93
 17714 %* \textPUrhookepsilon -> \textrhookepsilon (tipx)
 17715 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;

17716 % \textrhookopeno (tipx)
 17717 \DeclareTextCommand{\textPUrhookopeno}{PU}{\9035\227}% U+1D97
 17718 %* \textPUrhookopeno -> \textrhookopeno (tipx)

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

17719 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17720 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17721 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17722 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17723 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17724 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 17725 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17726 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 17727 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17728 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17729 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17730 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17731 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 17732 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 17733 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 17734 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 17735 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 17736 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 17737 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 17738 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 17739 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 17740 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 17741 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 17742 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 17743 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 17744 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 17745 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 17746 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 17747 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 17748 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 17749 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 17750 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 17751 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
 cumflexbelow
 17752 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
 17753 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
 cumflexbelow
 17754 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
 17755 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
 17756 % Emacrongrave
 17757 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
 17758 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
 17759 % emacrongrave
 17760 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
 17761 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
 17762 % Emacronacute
 17763 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
 17764 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
 17765 % emacronacute

17766 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17767 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17768 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17769 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17770 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17771 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17772 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17773 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17774 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17775 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17776 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17777 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17778 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17779 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17780 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
17781 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17782 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
17783 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17784 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17785 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17786 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17787 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17788 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17789 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17790 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17791 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17792 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
17793 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17794 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
17795 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17796 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17797 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17798 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17799 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17800 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17801 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17802 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17803 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17804 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17805 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17806 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17807 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17808 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17809 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17810 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17811 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17812 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17813 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17814 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17815 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17816 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17817 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow

17818 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17819 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17820 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17821 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17822 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17823 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17824 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17825 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17826 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17827 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17828 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17829 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17830 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17831 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17832 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17833 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17834 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17835 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17836 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17837 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17838 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17839 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17840 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17841 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17842 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17843 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17844 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17845 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17846 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17847 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17848 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17849 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17850 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17851 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17852 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17853 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17854 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17855 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17856 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17857 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17858 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17859 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17860 % Omacrongrave
17861 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17862 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17863 % omacrongrave
17864 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17865 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17866 % Omacronacute
17867 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52

17868 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 17869 % o macronacute
 17870 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 17871 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 17872 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 17873 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 17874 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 17875 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 17876 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 17877 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 17878 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 17879 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 17880 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 17881 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 17882 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 17883 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 17884 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 17885 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 17886 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 17887 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 17888 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 17889 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 17890 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 17891 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 17892 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 17893 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 17894 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 17895 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 17896 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 17897 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 17898 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 17899 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 17900 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 17901 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 17902 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 17903 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 17904 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 17905 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 17906 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 17907 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 17908 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 17909 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 17910 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 17911 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 17912 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 17913 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 17914 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 17915 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 17916 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 17917 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow

17918 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17919 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17920 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17921 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17922 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17923 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17924 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17925 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
17926 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17927 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17928 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17929 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17930 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17931 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17932 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17933 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17934 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17935 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17936 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17937 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17938 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17939 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17940 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17941 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17942 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17943 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17944 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17945 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17946 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17947 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17948 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17949 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17950 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17951 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17952 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17953 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17954 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17955 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17956 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17957 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17958 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17959 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17960 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17961 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17962 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17963 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17964 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17965 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17966 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17967 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17968 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17969 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex

17970 \DeclareTextCompositeCommand{\~}{PU}{z}{\9036\221}% U+1E91
17971 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17972 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17973 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17974 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17975 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17976 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17977 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17978 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17979 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17980 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17981 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17982 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
17983 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17984 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17985 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17986 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17987 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
17988 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17989 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17990 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17991 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17992 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17993 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17994 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17995 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17996 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17997 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17998 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17999 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
18000 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
18001 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
18002 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
18003 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
18004 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18005 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
18006 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
18007 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
18008 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
18009 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
18010 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
18011 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
18012 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
18013 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
18014 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
18015 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
18016 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
18017 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
18018 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
18019 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
18020 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
18021 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
18022 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8

18023 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
18024 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

18025 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
18026 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
18027 % U+2013 EN DASH; endash
18028 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
18029 % U+2014 EM DASH; emdash
18030 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
18031 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
18032 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
18033 %* \textbardbl -> \textdoublevertline (tipa)
18034 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
18035 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
18036 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
18037 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
18038 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
18039 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
18040 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
18041 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
18042 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
18043 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
18044 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
18045 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
18046 % U+2020 DAGGER; dagger
18047 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
18048 %* \textdagger -> \dag (LaTeX)
18049 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
18050 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
18051 %* \textdaggerdbl -> \ddagger (LaTeX)
18052 %* \textdaggerdbl -> \ddag (LaTeX)
18053 % U+2022 BULLET; bullet
18054 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
18055 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
18056 \DeclareTextCommand{\texthdofor}{PU}{\9040\045}%* U+2025
18057 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
18058 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
18059 %* \textellipsis -> \mathellipsis
18060 % U+2030 PER MILLE SIGN; perthousand
18061 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
18062 % U+2031 PER TEN THOUSAND SIGN
18063 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
18064 % U+2032 PRIME; minute; \prime (MnSymbol)
18065 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
18066 % U+2033 DOUBLE PRIME; \second (mathabx)
18067 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
18068 % U+2034 TRIPLE PRIME; \third (mathabx)
18069 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
18070 % U+2035 REVERSED PRIME; \backprime (AmS)
18071 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
18072 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
18073 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039

18074 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
18075 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
18076 % U+203B REFERENCE MARK; referencemark
18077 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
18078 % U+203D INTERROBANG
18079 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
18080 % U+2044 FRACTION SLASH; fraction
18081 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
18082 % U+2045 LEFT SQUARE BRACKET WITH QUILL
18083 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
18084 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
18085 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
18086 % U+2052 COMMERCIAL MINUS SIGN
18087 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
18088 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
18089 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}% U+2056
18090 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
18091 \DeclareTextCommand{\textfourth}{PU}{\9040\127}% U+2057
18092 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
18093 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}% U+2058

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

18094 % U+2070 SUPERSCRIPT ZERO; zerosuperior
18095 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
18096 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
18097 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}% U+2071
18098 % U+2074 SUPERSCRIPT FOUR; foursuperior
18099 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
18100 % U+2075 SUPERSCRIPT FIVE; fivesuperior
18101 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
18102 % U+2076 SUPERSCRIPT SIX; sixsuperior
18103 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
18104 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
18105 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
18106 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
18107 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
18108 % U+2079 SUPERSCRIPT NINE; ninesuperior
18109 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
18110 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
18111 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
18112 % U+207B SUPERSCRIPT MINUS
18113 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}% U+207B
18114 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
18115 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}% U+207C
18116 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
18117 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}% U+207D
18118 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
18119 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}% U+207E
18120 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
18121 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}% U+207F
18122 % U+2080 SUBSCRIPT ZERO; zeroinferior
18123 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
18124 % U+2081 SUBSCRIPT ONE; oneinferior

18125 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
18126 % U+2082 SUBSCRIPT TWO; twoinferior
18127 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
18128 % U+2083 SUBSCRIPT THREE; threeinferior
18129 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
18130 % U+2084 SUBSCRIPT FOUR; fourinferior
18131 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
18132 % U+2085 SUBSCRIPT FIVE; fiveinferior
18133 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
18134 % U+2086 SUBSCRIPT SIX; sixinferior
18135 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
18136 % U+2087 SUBSCRIPT SEVEN; seveninferior
18137 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
18138 % U+2088 SUBSCRIPT EIGHT; eightinferior
18139 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
18140 % U+2089 SUBSCRIPT NINE; nineinferior
18141 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
18142 % U+208A SUBSCRIPT PLUS SIGN
18143 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
18144 % U+208B SUBSCRIPT MINUS
18145 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
18146 % U+208C SUBSCRIPT EQUALS SIGN
18147 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
18148 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
18149 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
18150 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
18151 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
18152 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
18153 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
18154 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
18155 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
18156 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
18157 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
18158 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
18159 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
18160 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
18161 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
18162 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
18163 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
18164 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
18165 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
18166 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
18167 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
18168 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
18169 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
18170 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
18171 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
18172 % U+209A LATIN SUBSCRIPT SMALL LETTER P
18173 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
18174 % U+209B LATIN SUBSCRIPT SMALL LETTER S
18175 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
18176 % U+209C LATIN SUBSCRIPT SMALL LETTER T
18177 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

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

```

18178 % U+20A1 COLON SIGN; *colonmonetary, colonsign
18179 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
18180 % U+20A4 LIRA SIGN; afi08941, *lira
18181 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
18182 % U+20A6 NAIRA SIGN
18183 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
18184 % U+20A7 PESETA SIGN; peseta
18185 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
18186 % U+20A9 WON SIGN; won
18187 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
18188 % U+20AB DONG SIGN; dong
18189 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
18190 % U+20AC EURO SIGN; *Euro, euro
18191 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
18192 %* \texteuro -> \EurDig (marvosym)
18193 %* \texteuro -> \EURdig (marvosym)
18194 %* \texteuro -> \EurHv (marvosym)
18195 %* \texteuro -> \EURhv (marvosym)
18196 %* \texteuro -> \EurCr (marvosym)
18197 %* \texteuro -> \EURcr (marvosym)
18198 %* \texteuro -> \EurTm (marvosym)
18199 %* \texteuro -> \EURtm (marvosym)
18200 %* \texteuro -> \Eur (marvosym)
18201 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
18202 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
18203 %* \textDeleatur -> \Denarius (marvosym)
18204 % U+20B1 PESO SIGN
18205 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
18206 % U+20B2 GUARANI SIGN
18207 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

```

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

```

18208 % U+2103 DEGREE CELSIUS; centigrade
18209 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
18210 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
18211 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
18212 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
18213 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
18214 % U+2113 SCRIPT SMALL L (=ell, liter); afi61289, lsquare; \ell (LaTeX)
18215 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
18216 % U+2116 NUMERO SIGN; *afi61352, numero
18217 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
18218 % U+2117 SOUND RECORDING COPYRIGHT
18219 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
18220 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
18221 % weierstrass; \wp (LaTeX)
18222 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
18223 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
18224 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
18225 % U+211E PRESCRIPTION TAKE; prescription
18226 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E

```

18227 % U+2120 SERVICE MARK
 18228 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18229 % U+2122 TRADE MARK SIGN; trademark
 18230 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18231 % U+2126 OHM SIGN; Ohm, Omega
 18232 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18233 % U+2127 INVERTED OHM SIGN
 18234 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18235 %* \textmho -> \agemO (wasysym)
 18236 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18237 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18238 % U+212B ANGSTROM SIGN; angstrom
 18239 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18240 % U+212E ESTIMATED SYMBOL; estimated
 18241 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18242 %* \textestimated -> \EstimatedSign (marvosym)
 18243 %* \textestimated -> \Ecommerce (marvosym)
 18244 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18245 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18246 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18247 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18248 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18249 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18250 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18251 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18252 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18253 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18254 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18255 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18256 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18257 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18258 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18259 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18260 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18261 %* \textinvamp -> \parr (cml)

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

18262 % U+2150 VULGAR FRACTION ONE SEVENTH
 18263 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18264 % U+2151 VULGAR FRACTION ONE NINTH
 18265 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18266 % U+2152 VULGAR FRACTION ONE TENTH
 18267 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18268 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18269 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18270 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18271 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18272 % U+2155 VULGAR FRACTION ONE FIFTH
 18273 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18274 % U+2156 VULGAR FRACTION TWO FIFTHS
 18275 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18276 % U+2157 VULGAR FRACTION THREE FIFTHS
 18277 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18278 % U+2158 VULGAR FRACTION FOUR FIFTHS

18279 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18280 % U+2159 VULGAR FRACTION ONE SIXTH
 18281 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18282 % U+215A VULGAR FRACTION FIVE SIXTHS
 18283 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18284 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18285 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18286 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18287 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18288 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18289 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18290 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18291 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18292 % U+2184 LATIN SMALL LETTER REVERSED C
 18293 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18294 % U+2189 VULGAR FRACTION ZERO THIRDS
 18295 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18296 % U+2190 LEFTWARDS ARROW; arrowleft
 18297 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18298 % U+2191 UPWARDS ARROW; arrowup
 18299 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18300 % U+2192 RIGHTWARDS ARROW; arrowright
 18301 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18302 %* \textrightarrow -> \MVRightArrow (marvosym)
 18303 %* \textrightarrow -> \MVRightarrow (marvosym)
 18304 % U+2193 DOWNWARDS ARROW; arrowdown
 18305 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18306 %* \textdownarrow -> \MVAArrowDown (marvosym)
 18307 %* \textdownarrow -> \Force (marvosym)
 18308 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
 18309 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18310 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18311 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18312 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18313 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18314 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18315 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18316 %* \textnearrow -> \textglobrise (tipa)
 18317 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18318 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18319 %* \textsearrow -> \textglobfall (tipa)
 18320 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18321 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 18322 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
 18323 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 18324 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
 18325 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 18326 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 18327 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 18328 % \ntwoheadleftarrow (txfonts/pxfonts)
 18329 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
 18330 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)

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18331 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18332 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18333 % \twoheadrightarrow (AmS)
18334 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18335 % \ntwoheadrightarrow (txfonts/pxfonts)
18336 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18337 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18338 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18339 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18340 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18341 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18342 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18343 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18344 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18345 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18346 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18347 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18348 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18349 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18350 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18351 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18352 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18353 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18354 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
18355 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18356 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18357 %* \textlightning -> \Lightning (marvosym)
18358 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18359 % \dls (mathabx)
18360 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18361 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18362 % \curvearrowleft (AmS)
18363 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18364 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18365 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18366 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18367 % \leftharpoonup (LaTeX)
18368 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18369 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18370 % \leftharpoondown (LaTeX)
18371 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18372 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18373 % \upharpoonright (AmS)
18374 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18375 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18376 % \upharpoonleft (AmS)
18377 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18378 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18379 % \rightharpoonup (LaTeX)
18380 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18381 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;

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18382 % \rightharpoondown (LaTeX)
18383 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18384 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18385 % \downharpoonright (AmS)
18386 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18387 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18388 % \downharpoonleft (AmS)
18389 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18390 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18391 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18392 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18393 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
18394 % \updownarrows (MnSymbol)
18395 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18396 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
18397 % \leftrightarrows (AmS)
18398 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18399 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18400 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18401 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18402 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18403 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18404 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18405 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18406 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18407 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18408 % \leftrightharpoons (AmS);
18409 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18410 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18411 % \rightleftharpoons (LaTeX, AmS)
18412 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18413 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleft-
dblstroke;
18414 % \nLeftarrow (AmS)
18415 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18416 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow
(AmS)
18417 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18418 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
18419 % \nRightarrow (AmS)
18420 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18421 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18422 % \Leftarrow (LaTeX)
18423 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18424 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18425 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18426 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18427 % \Rightarrow (LaTeX)
18428 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18429 %* \textRightarrow -> \Conclusion (marvosym)
18430 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbl down; \Downarrow (La-

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TeX)

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18431 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18432 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18433 % \Leftrightarrow (LaTeX)
18434 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18435 %* textLeftrightarrow -> \Equivalence (marvosym)
18436 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18437 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18438 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18439 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18440 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18441 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18442 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18443 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18444 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18445 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18446 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18447 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18448 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18449 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18450 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18451 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18452 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18453 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18454 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18455 % \dashleftarrow (AmS)
18456 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18457 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18458 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18459 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18460 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
row (AmS)
18461 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18462 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18463 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
18464 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18465 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18466 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18467 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18468 % \downuparrows (MnSymbol)
18469 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18470 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18471 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18472 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18473 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18474 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtrian-
gle (stmaryrd)
18475 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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

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18476 % U+2200 FOR ALL; forall; \forall (LaTeX)
18477 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200

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18478 % U+2201 COMPLEMENT; \complement (AmS)
18479 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18480 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18481 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18482 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18483 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18484 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18485 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18486 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18487 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18488 %* \textemptyset -> \varnothing (AmS)
18489 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18490 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18491 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18492 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18493 % U+2208 ELEMENT OF; element; \in (LaTeX)
18494 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18495 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18496 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18497 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18498 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18499 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18500 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18501 %* \textni -> \owns (mathabx)
18502 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18503 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18504 %* \textnotowner -> \notni (txfonts/pxfonts)
18505 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18506 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18507 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18508 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18509 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18510 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18511 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18512 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18513 % U+2212 MINUS SIGN; minus
18514 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18515 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18516 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18517 % U+2214 DOT PLUS; \dotplus (AmS)
18518 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18519 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18520 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18521 % \DividesNot (marvosym)
18522 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18523 % U+2216 SET MINUS; \setminus (LaTeX)
18524 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18525 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18526 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18527 % U+2218 RING OPERATOR; \circ (LaTeX)
18528 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18529 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18530 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18531 % U+221A SQUARE ROOT; radical

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18532 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18533 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18534 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18535 %* \textpropto -> \varprop (wasysym)
18536 % U+221E INFINITY; infinity; \infty (LaTeX)
18537 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18538 % U+2220 ANGLE; angle; \angle (LaTeX)
18539 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18540 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18541 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18542 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18543 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18544 %* \textsphericalangle -> \varangle (wasysym)
18545 %* \textsphericalangle -> \Anglesign (marvosym)
18546 %* \textsphericalangle -> \AngleSign (marvosym)
18547 % U+2223 DIVIDES; divides; \mid (LaTeX)
18548 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18549 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18550 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18551 %* \textnmid -> \notdivides (mathabx)
18552 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18553 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18554 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18555 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18556 %* \textnparallel -> nUpdownline (MnSymbol)
18557 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18558 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18559 % \owedge (stmaryrd)
18560 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18561 %* \textowedge -> \varowedge (stmaryrd)
18562 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18563 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18564 % \ovee (stmaryrd)
18565 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18566 %* \textovee -> \varovee (stmaryrd)
18567 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18568 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18569 % U+222A UNION; union; \cup (LaTeX)
18570 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18571 % U+222B INTEGRAL; integral; \int (LaTeX)
18572 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18573 %* \textint -> \varint (wasysym)
18574 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18575 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18576 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18577 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18578 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18579 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18580 %* \textoint -> \varoint (wasysym)
18581 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18582 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18583 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18584 % \ointclockwise (txfonts/pxfonts)
18585 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232

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18586 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
 fonts/pxfonts)
 18587 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
 18588 % U+2234 THEREFORE; therefore; \therefore (AmS)
 18589 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
 18590 %* \texttherefore -> uptherefore (MnSymbol)
 18591 % U+2235 BECAUSE; because; \because (AmS)
 18592 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
 18593 %* \textbecause -> \downtherefore (MnSymbol)
 18594 % U+2236 RATIO; \dotdot (MnSymbol)
 18595 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
 18596 % U+2237 PROPORTION; \squaredots (MnSymbol)
 18597 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
 18598 % U+2238 DOT MINUS; \dotminus (MnSymbol)
 18599 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
 18600 %* \textdotminus -> \textdotdiv (mathabx)
 18601 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
 18602 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
 18603 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
 18604 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
 18605 %* \textsim -> \AC (wasysym)
 18606 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
 18607 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
 18608 % \nbacksim (txfonts/pxfonts)
 18609 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
 18610 % U+2240 WREATH PRODUCT; \wr (LaTeX)
 18611 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
 18612 %* \textwr -> \wreath (MnSymbol)
 18613 % U+2241 NOT TILDE; \nsim (AmS)
 18614 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
 18615 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
 18616 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
 18617 % \neqsim (MnSymbol)
 18618 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
 18619 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
 TeX)
 18620 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
 18621 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
 18622 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
 18623 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
 18624 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
 18625 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
 18626 % \ncong (AmS)
 18627 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
 18628 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
 18629 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
 18630 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts0
 18631 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
 18632 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
 18633 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
 18634 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
 18635 % \napproxeq (txfonts/pxfonts)
 18636 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
 18637 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)

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18638 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18639 %* \texttriplesim -> \VHF (wasysym)
18640 % \ntriplesim (MnSymbol)
18641 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18642 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18643 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18644 % \nbackcong (MnSymbol)
18645 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18646 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18647 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18648 % \nasymp (txfonts/pxfonts)
18649 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18650 %* \textnasymp -> \notasymp (mathabx)
18651 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18652 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18653 % \nBumpeq (txfonts/pxfonts)
18654 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18655 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18656 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18657 % \nbumpeq (txfonts/pxfonts)
18658 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18659 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18660 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18661 % \ndoteq (MnSymbol)
18662 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18663 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18664 % \doteqdot (AmS)
18665 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18666 %* \textdoteqdot -> \Doteq (MnSymbol)
18667 % \nDoteq (MnSymbol)
18668 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18669 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18670 % \fallingdotseq (AmS)
18671 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18672 % \nfallingdotseq (MnSymbol)
18673 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18674 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18675 % \risingdotseq (AmS)
18676 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18677 % \nrisingdotseq (MnSymbol)
18678 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18679 % U+2254 COLON EQUALS; \colonequals (colonequals)
18680 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18681 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18682 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18683 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18684 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18685 % \neqcirc (MnSymbol)
18686 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18687 % U+2257 RING EQUAL TO; \circeq (AmS)
18688 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18689 % \ncirceq (MnSymbol)

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18690 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18691 % U+2259 ESTIMATES; \hateq (MnSymbol)
18692 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18693 %* \texthateq -> \corresponds (mathabx)
18694 %* \texthateq -> \Corresponds (marvosym)
18695 % \nhateq (MnSymbol)
18696 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18697 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18698 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18699 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18700 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18701 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18702 %* \textneq -> \nequal (MnSymbol)
18703 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18704 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18705 %* \textequiv -> \Congruent (marvosym)
18706 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18707 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18708 %* \textnequiv -> \NotCongruent (marvosym)
18709 %* \textnequiv -> \notequiv (mathabx)
18710 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18711 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18712 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
18713 %* \textleq -> \LessOrEqual (marvosym)
18714 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18715 % \ge (LaTeX), \geq (LaTeX)
18716 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18717 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18718 %* \textgeq -> \LargerOrEqual (marvosym)
18719 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18720 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18721 % \nleqq (txfonts/pxfonts)
18722 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18723 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
18724 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18725 % \ngeqq (txfonts/pxfonts)
18726 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18727 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18728 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18729 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18730 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18731 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18732 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18733 % \nll (txfonts/pxfonts)
18734 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18735 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18736 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18737 % \ngg (txfonts/pxfonts)
18738 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18739 % U+226C BETWEEN; \between (AmS)
18740 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18741 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18742 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18743 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)

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18744 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18745 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18746 % \nleq (AmS)
18747 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18748 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18749 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18750 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessgtr (AmS)
18751 \DeclareTextCommand{\textlessgtr}{PU}{\9042\162}%* U+2272
18752 %* \textlessgtr -> \apprle (wasysym)
18753 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18754 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18755 %* \textgtrsim -> \apprge (wasysym)
18756 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessgtr (tx-fonts/pxfonts)
18757 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\164}%* U+2274
18758 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-fonts/pxfonts)
18759 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18760 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18761 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18762 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18763 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18764 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-fonts/pxfonts)
18765 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18766 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-fonts/pxfonts)
18767 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18768 % U+227A PRECEDES; precedes; \prec (LaTeX)
18769 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18770 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18771 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18772 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18773 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18774 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18775 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18776 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18777 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18778 % \nprecsim (txfonts/pxfonts)
18779 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18780 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18781 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18782 % \nsuccsim (txfonts/pxfonts)
18783 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18784 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18785 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18786 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
18787 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18788 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18789 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18790 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18791 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283

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18792 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18793 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18794 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18795 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18796 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subsetq (LaTeX)
18797 \DeclareTextCommand{\textsubsetq}{PU}{\9042\206}%* U+2286
18798 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supsetq (LaTeX)
18799 \DeclareTextCommand{\textsupsetq}{PU}{\9042\207}%* U+2287
18800 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubsetq (AmS)
18801 \DeclareTextCommand{\textnsubsetq}{PU}{\9042\210}%* U+2288
18802 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupsetq (AmS)
18803 \DeclareTextCommand{\textnsupsetq}{PU}{\9042\211}%* U+2289
18804 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
neq (AmS)
18805 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18806 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
neq (AmS)
18807 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18808 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18809 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18810 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18811 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18812 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18813 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18814 % \nsqsubset (txfonts/pxfonts)
18815 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18816 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18817 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18818 % \nsqsupset (txfonts/pxfonts)
18819 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18820 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubsetq (LaTeX)
18821 \DeclareTextCommand{\textsqsubsetq}{PU}{\9042\221}%* U+2291
18822 % \nsqsubsetq (txfonts/pxfonts)
18823 \DeclareTextCommand{\textnsqsubsetq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18824 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupsetq (LaTeX)
18825 \DeclareTextCommand{\textsqsupsetq}{PU}{\9042\222}%* U+2292
18826 % \nsqsupsetq (txfonts/pxfonts)
18827 \DeclareTextCommand{\textnsqsupsetq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18828 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18829 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18830 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18831 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18832 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18833 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18834 %* \textoplus -> \varoplus (stmaryrd)
18835 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18836 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18837 %* \textominus -> \varominus (stmaryrd)
18838 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18839 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18840 %* \textotimes -> \varotimes (stmaryrd)
18841 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18842 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18843 %* \textoslash -> \varoslash (stmaryrd)

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18844 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18845 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18846 %* \textodot -> \varodot (stmaryrd)
18847 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18848 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18849 %* \textcircledcirc -> \ocirc (mathabx)
18850 %* \textcircledcirc -> \varocircle (stmaryrd)
18851 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18852 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18853 %* \textcircledast -> \varoast (stmaryrd)
18854 %* \textcircledast -> \oasterisk (mathabx)
18855 % U+229D CIRCLED DASH; \circleddash (AmS)
18856 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18857 % U+229E SQUARED PLUS; \boxplus (AmS)
18858 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18859 % U+229F SQUARED MINUS; \boxminus (AmS)
18860 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18861 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18862 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18863 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18864 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18865 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18866 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18867 %* \textvdash -> \rightvdash (MnSymbol)
18868 % U+22A3 LEFT TACK; \dashleftarrow; \dashv (LaTeX)
18869 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18870 %* \textdashv -> \leftvdash (MnSymbol)
18871 % \ndashv (mathabx)
18872 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18873 %* \textndashv -> \leftvdash (MnSymbol)
18874 % U+22A4 DOWN TACK (=top); \dashrightarrow; \top (LaTeX)
18875 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18876 %* \texttop -> \downvdash (MnSymbol)
18877 % \ndownvdash (MnSymbol)
18878 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18879 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18880 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18881 %* \textbot -> \upvdash (MnSymbol)
18882 % \nupvdash (MnSymbol)
18883 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18884 %* \textnupvdash -> \nperp (MnSymbol)
18885 % U+22A8 TRUE; \vDash (AmS)
18886 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18887 %* \textvDash -> \models (LaTeX)
18888 %* \textvDash -> \rightmodels (MnSymbol)
18889 % U+22A9 FORCES; \Vdash (AmS)
18890 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18891 %* \textVdash -> \rightVdash (MnSymbol)
18892 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18893 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18894 % \nVdash (mathabx)
18895 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18896 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18897 % \VDash (mathabx)

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18898 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18899 %* \textVDash -> \rightModels (MnSymbol)
18900 % U+22AC DOES NOT PROVE; \nvDash (AmS)
18901 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18902 %* \textnvdash -> \nrighTVdash (MnSymbol)
18903 % U+22AD NOT TRUE; \nvDash (AmS)
18904 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18905 %* \textnvDash -> \nrighmodels (MnSymbol)
18906 %* \textnvDash -> \nmodels (MnSymbol)
18907 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18908 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18909 %* \textnVdash -> \nrighVdash (MnSymbol)
18910 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18911 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18912 %* \textnVDash -> \nrighModels (MnSymbol)
18913 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18914 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18915 %* \textlhd -> \lessclosed (MnSymbol)
18916 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18917 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18918 %* \textrhd -> \gtrclosed (MnSymbol)
18919 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18920 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18921 %* \textunlhd -> \leqclosed (MnSymbol)
18922 %* \textunlhd -> \trianglelefteq (MnSymbol)
18923 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18924 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18925 %* \textunrhd -> \geqclosed (MnSymbol)
18926 %* \textunrhd -> \trianglerighteq (MnSymbol)
18927 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18928 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18929 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18930 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18931 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18932 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18933 % U+22BB XOR; \veebar (AmS)
18934 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18935 % U+22BC NAND; \barwedge (mathabx)
18936 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18937 % U+22C6 STAR OPERATOR; \star (LaTeX)
18938 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18939 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18940 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18941 % U+22C8 BOWTIE; \bowtie (LaTeX)
18942 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18943 %* \textbowtie -> \Bowtie (wasysym)
18944 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18945 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18946 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18947 % \rtimes (AmS)
18948 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18949 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)

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18950 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18951 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18952 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18953 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18954 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18955 % \nbacksimeq (txfonts/pxfonts)
18956 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18957 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18958 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18959 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18960 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18961 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18962 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18963 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18964 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18965 % \nSubset (txfonts/pxfonts)
18966 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18967 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18968 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18969 % \nSupset (txfonts/pxfonts)
18970 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18971 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18972 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18973 %* \textCap -> \doublecap (mathabx)
18974 % U+22D3 DOUBLE UNION; \Cup (AmS)
18975 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18976 %* \textCup -> \doublecup (mathabx)
18977 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18978 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18979 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18980 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18981 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18982 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18983 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18984 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18985 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18986 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18987 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
18988 % \lesseqgtr (AmS)
18989 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18990 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18991 % \gtreqless (AmS)
18992 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18993 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18994 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18995 % \ncurlyeqprec (mathabx)
18996 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18997 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18998 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18999 % \ncurlyeqsucc (mathabx)
19000 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19001 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19002 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19003 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)

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19004 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19005 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nssqsubseteq (tx-
      fonts/pxfonts)
19006 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19007 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nssqsupseteq (tx-
      fonts/pxfonts)
19008 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19009 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsubseteq (mathabx)
19010 \DeclareTextCommand{\textsqsubsubseteq}{PU}{\9042\344}%* U+22E4
19011 %* \textsqsubsubseteq -> \varsqsubsubseteq (mathabx)
19012 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupseteq (math-
      abx)
19013 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\345}%* U+22E5
19014 %* \textsqsupseteq -> \varsqsupseteq (mathabx)
19015 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19016 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19017 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19018 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19019 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19020 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19021 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19022 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19023 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19024 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19025 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19026 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
      leright (AmS)
19027 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19028 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19029 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19030 % \ntrianglelefteq (AmS)
19031 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19032 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19033 % \ntrianglerighteq (AmS)
19034 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19035 %* \textntrianglerighteq -> \textngeqclosed
19036 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
19037 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19038 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19039 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19040 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19041 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19042 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19043 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19044 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19045 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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

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19046 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19047 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19048 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19049 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19050 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
19051 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311

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19052 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19053 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19054 % U+231A WATCH; \clock (wasysym)
19055 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19056 %* \textclock -> \Clocklogo (marvosym)
19057 %* \textclock -> \ClockLogo (marvosym)
19058 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19059 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19060 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19061 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19062 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19063 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19064 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19065 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19066 % U+2322 FROWN; \frown (LaTeX)
19067 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19068 % U+2323 SMILE; \smile (LaTeX)
19069 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19070 % U+2328 KEYBOARD; \Keyboard (marvosym)
19071 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19072 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19073 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19074 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19075 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
19076 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19077 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19078 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19079 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19080 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
19081 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
19082 %* \textstmaryrdbaro -> \baro (stmaryrd)
19083 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
19084 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
19085 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
19086 % \notbackslash (wasysym)
19087 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
19088 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
19089 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
19090 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
19091 % \APLleftarrowbox (wasysym)
19092 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
19093 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
19094 % \APLrightarrowbox (wasysym)
19095 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
19096 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
19097 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
19098 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
19099 % \APLdownarrowbox (wasysym)
19100 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
19101 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
19102 % \APLinput (wasysym)

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19103 \DeclareTextCommand{\textAPLinut}{PU}{\9043\136}%* U+235E
 19104 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19105 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19106 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19107 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19108 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19109 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19110 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19111 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19112 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19113 % \ForwardToIndex (marvosym)
 19114 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19115 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19116 % \RewindToIndex (marvosym)
 19117 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

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

19118 % U+2422 BLANK SYMBOL
 19119 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19120 % U+2423 OPEN BOX; blank
 19121 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

19122 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19123 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19124 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

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

19125 % U+2460 CIRCLED DIGIT ONE; onecircle
 19126 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19127 % U+2461 CIRCLED DIGIT TWO; twocircle
 19128 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19129 % U+2462 CIRCLED DIGIT THREE; threecircle
 19130 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19131 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19132 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19133 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19134 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19135 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19136 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19137 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 19138 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19139 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19140 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19141 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19142 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19143 % U+2469 CIRCLED NUMBER TEN; tencircle
 19144 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19145 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19146 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19147 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19148 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B

19149 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19150 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19151 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19152 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19153 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19154 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19155 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19156 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19157 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19158 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19159 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19160 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19161 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19162 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19163 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19164 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19165 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19166 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19167 % \CircledA (marvosym)
 19168 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19169 %* \textCircledA -> \CleaningA
 19170 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19171 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19172 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19173 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19174 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19175 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19176 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19177 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19178 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19179 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19180 % \CleaningF (marvosym)
 19181 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19182 % \CleaningFF (marvosym)
 19183 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19184 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19185 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19186 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19187 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19188 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19189 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19190 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19191 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19192 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19193 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19194 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19195 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19196 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19197 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19198 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19199 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19200 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19201 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19202 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle

19203 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19204 % \CleaningP (marvosym)
 19205 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19206 % \CleaningPP (marvosym)
 19207 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19208 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19209 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19210 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19211 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19212 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19213 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19214 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19215 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19216 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19217 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19218 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19219 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19220 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19221 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19222 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19223 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19224 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19225 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19226 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19227 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19228 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19229 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19230 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19231 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19232 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19233 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19234 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19235 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19236 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19237 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19238 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19239 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19240 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19241 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19242 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19243 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19244 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19245 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19246 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19247 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19248 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19249 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19250 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19251 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19252 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19253 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19254 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19255 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19256 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle

19257 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19258 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19259 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19260 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19261 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19262 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19263 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19264 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19265 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19266 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19267 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19268 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19269 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19270 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19271 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19272 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19273 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19274 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19275 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19276 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19277 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19278 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19279 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19280 % U+24EA CIRCLED DIGIT ZERO
 19281 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19282 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19283 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19284 %* \textCuttingLine -> \Kutline (marvosym)
 19285 %* \textCuttingLine -> \CutLine (marvosym)
 19286 %* \textCuttingLine -> \Cutline (marvosym)

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

19287 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19288 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19289 %* \textUParrow -> \MoveUp (marvosym)
 19290 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19291 % \bigtriangleup (LaTeX)
 19292 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19293 %* \textbigtriangleup -> \APLup (wasysym)
 19294 %* \textbigtriangleup -> \Bleech (marvosym)
 19295 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19296 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19297 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19298 % whiterightpointingtriangle; \triangleright (LaTeX)
 19299 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19300 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19301 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19302 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19303 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19304 %* \textDOWNarrow -> \MoveDown (marvosym)

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19305 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
      angle;
19306 % \bigtriangledown (LaTeX)
19307 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19308 %* \textbigtriangledown -> \APLdown (wasysym)
19309 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19310 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19311 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
      striction);
19312 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19313 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19314 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19315 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19316 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19317 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19318 %* \textdiamond -> \Diamond (wasysym)
19319 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19320 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19321 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19322 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19323 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19324 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19325 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19326 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19327 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19328 % \boxbar (stmaryrd)
19329 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19330 % U+25EF LARGE CIRCLE; largecircle
19331 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19332 %* \textbigcircle -> \varbigcirc (stmaryrd)
19333 %

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

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19334 % U+2601 CLOUD; \Cloud (ifsym)
19335 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19336 % U+2605 BLACK STAR; \FiveStar (bbding)
19337 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19338 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19339 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19340 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19341 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19342 %* \textPhone -> \Telefon (marvosym)
19343 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19344 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19345 %* \textboxempty -> \Box (wasysym)
19346 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19347 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19348 %* \textCheckedbox -> \CheckedBox (marvosym)
19349 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19350 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19351 %* \textCrossedbox -> \XBox (wasysym)
19352 %* \textCrossedbox -> \CrossedBox (marvosym)
19353 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19354 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615

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19355 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
 19356 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19357 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
 19358 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19359 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
 19360 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19361 %* \textHandLeft -> \rightpointleft (fourier)
 19362 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
 19363 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19364 %* \textHandRight -> \leftpointright (fourier)
 19365 %* \textHandRight -> \PointingHand (marvosym)
 19366 %* \textHandRight -> \Pointinghand (marvosym)
 19367 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19368 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19369 %* \textRadioactivity -> \Radiation (ifsym)
 19370 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19371 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19372 % U+2625 ANKH; \Ankh (marvosym)
 19373 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
 19374 % U+262F YIN YANG; \YinYang (marvosym)
 19375 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
 19376 %* \textYinYang -> \Yinyang (marvosym)
 19377 %* \textYinYang -> \YingYang (marvosym)
 19378 %* \textYinYang -> \Yingyang (marvosym)
 19379 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
 19380 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
 19381 %* \textfrownie -> \Frowny (marvosym)
 19382 % U+263A WHITE SMILING FACE; \smiley (wasysym)
 19383 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
 19384 %* \textsmiley -> \Smiley (marvosym)
 19385 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
 19386 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
 19387 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
 19388 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
 19389 %* \textsun -> \Sun (marvosym)
 19390 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
 19391 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
 19392 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
 19393 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
 19394 % U+263F MERCURY; \mercury (wasysym)
 19395 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
 19396 %* \textmercury -> \Mercury (marvosym)
 19397 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19398 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19399 %* \textPUfemale -> \textfemale (tipx)
 19400 %* \textPUfemale -> \female (wasysym)
 19401 %* \textPUfemale -> \venus (wasysym)
 19402 %* \textPUfemale -> \Venus (marvosym)
 19403 %* \textPUfemale -> \Female (marvosym)
 19404 % U+2641 EARTH; \earth (wasysym)
 19405 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
 19406 %* \textearth -> \Earth (marvosym)
 19407 % U+2642 MALE SIGN; male, mars; \male (wasysym)
 19408 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642

19409 %* \textmale -> \mars (wasysym)
 19410 %* \textmale -> \Mars (marvosym)
 19411 %* \textmale -> \Male (marvosym)
 19412 % U+2643 JUPITER; \jupiter (wasysym)
 19413 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
 19414 %* \textjupiter -> \Jupiter (marvosym)
 19415 % U+2644 SATURN; \saturn (wasysym)
 19416 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
 19417 %* \textsaturn -> \Saturn (marvosym)
 19418 % U+2645 URANUS; \uranus (wasysym)
 19419 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
 19420 %* \texturanus -> \Uranus (marvosym)
 19421 % U+2646 NEPTUNE; \neptune (wasysym)
 19422 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
 19423 %* \textneptune -> \Neptune (marvosym)
 19424 % U+2647 PLUTO; \pluto (wasysym)
 19425 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
 19426 %* \textpluto -> \Pluto (marvosym)
 19427 % U+2648 ARIES; \aries (wasysym)
 19428 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
 19429 %* \textaries -> \Aries (marvosym)
 19430 % U+2649 TAURUS; \taurus (wasysym)
 19431 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
 19432 %* \texttaurus -> \Taurus (marvosym)
 19433 % U+264A GEMINI; \gemini (wasysym)
 19434 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
 19435 %* \textgemini -> \Gemini (marvosym)
 19436 % U+264B CANCER; \cancer (wasysym)
 19437 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
 19438 %* \textcancer -> \Cancer (marvosym)
 19439 % U+264C LEO; \leo (wasysym)
 19440 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
 19441 %* \textleo -> \Leo (marvosym)
 19442 % U+264D VIRGO; \virgo (wasysym)
 19443 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
 19444 %* \textvirgo -> \Virgo (marvosym)
 19445 % U+264E LIBRA; \libra (wasysym)
 19446 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
 19447 %* \textlibra -> \Libra (marvosym)
 19448 % U+264F SCORPIO; \scorpio (wasysym)
 19449 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
 19450 %* \textscorpio -> \Scorpio (marvosym)
 19451 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19452 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
 19453 %* \textsagittarius -> \Sagittarius (marvosym)
 19454 % U+2651 CAPRICORN; \capricornus (wasysym)
 19455 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
 19456 %* \textcapricornus -> \Capricorn (marvosym)
 19457 % U+2652 AQUARIUS; \aquarius (wasysym)
 19458 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
 19459 %* \textaquarius -> \Aquarius (marvosym)
 19460 % U+2653 PISCES; \pisces (wasysym)
 19461 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
 19462 %* \textpisces -> \Pisces (marvosym)

19463 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
 19464 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
 19465 %* \textspadesuitblack -> \spadesuit (MnSymbol)
 19466 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
 19467 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
 19468 %* \textheartsuitwhite -> \Heart (marvosym)
 19469 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
 19470 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
 19471 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
 19472 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
 19473 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
 19474 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
 19475 %* \textclubsuitblack -> \clubsuit (MnSymbol)
 19476 % U+2664 WHITE SPADE SUIT; spadesuitwhite
 19477 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
 19478 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
 19479 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
 19480 % U+2666 BLACK DIAMOND SUIT; diamond
 19481 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
 19482 % U+2667 WHITE CLUB SUIT; clubsuitwhite
 19483 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
 19484 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
 19485 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
 19486 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
 19487 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 19488 %* \textmusicalnote -> \eighthnote (wasysym, arev)
 19489 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
 19490 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
 19491 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
 note (arev)
 19492 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
 19493 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
 19494 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
 19495 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
 19496 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
 19497 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
 19498 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
 19499 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
 19500 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
 19501 %* \textrecycle -> \Recycling (marvosym)
 19502 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
 19503 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
 19504 % U+2691 BLACK FLAG; \Flag (ifsym)
 19505 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
 19506 %* \textFlag -> \VarFlag (ifsym)
 19507 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
 19508 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 19509 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 19510 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 19511 %* \textdsmilitary -> \textxswup (fourier)
 19512 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19513 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19514 % U+2696 SCALES; \dsjuridical (dictsym)
 19515 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696

19516 % U+2697 ALEMBIC; \dschemical (dictsym)
 19517 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19518 % U+2698 FLOWER; \dsbiological (dictsym)
 19519 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19520 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19521 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19522 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19523 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19524 % U+26A0 WARNING SIGN; \danger (fourier)
 19525 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19526 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19527 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19528 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19529 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19530 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19531 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19532 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19533 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19534 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19535 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19536 % U+26AD MARRIAGE SYMBOL
 19537 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19538 % U+26AE DIVORCE SYMBOL
 19539 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19540 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19541 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19542 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19543 % U+26B9 SEXTILE; \hexstar (wasysym)
 19544 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19545 % U+26BD SOCCER BALL; \Football (marvosym)
 19546 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19547 %* \textSoccerBall -> \Football (marvosym)
 19548 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19549 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19550 % U+26C6 RAIN; \Rain (ifsym)
 19551 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19552 % U+26D4 NO ENTRY; \noway (fourier)
 19553 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19554 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19555 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19556 % U+26FA TENT; \Tent (ifsym)
 19557 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19558 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
 19559 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19560 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19561 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19562 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
 19563 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19564 %* \textScissorRight -> \RightScissors (marvosym)
 19565 %* \textScissorRight -> \Leftscissors (marvosym)
 19566 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)

19567 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19568 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19569 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19570 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19571 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19572 % U+2707 TAPE DRIVE; \Tape (bding)
 19573 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19574 % U+2708 AIRPLANE; \Plane (bding)
 19575 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19576 % U+2709 ENVELOPE; \Envelope (bding),
 19577 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19578 %* \textEnvelope -> \Letter (marvosym)
 19579 % U+270C VICTORY HAND; \Peace (bding)
 19580 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19581 % U+270D WRITING HAND; \WritingHand (marvosym)
 19582 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19583 %* \textWritingHand -> \Writinghand (marvosym)
 19584 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19585 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19586 % U+270F PENCIL; \PencilRight (bding)
 19587 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19588 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19589 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19590 % U+2711 WHITE NIB; \NibRight (bding)
 19591 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19592 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19593 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19594 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19595 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19596 %* \textCheckmark -> \checkmark (MnSymbol)
 19597 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19598 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19599 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19600 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19601 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19602 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19603 % U+2717 BALLOT X; \XSolidBrush (bding)
 19604 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19605 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19606 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19607 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19608 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19609 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19610 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19611 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19612 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19613 % U+271D LATIN CROSS; \Cross (bding)
 19614 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19615 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19616 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19617 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19618 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19619 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19620 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720

19621 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19622 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19623 %* \textDavidStar -> \davidstar (wasysym)
 19624 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19625 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19626 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19627 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19628 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19629 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19630 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19631 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19632 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19633 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19634 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19635 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19636 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19637 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19638 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19639 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19640 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19641 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19642 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19643 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19644 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19645 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19646 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19647 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19648 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19649 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19650 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19651 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19652 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19653 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19654 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19655 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19656 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19657 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19658 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19659 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19660 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19661 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19662 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19663 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19664 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19665 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19666 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19667 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19668 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19669 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19670 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;

19671 % \SixFlowerOpenCenter (bding)
 19672 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19673 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19674 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19675 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl-
 ternate (bding)
 19676 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19677 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19678 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19679 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19680 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19681 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 19682 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19683 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 19684 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19685 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 19686 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19687 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19688 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19689 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19690 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19691 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19692 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19693 % U+2747 SPARKLE; \Sparkle (bding)
 19694 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19695 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19696 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19697 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19698 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19699 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19700 % \EightFlowerPetalRemoved (bding)
 19701 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19702 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19703 % \EightAsterisk (bding)
 19704 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19705 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19706 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19707 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19708 % \SquareShadowBottomRight (bding)
 19709 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19710 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19711 % \SquareShadowTopRight (bding)
 19712 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19713 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19714 % \SquareCastShadowBottomRight (bding)
 19715 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19716 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19717 % \SquareCastShadowTopRight (bding)
 19718 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19719 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-
 ding)

19720 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19721 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
 19722 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19723 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
 19724 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19725 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 19726 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

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

19727 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19728 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19729 % \notperp (mathabx)
 19730 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19731 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19732 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19733 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19734 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19735 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19736 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19737 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19738 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19739 %* \textlbrackdbl -> \lbracket (stmaryrd)
 19740 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19741 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19742 %* \textrbrackdbl -> \rrbracket (stmaryrd)

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

19743 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19744 % \circlearrowleft (AmS)
 19745 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19746 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19747 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19748 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19749 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19750 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19751 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19752 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
 19753 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
 19754 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19755 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19756 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19757 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19758 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)
 19759 \DeclareTextCommand{\textLonglefttrightarrow}{PU}{\9047\372}%* U+27FA
 19760 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19761 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19762 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19763 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19764 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19765 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

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

19766 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSymbol)
 19767 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19768 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSymbol)
 19769 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19770 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 19771 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 19772 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 19773 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19774 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 19775 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 19776 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 19777 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19778 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19779 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19780 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19781 % \rcurvearrowne (MnSymbol)
 19782 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19783 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 19784 % \lcurvearrowse (MnSymbol)
 19785 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19786 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 19787 % \lcurvearrowsw (MnSymbol)
 19788 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19789 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 19790 % \rcurvearrowse (MnSymbol)
 19791 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19792 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 19793 % \textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 19794 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 19795 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 19796 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 19797 % \rcurvearrowdown (MnSymbol)
 19798 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 19799 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 19800 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 19801 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 19802 % \textrcurvearrowleft}{PU}{\9051\072}%* U+293A
 19803 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 19804 % \rcurvearrowright (MnSymbol)
 19805 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
 19806 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 19807 % \textleftrightharpoon}{PU}{\9051\112}%* U+294A
 19808 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 19809 % \textrightleftharpoon}{PU}{\9051\113}%* U+294B
 19810 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;

19811 % \updownharpoonrightleft (MnSymbol)
 19812 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 19813 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 19814 % \updownharpoonleftright (MnSymbol)
 19815 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 19816 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 19817 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 19818 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 19819 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 19820 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 19821 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 19822 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 19823 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 19824 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 19825 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19826 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 19827 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 19828 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19829 % \leftbarharpoon (mathabx)
 19830 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19831 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19832 % LONG DASH; \barleftharpoon (mathabx)
 19833 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19834 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19835 % LONG DASH; \rightbarharpoon (mathabx)
 19836 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19837 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19838 % LONG DASH; \barrightharpoon (mathabx)
 19839 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19840 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19841 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19842 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19843 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19844 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19845 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19846 % U+297F DOWN FISH TAIL
 19847 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

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

19848 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19849 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 19850 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19851 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19852 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19853 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19854 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19855 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19856 %* \textobar -> \textvarobar (stmaryrd)
 19857 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19858 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8

19859 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19860 %* \textobslash -> \obackslash (mathabx)
 19861 %* \textobslash -> \varobslash (stmaryrd)
 19862 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19863 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19864 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19865 %* \textobot -> \odplus (ulsy)
 19866 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (marvosym)
 19867 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19868 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19869 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19870 %* \textolessthan -> \varolessthan (stmaryrd)
 19871 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19872 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19873 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19874 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19875 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19876 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19877 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19878 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19879 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19880 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19881 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19882 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19883 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19884 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19885 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19886 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19887 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19888 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19889 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

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

19890 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19891 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19892 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19893 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19894 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19895 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19896 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19897 % pxfonts, wasysym)
 19898 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 19899 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19900 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19901 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 19902 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 19903 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19904 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19905 %* \textminusdot -> \divdot (mathabx)
 19906 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 19907 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 19908 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19909 % \dtimes (mathdesign)

19910 \DeclareTextCommand{\textdttimes}{PU}{\9052\062}%* U+2A32
 19911 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 19912 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 19913 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 19914 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 19915 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 19916 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 19917 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 19918 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 19919 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 19920 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 19921 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 19922 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 19923 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 19924 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 19925 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 19926 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 19927 %* \textdoublevee -> \merge (stmaryrd)
 19928 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 19929 % \doublebarwedge (AmS)
 19930 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 19931 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 19932 % \veedoublebar (mahtabx)
 19933 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 19934 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 19935 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 19936 % \neqdot (MnSymbol)
 19937 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 19938 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 19939 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 19940 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 19941 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 19942 % \nleqslant (txfonts/pxfonts)
 19943 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 19944 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 19945 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 19946 % \ngeqslant (txfonts/pxfonts)
 19947 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 19948 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 19949 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 19950 % \nlessapprox (txfonts/pxfonts)
 19951 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 19952 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 19953 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 19954 % \ngtrapprox (txfonts/pxfonts)
 19955 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 19956 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 19957 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 19958 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 19959 % \gneq (AmS)
 19960 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 19961 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 19962 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 19963 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)

19964 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 19965 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 19966 % \lesseqqgtr (AmS)
 19967 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 19968 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 19969 % \gtreqless (AmS)
 19970 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 19971 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 19972 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 19973 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 19974 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 19975 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 19976 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 19977 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 19978 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 19979 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 19980 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 19981 % \npreceq (txfonts/pxfonts)
 19982 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 19983 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 19984 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 19985 % \nsucceq (txfonts/pxfonts)
 19986 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 19987 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 19988 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 19989 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 19990 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 19991 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 19992 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 19993 % \npreceqq (txfonts/pxfonts)
 19994 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 19995 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 19996 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 19997 % \nsucceqq (txfonts/pxfonts)
 19998 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 19999 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20000 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20001 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20002 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20003 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20004 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20005 % \nprecapprox (txfonts/pxfonts)
 20006 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20007 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20008 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20009 % \nsuccapprox (txfonts/pxfonts)
 20010 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20011 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-


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prox (AmS)
20012 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
20013 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
prox (AmS)
20014 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
20015 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
20016 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
20017 % \nsubseteqq (txfonts/pxfonts, mathabx)
20018 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
20019 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
20020 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
20021 % \nsupseteqq (mathabx)
20022 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
20023 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
20024 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
20025 %* \textdashV -> \leftVdash (MnSymbol)
20026 % \ndashV (mathabx)
20027 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
20028 %* \textndashV -> \nleftVdash (MnSymbol)
20029 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
20030 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
20031 %* \textDashv -> \leftmodels (MnSymbol)
20032 % \nDashv (mathabx)
20033 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
20034 %* \textnDashv -> \nleftmodels (MnSymbol)
20035 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
20036 % \DashV (mathabx)
20037 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
20038 %* \textDashV -> \leftModels (MnSymbol)
20039 % \nDashV (mathabx)
20040 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
20041 %* \textnDashV -> \nleftModels (MnSymbol)
20042 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
20043 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
20044 % \ndownmodels (MnSymbol)
20045 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
20046 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
20047 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
20048 % \nupmodels (MnSymbol)
20049 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
20050 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
20051 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
20052 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
20053 % \interleave (stmaryrd)
20054 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
20055 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
20056 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
20057 %* \textsslash -> \varparallel (txfonts/pxfonts)

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

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20058 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
20059 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
20060 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
20061 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

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

20062 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
20063 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

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

20064 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
20065 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
20066 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
20067 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
20068 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
20069 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

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

20070 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
20071 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
20072 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
20073 % \textdownstep (tipa)
20074 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

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

20075 % U+A727 LATIN SMALL LETTER HENG; \texheng (tipx)
20076 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
20077 %* \textPUheng -> \texheng (tipx)
20078 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
20079 \DeclareTextCommand{\textPUIhookfour}{PU}{\9247\054}% U+A72C
20080 %* \textPUIhookfour -> \textlhookfour (tipx)
20081 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
20082 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
20083 %* \textPUscf -> \textscf (tipx)
20084 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
20085 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
20086 %* \textPUaolig -> \textao lig (tipx)
20087 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
20088 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
20089 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
20090 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

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

20091 % U+FB01 LATIN SMALL LIGATURE FI; fi
20092 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
20093 % U+FB02 LATIN SMALL LIGATURE FL; fl
20094 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

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

20095 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
20096 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
20097 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
20098 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
20099 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
20100 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
20101 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
20102 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
20103 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)

20104 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20105 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20106 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20107 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20108 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20109 %* \textfullnote -> \Ganz (harmony)
 20110 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20111 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20112 %* \texthalfnote -> \Halb (harmony)
 20113 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20114 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20115 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20116 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20117 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20118 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20119 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20120 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

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

20121 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20122 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20123 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20124 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20125 % U+1F468 MAN; \ManFace (marvosym)
 20126 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20127 % U+1F469 WOMAN; \WomanFace (marvosym)
 20128 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20129 %* \textWomanFace -> \Womanface (marvosym)
 20130 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20131 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20132 %* \textFax -> \Faxmachine (marvosym)
 20133 % U+1F525 FIRE; \Fire (ifsym)
 20134 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

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

20135 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20136 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20137 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20138 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20139 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20140 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20141 \DeclareTextCommand{\SS}{PU}{SS}%
 20142 % \textcopyleft (textcomp)
 20143 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20144 % \ccnc (ccllicenses)
 20145 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20146 % \ccnd (ccllicenses)
 20147 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 20148 % \ccsa (ccllicenses)
 20149 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
 20150 % \Info (marvosym, china2e)
 20151 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE

```

20152 % \CESign (marvosym)
20153 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20154 %* \textCESign -> \CEsign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20155 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20156 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20157 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20158 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20159 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20160 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20161 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20162 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20163 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20164 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20165 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20166 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20167 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20168 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20169 <*puvnenc>
20170 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20171 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20172 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20173 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20174 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20175 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20176 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20177 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20178 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20179 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20180 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20181 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20182 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20183 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20184 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
20185 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20186 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20187 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20188 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20189 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
20190 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20191 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20192 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20193 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
20194 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7

```

20195 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20196 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20197 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20198 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20199 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20200 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20201 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20202 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20203 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20204 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20205 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20206 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20207 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20208 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20209 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20210 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20211 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20212 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20213 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20214 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20215 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20216 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20217 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20218 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20219 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20220 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20221 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20222 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20223 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20224 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20225 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20226 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20227 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20228 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20229 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20230 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20231 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20232 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20233 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20234 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20235 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20236 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20237 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20238 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20239 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20240 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20241 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20242 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20243 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20244 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20245 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20246 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20247 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20248 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6

20249 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20250 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20251 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20252 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20253 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20254 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20255 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20256 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20257 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20258 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20259 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20260 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20261 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20262 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20263 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20264 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20265 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20266 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20267 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20268 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20269 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20270 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20271 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20272 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20273 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20274 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20275 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20276 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20277 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20278 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20279 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20280 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20281 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20282 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20283 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20284 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20285 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20286 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20287 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20288 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20289 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20290 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20291 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20292 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20293 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20294 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
 20295 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
 20296 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
 20297 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
 20298 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 20299 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 20300 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
 20301 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 20302 </puvnenc>

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
20303 (*puarenc)
20304 % U+0621;afii57409;ARABIC LETTER HAMZA
20305 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20306 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20307 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20308 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20309 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20310 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20311 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20312 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20313 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20314 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20315 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20316 % U+0627;afii57415;ARABIC LETTER ALEF
20317 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20318 % U+0628;afii57416;ARABIC LETTER BEH
20319 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20320 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20321 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20322 % U+062A;afii57418;ARABIC LETTER TEH
20323 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20324 % U+062B;afii57419;ARABIC LETTER THEH
20325 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20326 % U+062C;afii57420;ARABIC LETTER JEEM
20327 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20328 % U+062D;afii57421;ARABIC LETTER HAH
20329 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20330 % U+062E;afii57422;ARABIC LETTER KHAH
20331 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20332 % U+062F;afii57423;ARABIC LETTER DAL
20333 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20334 % U+0630;afii57424;ARABIC LETTER THAL
20335 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20336 % U+0631;afii57425;ARABIC LETTER REH
20337 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20338 % U+0632;afii57426;ARABIC LETTER ZAIN
20339 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20340 % U+0633;afii57427;ARABIC LETTER SEEN
20341 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20342 % U+0634;afii57428;ARABIC LETTER SHEEN
20343 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20344 % U+0635;afii57429;ARABIC LETTER SAD
20345 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20346 % U+0636;afii57430;ARABIC LETTER DAD
20347 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
20348 % U+0637;afii57431;ARABIC LETTER TAH
20349 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
20350 % U+0638;afii57432;ARABIC LETTER ZAH
20351 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
20352 % U+0639;afii57433;ARABIC LETTER AIN
20353 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
```

20354 % U+063A;afii57434;ARABIC LETTER GHAIN
 20355 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20356 % U+0640;afii57440;ARABIC TATWEEL
 20357 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20358 % U+0641;afii57441;ARABIC LETTER FEH
 20359 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20360 % U+0642;afii57442;ARABIC LETTER QAF
 20361 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20362 % U+0643;afii57443;ARABIC LETTER KAF
 20363 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20364 % U+0644;afii57444;ARABIC LETTER LAM
 20365 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20366 % U+0645;afii57445;ARABIC LETTER MEEM
 20367 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20368 % U+0646;afii57446;ARABIC LETTER NOON
 20369 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20370 % U+0647;afii57470;ARABIC LETTER HEH
 20371 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20372 % U+0648;afii57448;ARABIC LETTER WAW
 20373 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20374 % U+0649;afii57449;ARABIC LETTER ALEF MAKURA
 20375 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20376 % U+064A;afii57450;ARABIC LETTER YEH
 20377 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20378 % U+064B;afii57451;ARABIC FATHATAN
 20379 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20380 % U+064C;afii57452;ARABIC DAMMATAN
 20381 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20382 % U+064D;afii57453;ARABIC KASRATAN
 20383 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20384 % U+064E;afii57454;ARABIC FATHA
 20385 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20386 % U+064F;afii57455;ARABIC DAMMA
 20387 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20388 % U+0650;afii57456;ARABIC KASRA
 20389 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20390 % U+0651;afii57457;ARABIC SHADDA
 20391 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20392 % U+0652;afii57458;ARABIC SUKUN
 20393 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20394 % U+067E ARABIC LETTER PEH; afii57506
 20395 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20396 % U+0686 ARABIC LETTER TCHEH; afii57507
 20397 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20398 % U+0698 ARABIC LETTER JEH; afii57508
 20399 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20400 % U+06A9 ARABIC LETTER KEHEH
 20401 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20402 % U+06AF ARABIC LETTER GAF; afii57509
 20403 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20404 % U+06CC ARABIC LETTER FARSI YEH
 20405 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC


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20406 % U+200C ZERO WIDTH NON-JOINER; afii61664
20407 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
20408 % U+200D ZERO WIDTH JOINER; afii301
20409 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

20410 (/puarenc)

20411 (*psdextra)
20412 \Hy@VersionCheck{psdextra.def}
20413 \newcommand*{\psdmapshortnames}{%
20414   \let\MVPlus\textMVPlus
20415   \let\MVComma\textMVComma
20416   \let\MVMinus\textMVMinus
20417   \let\MVPeriod\textMVPeriod
20418   \let\MVDivision\textMVDivision
20419   \let\MVZero\textMVZero
20420   \let\MVOne\textMVOne
20421   \let\MVTwo\textMVTwo
20422   \let\MVThree\textMVThree
20423   \let\MVFour\textMVFour
20424   \let\MVFive\textMVFive
20425   \let\MVSix\textMVSix
20426   \let\MVSeven\textMVSeven
20427   \let\MVEight\textMVEight
20428   \let\MVNine\textMVNine
20429   \let\MVAt\textMVAt
20430   \let\copyright\textcopyright
20431   \let\twosuperior\texttwosuperior
20432   \let\threesuperior\textthreesuperior
20433   \let\onesuperior\textonesuperior
20434   \let\Thorn\textThorn
20435   \let\thorn\textthorn
20436   \let\hbar\texthbar
20437   \let\hausaB\texthausaB
20438   \let\hausaD\texthausaD
20439   \let\hausaK\texthausaK
20440   \let\barl\textbarl
20441   \let\inve\textinve
20442   \let\slashc\textslashc
20443   \let\scripta\textscripta
20444   \let\openo\textopeno
20445   \let\rtaild\textrtaild
20446   \let\reve\textreve
20447   \let\schwa\textschwa
20448   \let\niepsilon\textniepsilon
20449   \let\repsilon\textrepsilon
20450   \let\rhookrepsilon\texthookrepsilon
20451   \let\scriptg\textscriptg
20452   \let\scg\textscg
20453   \let\ipagamma\textipagamma
20454   \let\babygamma\textbabygamma
20455   \let\bari\textbari
20456   \let\niiota\textniiota
20457   \let\sci\textsci
20458   \let\scn\textscn

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20459 $\backslash\mathrm{nphi}$
 20460 $\backslash\mathrm{longleg}$
 20461 $\backslash\mathrm{scr}$
 20462 $\backslash\mathrm{invscr}$
 20463 $\backslash\mathrm{esh}$
 20464 $\backslash\mathrm{baru}$
 20465 $\backslash\mathrm{niupsilon}$
 20466 $\backslash\mathrm{scriptv}$
 20467 $\backslash\mathrm{turnv}$
 20468 $\backslash\mathrm{turnw}$
 20469 $\backslash\mathrm{turny}$
 20470 $\backslash\mathrm{scy}$
 20471 $\backslash\mathrm{yogh}$
 20472 $\backslash\mathrm{glotstop}$
 20473 $\backslash\mathrm{revglotstop}$
 20474 $\backslash\mathrm{invglotstop}$
 20475 $\backslash\mathrm{Gamma}$
 20476 $\backslash\mathrm{Delta}$
 20477 $\backslash\mathrm{Theta}$
 20478 $\backslash\mathrm{Lambda}$
 20479 $\backslash\mathrm{Xi}$
 20480 $\backslash\mathrm{Pi}$
 20481 $\backslash\mathrm{Sigma}$
 20482 $\backslash\mathrm{Upsilon}$
 20483 $\backslash\mathrm{Phi}$
 20484 $\backslash\mathrm{Psi}$
 20485 $\backslash\mathrm{Omega}$
 20486 $\backslash\mathrm{alpha}$
 20487 $\backslash\mathrm{beta}$
 20488 $\backslash\mathrm{gamma}$
 20489 $\backslash\mathrm{delta}$
 20490 $\backslash\mathrm{epsilon}$
 20491 $\backslash\mathrm{zeta}$
 20492 $\backslash\mathrm{eta}$
 20493 $\backslash\mathrm{theta}$
 20494 $\backslash\mathrm{iota}$
 20495 $\backslash\mathrm{kappa}$
 20496 $\backslash\mathrm{lambda}$
 20497 $\backslash\mathrm{mu}$
 20498 $\backslash\mathrm{mugreek}$
 20499 $\backslash\mathrm{nu}$
 20500 $\backslash\mathrm{xi}$
 20501 $\backslash\mathrm{pi}$
 20502 $\backslash\mathrm{rho}$
 20503 $\backslash\mathrm{varsigma}$
 20504 $\backslash\mathrm{sigma}$
 20505 $\backslash\mathrm{tau}$
 20506 $\backslash\mathrm{upsilon}$
 20507 $\backslash\mathrm{phi}$
 20508 $\backslash\mathrm{chi}$
 20509 $\backslash\mathrm{psi}$
 20510 $\backslash\mathrm{omega}$
 20511 $\backslash\mathrm{scd}$
 20512 $\backslash\mathrm{scu}$

20513 `\let\iinferior\textiinferior`
 20514 `\let\rinferior\extrinferior`
 20515 `\let\uinferior\textuinferior`
 20516 `\let\vinferior\textvinferior`
 20517 `\let\betainferior\textbetainferior`
 20518 `\let\gammainferior\textgammainferior`
 20519 `\let\rhoinferior\textrhoinferior`
 20520 `\let\phiinferior\textphiinferior`
 20521 `\let\chiinferior\textchiinferior`
 20522 `\let\barsci\textbarsci`
 20523 `\let\barp\textbarp`
 20524 `\let\barscu\textbarscu`
 20525 `\let\htrtaild\texthtrtaild`
 20526 `\let\dagger\textdagger`
 20527 `\let\bullet\textbullet`
 20528 `\let\hdotfor\texthdotfor`
 20529 `\let\prime\textprime`
 20530 `\let\second\textsecond`
 20531 `\let\third\textthird`
 20532 `\let\backprime\textbackprime`
 20533 `\let\lefttherefore\textlefttherefore`
 20534 `\let\fourth\textfourth`
 20535 `\let\diamonddots\textdiamonddots`
 20536 `\let\zerosuperior\textzerosuperior`
 20537 `\let\isuperior\textisuperior`
 20538 `\let\foursuperior\textfoursuperior`
 20539 `\let\fivesuperior\textfivesuperior`
 20540 `\let\sixsuperior\textsixsuperior`
 20541 `\let\sevensuperior\textsevensuperior`
 20542 `\let\eightsuperior\texteightsuperior`
 20543 `\let\ninesuperior\textninesuperior`
 20544 `\let\plussuperior\textplussuperior`
 20545 `\let\minussuperior\textminussuperior`
 20546 `\let>equalsuperior\textequalsuperior`
 20547 `\let\parenleftsuperior\textparenleftsuperior`
 20548 `\let\parenrightsuperior\textparenrightsuperior`
 20549 `\let\nsuperior\textnsuperior`
 20550 `\let\zeroinferior\textzeroinferior`
 20551 `\let\oneinferior\textoneinferior`
 20552 `\let\twoinferior\texttwoinferior`
 20553 `\let\threeinferior\textthreeinferior`
 20554 `\let\fourinferior\textfourinferior`
 20555 `\let\fiveinferior\textfiveinferior`
 20556 `\let\sixinferior\textsixinferior`
 20557 `\let\seveninferior\textseveninferior`
 20558 `\let\eightinferior\texteightinferior`
 20559 `\let\nineinferior\textnineinferior`
 20560 `\let\plusinferior\textplusinferior`
 20561 `\let\minusinferior\textminusinferior`
 20562 `\let\equalsinferior\textequalsinferior`
 20563 `\let\parenleftinferior\textparenleftinferior`
 20564 `\let\parenrightinferior\textparenrightinferior`
 20565 `\let\ainferior\textainferior`
 20566 `\let\einferior\texteinferior`

20567 \let\oinferior\textoinferior
 20568 \let\xinferior\textxinferior
 20569 \let\schwainferior\textschwainferior
 20570 \let\hinferior\texthinferior
 20571 \let\kinferior\textkinferior
 20572 \let\linferior\textlinferior
 20573 \let\minferior\textminferior
 20574 \let\ninferior\textninferior
 20575 \let\pinferior\textpinferior
 20576 \let\sinferior\textsinferior
 20577 \let\tinferior\texttinferior
 20578 \let\Deleatur\textDeleatur
 20579 \let\hslash\texthslash
 20580 \let\Im\textIm
 20581 \let\ell\textell
 20582 \let\wp\textwp
 20583 \let\Re\textRe
 20584 \let\mho\textmho
 20585 \let\riota\textriota
 20586 \let\Finv\textFinv
 20587 \let\aleph\textaleph
 20588 \let\beth\textbeth
 20589 \let\gimel\textgimel
 20590 \let\daleth\textdaleth
 20591 \let\xfax\textfax
 20592 \let\Game\textGame
 20593 \let\leftarrow\textleftarrow
 20594 \let\uparrow\textuparrow
 20595 \let\rightarrow\textrightarrow
 20596 \let\downarrow\textdownarrow
 20597 \let\leftrightarrow\textleftrightarrow
 20598 \let\updownarrow\textupdownarrow
 20599 \let\nwarrow\textnwarrow
 20600 \let\nearrow\textnearrow
 20601 \let\searrow\textsearrow
 20602 \let\swarrow\textswarrow
 20603 \let\nleftarrow\textnleftarrow
 20604 \let\nrightarrow\textnrightarrow
 20605 \let\twoheadleftarrow\texttwoheadleftarrow
 20606 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20607 \let\twoheaduparrow\texttwoheaduparrow
 20608 \let\twoheadrightarrow\texttwoheadrightarrow
 20609 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20610 \let\twoheaddownarrow\texttwoheaddownarrow
 20611 \let\leftarrowtail\textleftarrowtail
 20612 \let\rightarrowtail\textrightarrowtail
 20613 \let\mapsto\textmapsto
 20614 \let\hookleftarrow\texthookleftarrow
 20615 \let\hookrightarrow\texthookrightarrow
 20616 \let\looparrowleft\textlooparrowleft
 20617 \let\looparrowright\textlooparrowright
 20618 \let\nlefttrightarrow\textnlefttrightarrow
 20619 \let\lightning\textlightning
 20620 \let\dlsh\textdlsh

20621 $\backslash\text{let}\backslash\text{curvearrowleft}\backslash\text{textcurvearrowleft}$
 20622 $\backslash\text{let}\backslash\text{curvearrowright}\backslash\text{textcurvearrowright}$
 20623 $\backslash\text{let}\backslash\text{leftharpoonup}\backslash\text{textleftharpoonup}$
 20624 $\backslash\text{let}\backslash\text{leftharpoondown}\backslash\text{textleftharpoondown}$
 20625 $\backslash\text{let}\backslash\text{upharpoonright}\backslash\text{textupharpoonright}$
 20626 $\backslash\text{let}\backslash\text{upharpoonleft}\backslash\text{textupharpoonleft}$
 20627 $\backslash\text{let}\backslash\text{rightharpoonup}\backslash\text{textrightharpoonup}$
 20628 $\backslash\text{let}\backslash\text{rightharpoondown}\backslash\text{textrightharpoondown}$
 20629 $\backslash\text{let}\backslash\text{downharpoonright}\backslash\text{textdownharpoonright}$
 20630 $\backslash\text{let}\backslash\text{downharpoonleft}\backslash\text{textdownharpoonleft}$
 20631 $\backslash\text{let}\backslash\text{rightleftarrows}\backslash\text{textrightleftarrows}$
 20632 $\backslash\text{let}\backslash\text{updownarrows}\backslash\text{textupdownarrows}$
 20633 $\backslash\text{let}\backslash\text{leftrightarrows}\backslash\text{textleftrightarrows}$
 20634 $\backslash\text{let}\backslash\text{leftleftarrows}\backslash\text{textleftleftarrows}$
 20635 $\backslash\text{let}\backslash\text{upuparrows}\backslash\text{textupuparrows}$
 20636 $\backslash\text{let}\backslash\text{rightrightarrows}\backslash\text{textrightrightarrows}$
 20637 $\backslash\text{let}\backslash\text{downdownarrows}\backslash\text{textdowndownarrows}$
 20638 $\backslash\text{let}\backslash\text{leftrightharpoons}\backslash\text{textleftrightharpoons}$
 20639 $\backslash\text{let}\backslash\text{rightleftharpoons}\backslash\text{textrightleftharpoons}$
 20640 $\backslash\text{let}\backslash\text{nLeftarrow}\backslash\text{textnLeftarrow}$
 20641 $\backslash\text{let}\backslash\text{nLeftrightarrow}\backslash\text{textnLeftrightarrow}$
 20642 $\backslash\text{let}\backslash\text{nRrightarrow}\backslash\text{textnRrightarrow}$
 20643 $\backslash\text{let}\backslash\text{Leftarrow}\backslash\text{textLeftarrow}$
 20644 $\backslash\text{let}\backslash\text{Uparrow}\backslash\text{textUparrow}$
 20645 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20646 $\backslash\text{let}\backslash\text{Downarrow}\backslash\text{textDownarrow}$
 20647 $\backslash\text{let}\backslash\text{Leftrightarrow}\backslash\text{textLeftrightarrow}$
 20648 $\backslash\text{let}\backslash\text{Updownarrow}\backslash\text{textUpdownarrow}$
 20649 $\backslash\text{let}\backslash\text{Nwarrow}\backslash\text{textNwarrow}$
 20650 $\backslash\text{let}\backslash\text{Nearrow}\backslash\text{textNearrow}$
 20651 $\backslash\text{let}\backslash\text{Searrow}\backslash\text{textSearrow}$
 20652 $\backslash\text{let}\backslash\text{Swarrow}\backslash\text{textSwarrow}$
 20653 $\backslash\text{let}\backslash\text{Lleftarrow}\backslash\text{textLleftarrow}$
 20654 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20655 $\backslash\text{let}\backslash\text{leftsquigarrow}\backslash\text{textleftsquigarrow}$
 20656 $\backslash\text{let}\backslash\text{rightsquigarrow}\backslash\text{textright squigarrow}$
 20657 $\backslash\text{let}\backslash\text{dashleftarrow}\backslash\text{texdashleftarrow}$
 20658 $\backslash\text{let}\backslash\text{dasheduparrow}\backslash\text{texdasheduparrow}$
 20659 $\backslash\text{let}\backslash\text{dashrightarrow}\backslash\text{texdashrightarrow}$
 20660 $\backslash\text{let}\backslash\text{dasheddownarrow}\backslash\text{texdasheddownarrow}$
 20661 $\backslash\text{let}\backslash\text{pointer}\backslash\text{textpointer}$
 20662 $\backslash\text{let}\backslash\text{downuparrows}\backslash\text{texdownuparrows}$
 20663 $\backslash\text{let}\backslash\text{leftarrowtriangle}\backslash\text{textleftarrowtriangle}$
 20664 $\backslash\text{let}\backslash\text{rightarrowtriangle}\backslash\text{textrightarrowtriangle}$
 20665 $\backslash\text{let}\backslash\text{leftrightarrowtriangle}\backslash\text{textleftrightarrowtriangle}$
 20666 $\backslash\text{let}\backslash\text{forall}\backslash\text{textforall}$
 20667 $\backslash\text{let}\backslash\text{complement}\backslash\text{textcomplement}$
 20668 $\backslash\text{let}\backslash\text{partial}\backslash\text{textpartial}$
 20669 $\backslash\text{let}\backslash\text{exists}\backslash\text{textexists}$
 20670 $\backslash\text{let}\backslash\text{nexists}\backslash\text{textnexists}$
 20671 $\backslash\text{let}\backslash\text{emptyset}\backslash\text{textemptyset}$
 20672 $\backslash\text{let}\backslash\text{triangle}\backslash\text{texttriangle}$
 20673 $\backslash\text{let}\backslash\text{nabla}\backslash\text{textnabla}$
 20674 $\backslash\text{let}\backslash\text{in}\backslash\text{textin}$

20675 $\backslash\text{let}\backslash\text{notin}\backslash\text{textnotin}$
 20676 $\backslash\text{let}\backslash\text{smallin}\backslash\text{textsmallin}$
 20677 $\backslash\text{let}\backslash\text{ni}\backslash\text{textni}$
 20678 $\backslash\text{let}\backslash\text{notowner}\backslash\text{textnotowner}$
 20679 $\backslash\text{let}\backslash\text{smallowns}\backslash\text{textsmallowns}$
 20680 $\backslash\text{let}\backslash\text{prod}\backslash\text{textprod}$
 20681 $\backslash\text{let}\backslash\text{amalg}\backslash\text{textamalg}$
 20682 $\backslash\text{let}\backslash\text{sum}\backslash\text{textsum}$
 20683 $\backslash\text{let}\backslash\text{mp}\backslash\text{textmp}$
 20684 $\backslash\text{let}\backslash\text{dotplus}\backslash\text{textdotplus}$
 20685 $\backslash\text{let}\backslash\text{Divides}\backslash\text{textDivides}$
 20686 $\backslash\text{let}\backslash\text{DividesNot}\backslash\text{textDividesNot}$
 20687 $\backslash\text{let}\backslash\text{setminus}\backslash\text{textsetminus}$
 20688 $\backslash\text{let}\backslash\text{ast}\backslash\text{textast}$
 20689 $\backslash\text{let}\backslash\text{circ}\backslash\text{textcirc}$
 20690 $\backslash\text{let}\backslash\text{surd}\backslash\text{textsqrt}$
 20691 $\backslash\text{let}\backslash\text{propto}\backslash\text{textpropto}$
 20692 $\backslash\text{let}\backslash\text{infty}\backslash\text{textinfty}$
 20693 $\backslash\text{let}\backslash\text{angle}\backslash\text{textangle}$
 20694 $\backslash\text{let}\backslash\text{measuredangle}\backslash\text{textmeasuredangle}$
 20695 $\backslash\text{let}\backslash\text{sphericalangle}\backslash\text{textsphericalangle}$
 20696 $\backslash\text{let}\backslash\text{mid}\backslash\text{textmid}$
 20697 $\backslash\text{let}\backslash\text{nmid}\backslash\text{textnmid}$
 20698 $\backslash\text{let}\backslash\text{parallel}\backslash\text{textparallel}$
 20699 $\backslash\text{let}\backslash\text{nparallel}\backslash\text{textnparallel}$
 20700 $\backslash\text{let}\backslash\text{wedge}\backslash\text{textwedge}$
 20701 $\backslash\text{let}\backslash\text{owedge}\backslash\text{textowedge}$
 20702 $\backslash\text{let}\backslash\text{vee}\backslash\text{textvee}$
 20703 $\backslash\text{let}\backslash\text{ovee}\backslash\text{textovee}$
 20704 $\backslash\text{let}\backslash\text{cap}\backslash\text{textcap}$
 20705 $\backslash\text{let}\backslash\text{cup}\backslash\text{textcup}$
 20706 $\backslash\text{let}\backslash\text{int}\backslash\text{textint}$
 20707 $\backslash\text{let}\backslash\text{iint}\backslash\text{textiint}$
 20708 $\backslash\text{let}\backslash\text{iiint}\backslash\text{textiiint}$
 20709 $\backslash\text{let}\backslash\text{ooint}\backslash\text{textoint}$
 20710 $\backslash\text{let}\backslash\text{oiint}\backslash\text{textoiint}$
 20711 $\backslash\text{let}\backslash\text{oointclockwise}\backslash\text{textointclockwise}$
 20712 $\backslash\text{let}\backslash\text{oointctrlockwise}\backslash\text{textointctrlockwise}$
 20713 $\backslash\text{let}\backslash\text{therefore}\backslash\text{texttherefore}$
 20714 $\backslash\text{let}\backslash\text{because}\backslash\text{textbecause}$
 20715 $\backslash\text{let}\backslash\text{vdotdot}\backslash\text{textvdotdot}$
 20716 $\backslash\text{let}\backslash\text{sqaredots}\backslash\text{textsquaredots}$
 20717 $\backslash\text{let}\backslash\text{dotminus}\backslash\text{textdotminus}$
 20718 $\backslash\text{let}\backslash\text{eqcolon}\backslash\text{texteqcolon}$
 20719 $\backslash\text{let}\backslash\text{sim}\backslash\text{textsim}$
 20720 $\backslash\text{let}\backslash\text{backsim}\backslash\text{textbacksim}$
 20721 $\backslash\text{let}\backslash\text{nbacksim}\backslash\text{textnbacksim}$
 20722 $\backslash\text{let}\backslash\text{wr}\backslash\text{textwr}$
 20723 $\backslash\text{let}\backslash\text{nsim}\backslash\text{textnsim}$
 20724 $\backslash\text{let}\backslash\text{eqsim}\backslash\text{texteqsim}$
 20725 $\backslash\text{let}\backslash\text{neqsim}\backslash\text{textneqsim}$
 20726 $\backslash\text{let}\backslash\text{simeq}\backslash\text{textsimeq}$
 20727 $\backslash\text{let}\backslash\text{nsimeq}\backslash\text{textnsimeq}$
 20728 $\backslash\text{let}\backslash\text{cong}\backslash\text{textcong}$

20729 $\backslash\mathrm{let}\backslash\mathrm{ncong}\backslash\mathrm{textncong}$
 20730 $\backslash\mathrm{let}\backslash\mathrm{approx}\backslash\mathrm{textapprox}$
 20731 $\backslash\mathrm{let}\backslash\mathrm{napprox}\backslash\mathrm{textnapprox}$
 20732 $\backslash\mathrm{let}\backslash\mathrm{approxeq}\backslash\mathrm{textapproxeq}$
 20733 $\backslash\mathrm{let}\backslash\mathrm{napproxeq}\backslash\mathrm{textnapproxeq}$
 20734 $\backslash\mathrm{let}\backslash\mathrm{triplesim}\backslash\mathrm{texttriplesim}$
 20735 $\backslash\mathrm{let}\backslash\mathrm{ntriplesim}\backslash\mathrm{textntriplesim}$
 20736 $\backslash\mathrm{let}\backslash\mathrm{backcong}\backslash\mathrm{textbackcong}$
 20737 $\backslash\mathrm{let}\backslash\mathrm{nbackcong}\backslash\mathrm{textnbackcong}$
 20738 $\backslash\mathrm{let}\backslash\mathrm{asympt}\backslash\mathrm{textasympt}$
 20739 $\backslash\mathrm{let}\backslash\mathrm{nasympt}\backslash\mathrm{textnasympt}$
 20740 $\backslash\mathrm{let}\backslash\mathrm{Bumpeq}\backslash\mathrm{textBumpeq}$
 20741 $\backslash\mathrm{let}\backslash\mathrm{nBumpeq}\backslash\mathrm{textnBumpeq}$
 20742 $\backslash\mathrm{let}\backslash\mathrm{bumpeq}\backslash\mathrm{textbumpeq}$
 20743 $\backslash\mathrm{let}\backslash\mathrm{nbumpeq}\backslash\mathrm{textnbumpeq}$
 20744 $\backslash\mathrm{let}\backslash\mathrm{doteq}\backslash\mathrm{textdoteq}$
 20745 $\backslash\mathrm{let}\backslash\mathrm{ndoteq}\backslash\mathrm{textndoteq}$
 20746 $\backslash\mathrm{let}\backslash\mathrm{doteqdot}\backslash\mathrm{textdoteqdot}$
 20747 $\backslash\mathrm{let}\backslash\mathrm{nDoteq}\backslash\mathrm{textnDoteq}$
 20748 $\backslash\mathrm{let}\backslash\mathrm{fallingdoteq}\backslash\mathrm{textfallingdoteq}$
 20749 $\backslash\mathrm{let}\backslash\mathrm{nfallingdoteq}\backslash\mathrm{textnfallingdoteq}$
 20750 $\backslash\mathrm{let}\backslash\mathrm{risingdoteq}\backslash\mathrm{textrisingdoteq}$
 20751 $\backslash\mathrm{let}\backslash\mathrm{nrisingdoteq}\backslash\mathrm{textnrisingdoteq}$
 20752 $\backslash\mathrm{let}\backslash\mathrm{colonequals}\backslash\mathrm{textcolonequals}$
 20753 $\backslash\mathrm{let}\backslash\mathrm{equalscolon}\backslash\mathrm{textequalscolon}$
 20754 $\backslash\mathrm{let}\backslash\mathrm{eqcirc}\backslash\mathrm{texteqcirc}$
 20755 $\backslash\mathrm{let}\backslash\mathrm{neqcirc}\backslash\mathrm{textneqcirc}$
 20756 $\backslash\mathrm{let}\backslash\mathrm{circeq}\backslash\mathrm{textcirceq}$
 20757 $\backslash\mathrm{let}\backslash\mathrm{ncirceq}\backslash\mathrm{textncirceq}$
 20758 $\backslash\mathrm{let}\backslash\mathrm{hateq}\backslash\mathrm{texthateq}$
 20759 $\backslash\mathrm{let}\backslash\mathrm{nhateq}\backslash\mathrm{textnhateq}$
 20760 $\backslash\mathrm{let}\backslash\mathrm{triangleeq}\backslash\mathrm{texttriangleeq}$
 20761 $\backslash\mathrm{let}\backslash\mathrm{neq}\backslash\mathrm{textneq}$
 20762 $\backslash\mathrm{let}\backslash\mathrm{ne}\backslash\mathrm{textne}$
 20763 $\backslash\mathrm{let}\backslash\mathrm{equiv}\backslash\mathrm{textequiv}$
 20764 $\backslash\mathrm{let}\backslash\mathrm{nequiv}\backslash\mathrm{textnequiv}$
 20765 $\backslash\mathrm{let}\backslash\mathrm{leq}\backslash\mathrm{textleq}$
 20766 $\backslash\mathrm{let}\backslash\mathrm{le}\backslash\mathrm{textle}$
 20767 $\backslash\mathrm{let}\backslash\mathrm{geq}\backslash\mathrm{textgeq}$
 20768 $\backslash\mathrm{let}\backslash\mathrm{ge}\backslash\mathrm{textge}$
 20769 $\backslash\mathrm{let}\backslash\mathrm{leqq}\backslash\mathrm{textleqq}$
 20770 $\backslash\mathrm{let}\backslash\mathrm{nleqq}\backslash\mathrm{textnleqq}$
 20771 $\backslash\mathrm{let}\backslash\mathrm{geqq}\backslash\mathrm{textgeqq}$
 20772 $\backslash\mathrm{let}\backslash\mathrm{ngeqq}\backslash\mathrm{textngeqq}$
 20773 $\backslash\mathrm{let}\backslash\mathrm{lneqq}\backslash\mathrm{textlneqq}$
 20774 $\backslash\mathrm{let}\backslash\mathrm{gneqq}\backslash\mathrm{textgneqq}$
 20775 $\backslash\mathrm{let}\backslash\mathrm{ll}\backslash\mathrm{textll}$
 20776 $\backslash\mathrm{let}\backslash\mathrm{nll}\backslash\mathrm{textnll}$
 20777 $\backslash\mathrm{let}\backslash\mathrm{gg}\backslash\mathrm{textgg}$
 20778 $\backslash\mathrm{let}\backslash\mathrm{ngg}\backslash\mathrm{textngg}$
 20779 $\backslash\mathrm{let}\backslash\mathrm{between}\backslash\mathrm{textbetween}$
 20780 $\backslash\mathrm{let}\backslash\mathrm{nless}\backslash\mathrm{textnless}$
 20781 $\backslash\mathrm{let}\backslash\mathrm{ngtr}\backslash\mathrm{textngtr}$
 20782 $\backslash\mathrm{let}\backslash\mathrm{nleq}\backslash\mathrm{textnleq}$

20783 $\backslash\mathrm{let}\backslash\mathrm{ngeq}\backslash\mathrm{textngeq}$
 20784 $\backslash\mathrm{let}\backslash\mathrm{lesssim}\backslash\mathrm{textlessim}$
 20785 $\backslash\mathrm{let}\backslash\mathrm{gtrsim}\backslash\mathrm{textgtrsim}$
 20786 $\backslash\mathrm{let}\backslash\mathrm{nlessim}\backslash\mathrm{textnlessim}$
 20787 $\backslash\mathrm{let}\backslash\mathrm{ngtrsim}\backslash\mathrm{textngtrsim}$
 20788 $\backslash\mathrm{let}\backslash\mathrm{lessgtr}\backslash\mathrm{textlessgtr}$
 20789 $\backslash\mathrm{let}\backslash\mathrm{gtrless}\backslash\mathrm{textgtrless}$
 20790 $\backslash\mathrm{let}\backslash\mathrm{ngtrless}\backslash\mathrm{textngtrless}$
 20791 $\backslash\mathrm{let}\backslash\mathrm{nlessgtr}\backslash\mathrm{textnlessgtr}$
 20792 $\backslash\mathrm{let}\backslash\mathrm{prec}\backslash\mathrm{textprec}$
 20793 $\backslash\mathrm{let}\backslash\mathrm{succ}\backslash\mathrm{textsucc}$
 20794 $\backslash\mathrm{let}\backslash\mathrm{preccurlyeq}\backslash\mathrm{textpreccurlyeq}$
 20795 $\backslash\mathrm{let}\backslash\mathrm{succcurlyeq}\backslash\mathrm{textsucccurlyeq}$
 20796 $\backslash\mathrm{let}\backslash\mathrm{precsim}\backslash\mathrm{textprecsim}$
 20797 $\backslash\mathrm{let}\backslash\mathrm{nprecsim}\backslash\mathrm{textnprecsim}$
 20798 $\backslash\mathrm{let}\backslash\mathrm{succsim}\backslash\mathrm{textsuccsim}$
 20799 $\backslash\mathrm{let}\backslash\mathrm{nsuccsim}\backslash\mathrm{textnsuccsim}$
 20800 $\backslash\mathrm{let}\backslash\mathrm{nprec}\backslash\mathrm{textnprec}$
 20801 $\backslash\mathrm{let}\backslash\mathrm{nsucc}\backslash\mathrm{textnsucc}$
 20802 $\backslash\mathrm{let}\backslash\mathrm{subset}\backslash\mathrm{textsubset}$
 20803 $\backslash\mathrm{let}\backslash\mathrm{supset}\backslash\mathrm{textsupset}$
 20804 $\backslash\mathrm{let}\backslash\mathrm{nssubset}\backslash\mathrm{textnssubset}$
 20805 $\backslash\mathrm{let}\backslash\mathrm{nsupset}\backslash\mathrm{textnsupset}$
 20806 $\backslash\mathrm{let}\backslash\mathrm{subseteq}\backslash\mathrm{textsubseteq}$
 20807 $\backslash\mathrm{let}\backslash\mathrm{supseteq}\backslash\mathrm{textsupseteq}$
 20808 $\backslash\mathrm{let}\backslash\mathrm{nsubseteq}\backslash\mathrm{textnsubseteq}$
 20809 $\backslash\mathrm{let}\backslash\mathrm{nsupseteq}\backslash\mathrm{textnsupseteq}$
 20810 $\backslash\mathrm{let}\backslash\mathrm{subsetneq}\backslash\mathrm{textsubsetneq}$
 20811 $\backslash\mathrm{let}\backslash\mathrm{supsetneq}\backslash\mathrm{textsupsetneq}$
 20812 $\backslash\mathrm{let}\backslash\mathrm{cupdot}\backslash\mathrm{textcupdot}$
 20813 $\backslash\mathrm{let}\backslash\mathrm{cupplus}\backslash\mathrm{textcupplus}$
 20814 $\backslash\mathrm{let}\backslash\mathrm{sqsubset}\backslash\mathrm{textsqssubset}$
 20815 $\backslash\mathrm{let}\backslash\mathrm{nsqsubset}\backslash\mathrm{textnsqsubset}$
 20816 $\backslash\mathrm{let}\backslash\mathrm{sqsupset}\backslash\mathrm{textsqsupset}$
 20817 $\backslash\mathrm{let}\backslash\mathrm{nsqsupset}\backslash\mathrm{textnsqsupset}$
 20818 $\backslash\mathrm{let}\backslash\mathrm{sqsubseteq}\backslash\mathrm{textsqsubseteq}$
 20819 $\backslash\mathrm{let}\backslash\mathrm{nsqsubseteq}\backslash\mathrm{textnsqsubseteq}$
 20820 $\backslash\mathrm{let}\backslash\mathrm{sqsupseteq}\backslash\mathrm{textsqsupseteq}$
 20821 $\backslash\mathrm{let}\backslash\mathrm{nsqsupseteq}\backslash\mathrm{textnsqsupseteq}$
 20822 $\backslash\mathrm{let}\backslash\mathrm{sqcap}\backslash\mathrm{textsqcap}$
 20823 $\backslash\mathrm{let}\backslash\mathrm{sqcup}\backslash\mathrm{textsqcup}$
 20824 $\backslash\mathrm{let}\backslash\mathrm{oplus}\backslash\mathrm{textoplus}$
 20825 $\backslash\mathrm{let}\backslash\mathrm{ominus}\backslash\mathrm{textominus}$
 20826 $\backslash\mathrm{let}\backslash\mathrm{otimes}\backslash\mathrm{textotimes}$
 20827 $\backslash\mathrm{let}\backslash\mathrm{oslash}\backslash\mathrm{textoslash}$
 20828 $\backslash\mathrm{let}\backslash\mathrm{odot}\backslash\mathrm{textodot}$
 20829 $\backslash\mathrm{let}\backslash\mathrm{circledcirc}\backslash\mathrm{textcircledcirc}$
 20830 $\backslash\mathrm{let}\backslash\mathrm{circledast}\backslash\mathrm{textcircledast}$
 20831 $\backslash\mathrm{let}\backslash\mathrm{circleddash}\backslash\mathrm{textcircleddash}$
 20832 $\backslash\mathrm{let}\backslash\mathrm{boxplus}\backslash\mathrm{textboxplus}$
 20833 $\backslash\mathrm{let}\backslash\mathrm{boxminus}\backslash\mathrm{textboxminus}$
 20834 $\backslash\mathrm{let}\backslash\mathrm{boxtimes}\backslash\mathrm{textboxtimes}$
 20835 $\backslash\mathrm{let}\backslash\mathrm{boxdot}\backslash\mathrm{textboxdot}$
 20836 $\backslash\mathrm{let}\backslash\mathrm{vdash}\backslash\mathrm{textvdash}$

20837 $\backslash\mathrm{let}\backslash\mathrm{dashv}\backslash\mathrm{textdashv}$
 20838 $\backslash\mathrm{let}\backslash\mathrm{ndashv}\backslash\mathrm{textndashv}$
 20839 $\backslash\mathrm{let}\backslash\mathrm{top}\backslash\mathrm{texttop}$
 20840 $\backslash\mathrm{let}\backslash\mathrm{ndownvdash}\backslash\mathrm{textndownvdash}$
 20841 $\backslash\mathrm{let}\backslash\mathrm{bot}\backslash\mathrm{textbot}$
 20842 $\backslash\mathrm{let}\backslash\mathrm{nupvdash}\backslash\mathrm{textnupvdash}$
 20843 $\backslash\mathrm{let}\backslash\mathrm{vDash}\backslash\mathrm{textvDash}$
 20844 $\backslash\mathrm{let}\backslash\mathrm{Vdash}\backslash\mathrm{textVdash}$
 20845 $\backslash\mathrm{let}\backslash\mathrm{Vvdash}\backslash\mathrm{textVvdash}$
 20846 $\backslash\mathrm{let}\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20847 $\backslash\mathrm{let}\backslash\mathrm{VDash}\backslash\mathrm{textVDash}$
 20848 $\backslash\mathrm{let}\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20849 $\backslash\mathrm{let}\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20850 $\backslash\mathrm{let}\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20851 $\backslash\mathrm{let}\backslash\mathrm{nVDash}\backslash\mathrm{textnVDash}$
 20852 $\backslash\mathrm{let}\backslash\mathrm{lhs}\backslash\mathrm{textrhs}$
 20853 $\backslash\mathrm{let}\backslash\mathrm{rhd}\backslash\mathrm{textrhd}$
 20854 $\backslash\mathrm{let}\backslash\mathrm{unlhd}\backslash\mathrm{textunlhd}$
 20855 $\backslash\mathrm{let}\backslash\mathrm{unrhd}\backslash\mathrm{textunrhd}$
 20856 $\backslash\mathrm{let}\backslash\mathrm{multimapdotbothA}\backslash\mathrm{textmultimapdotbothA}$
 20857 $\backslash\mathrm{let}\backslash\mathrm{multimapdotbothB}\backslash\mathrm{textmultimapdotbothB}$
 20858 $\backslash\mathrm{let}\backslash\mathrm{multimap}\backslash\mathrm{textmultimap}$
 20859 $\backslash\mathrm{let}\backslash\mathrm{veebar}\backslash\mathrm{textveebar}$
 20860 $\backslash\mathrm{let}\backslash\mathrm{barwedge}\backslash\mathrm{textbarwedge}$
 20861 $\backslash\mathrm{let}\backslash\mathrm{star}\backslash\mathrm{textstar}$
 20862 $\backslash\mathrm{let}\backslash\mathrm{divideontimes}\backslash\mathrm{textdivideontimes}$
 20863 $\backslash\mathrm{let}\backslash\mathrm{bowtie}\backslash\mathrm{textbowtie}$
 20864 $\backslash\mathrm{let}\backslash\mathrm{ltimes}\backslash\mathrm{texltimes}$
 20865 $\backslash\mathrm{let}\backslash\mathrm{rtimes}\backslash\mathrm{textrtimes}$
 20866 $\backslash\mathrm{let}\backslash\mathrm{leftthreetimes}\backslash\mathrm{textleftthreetimes}$
 20867 $\backslash\mathrm{let}\backslash\mathrm{rightthreetimes}\backslash\mathrm{textrightthreetimes}$
 20868 $\backslash\mathrm{let}\backslash\mathrm{backsimeq}\backslash\mathrm{textbacksimeq}$
 20869 $\backslash\mathrm{let}\backslash\mathrm{nbacksimeq}\backslash\mathrm{textnbacksimeq}$
 20870 $\backslash\mathrm{let}\backslash\mathrm{curlyvee}\backslash\mathrm{textcurlyvee}$
 20871 $\backslash\mathrm{let}\backslash\mathrm{curlywedge}\backslash\mathrm{textcurlywedge}$
 20872 $\backslash\mathrm{let}\backslash\mathrm{Subset}\backslash\mathrm{textSubset}$
 20873 $\backslash\mathrm{let}\backslash\mathrm{nSubset}\backslash\mathrm{textnSubset}$
 20874 $\backslash\mathrm{let}\backslash\mathrm{Supset}\backslash\mathrm{textSupset}$
 20875 $\backslash\mathrm{let}\backslash\mathrm{nSupset}\backslash\mathrm{textnSupset}$
 20876 $\backslash\mathrm{let}\backslash\mathrm{Cap}\backslash\mathrm{textCap}$
 20877 $\backslash\mathrm{let}\backslash\mathrm{Cup}\backslash\mathrm{textCup}$
 20878 $\backslash\mathrm{let}\backslash\mathrm{pitchfork}\backslash\mathrm{textpitchfork}$
 20879 $\backslash\mathrm{let}\backslash\mathrm{lessdot}\backslash\mathrm{textlessdot}$
 20880 $\backslash\mathrm{let}\backslash\mathrm{gtrdot}\backslash\mathrm{textgtrdot}$
 20881 $\backslash\mathrm{let}\backslash\mathrm{lll}\backslash\mathrm{texlll}$
 20882 $\backslash\mathrm{let}\backslash\mathrm{ggg}\backslash\mathrm{textggg}$
 20883 $\backslash\mathrm{let}\backslash\mathrm{lesseqgtr}\backslash\mathrm{textlesseqgtr}$
 20884 $\backslash\mathrm{let}\backslash\mathrm{gtreqless}\backslash\mathrm{textgtreqless}$
 20885 $\backslash\mathrm{let}\backslash\mathrm{curlyeqprec}\backslash\mathrm{textcurlyeqprec}$
 20886 $\backslash\mathrm{let}\backslash\mathrm{ncurlyeqprec}\backslash\mathrm{textncurlyeqprec}$
 20887 $\backslash\mathrm{let}\backslash\mathrm{curlyeqsucc}\backslash\mathrm{textcurlyeqsucc}$
 20888 $\backslash\mathrm{let}\backslash\mathrm{ncurlyeqsucc}\backslash\mathrm{textncurlyeqsucc}$
 20889 $\backslash\mathrm{let}\backslash\mathrm{npreccurlyeq}\backslash\mathrm{textnpreccurlyeq}$
 20890 $\backslash\mathrm{let}\backslash\mathrm{nsucccurlyeq}\backslash\mathrm{textnsucccurlyeq}$

20891 \let\nqsubseteq\textnqsubseteq
 20892 \let\nqsupseteq\textnqsupseteq
 20893 \let\sqsubseteq\textsqssubseteq
 20894 \let\sqsupseteq\textsqsupseteq
 20895 \let\lnsim\textlnsim
 20896 \let\gnsim\textgnsim
 20897 \let\precnsim\textprecnsim
 20898 \let\succnsim\textsuccnsim
 20899 \let\triangleleft\texttriangleleft
 20900 \let\triangleright\texttriangleright
 20901 \let\trianglelefteq\texttrianglelefteq
 20902 \let\trianglerighteq\texttrianglerighteq
 20903 \let\vdots\textvdots
 20904 \let\cdots\textcdots
 20905 \let\udots\textudots
 20906 \let\ddots\textddots
 20907 \let\barin\textbarin
 20908 \let\diameter\textdiameter
 20909 \let\backneg\textbackneg
 20910 \let\wasylozenge\textwasylozenge
 20911 \let\invbackneg\textinvbackneg
 20912 \let\clock\textclock
 20913 \let\ulcorner\textulcorner
 20914 \let\urcorner\texturcorner
 20915 \let\llcorner\textllcorner
 20916 \let\lrcorner\textlrcorner
 20917 \let\frown\textfrown
 20918 \let\smile\textsmile
 20919 \let\Keyboard\textKeyboard
 20920 \let\langle\textlangle
 20921 \let\rangle\textrangle
 20922 \let\APLinv\textAPLinv
 20923 \let\Tumbler\textTumbler
 20924 \let\notslash\textnotslash
 20925 \let\notbackslash\textnotbackslash
 20926 \let\boxbackslash\textboxbackslash
 20927 \let\APLleftarrowbox\textAPLleftarrowbox
 20928 \let\APLrightarrowbox\textAPLrightarrowbox
 20929 \let\APLuparrowbox\textAPLuparrowbox
 20930 \let\APLdownarrowbox\textAPLdownarrowbox
 20931 \let\APLinput\textAPLinput
 20932 \let\Request\textRequest
 20933 \let\Beam\textBeam
 20934 \let\hexagon\texthexagon
 20935 \let\APLbox\textAPLbox
 20936 \let\ForwardToIndex\textForwardToIndex
 20937 \let\RewindToIndex\textRewindToIndex
 20938 \let\bbslash\textbbslash
 20939 \let\CircledA\textCircledA
 20940 \let\CleaningF\textCleaningF
 20941 \let\CleaningFF\textCleaningFF
 20942 \let\CleaningP\textCleaningP
 20943 \let\CleaningPP\textCleaningPP
 20944 \let\CuttingLine\textCuttingLine

20945 \let\UParrow\textUParrow
 20946 \let\bigtriangleup\textbigtriangleup
 20947 \let\Forward\textForward
 20948 \let\triangleright\texttriangleright
 20949 \let\RHD\textRHD
 20950 \let\DOWNarrow\textDOWNarrow
 20951 \let\bigtriangledown\textbigtriangledown
 20952 \let\Rewind\textRewind
 20953 \let\triangleleft\texttriangleleft
 20954 \let\LHD\textLHD
 20955 \let\diamond\textdiamond
 20956 \let\lozenge\textlozenge
 20957 \let\LEFTCIRCLE\textLEFTCIRCLE
 20958 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20959 \let\openbullet\textopenbullet
 20960 \let\boxbar\textboxbar
 20961 \let\bigcircle\textbigcircle
 20962 \let\Cloud\textCloud
 20963 \let\FiveStar\textFiveStar
 20964 \let\FiveStarOpen\textFiveStarOpen
 20965 \let\Phone\textPhone
 20966 \let\boxempty\textboxempty
 20967 \let\Checkedbox\textCheckedbox
 20968 \let\Crossedbox\textCrossedbox
 20969 \let\Coffeecup\textCoffeecup
 20970 \let\HandCuffLeft\textHandCuffLeft
 20971 \let\HandCuffRight\textHandCuffRight
 20972 \let\HandLeft\textHandLeft
 20973 \let\HandRight\textHandRight
 20974 \let\Radioactivity\textRadioactivity
 20975 \let\Biohazard\textBiohazard
 20976 \let\Ankh\textAnkh
 20977 \let\YinYang\textYinYang
 20978 \let\frownie\textfrownie
 20979 \let\smiley\textsmiley
 20980 \let\blacksmiley\textblacksmiley
 20981 \let\sun\textsun
 20982 \let\leftmoon\textleftmoon
 20983 \let\rightmoon\textrightmoon
 20984 \let\mercury\textmercury
 20985 \let\earth\textearth
 20986 \let\male\textmale
 20987 \let\jupiter\textjupiter
 20988 \let\saturn\textsaturn
 20989 \let\uranus\texturanus
 20990 \let\neptune\textneptune
 20991 \let\pluto\textpluto
 20992 \let\aries\textaries
 20993 \let\taurus\texttaurus
 20994 \let\gemini\textgemini
 20995 \let\cancer\textcancer
 20996 \let\leo\textleo
 20997 \let\virgo\textvirgo
 20998 \let\libra\textlibra

20999 \let\scorpio\textscorpio
 21000 \let\sagittarius\textsagittarius
 21001 \let\capricornus\textcapricornus
 21002 \let\aquarius\textaquarius
 21003 \let\pisces\textpisces
 21004 \let\quarternote\textquarternote
 21005 \let\wonotes\textwonotes
 21006 \let\sixteenthnote\textsixteenthnote
 21007 \let\flat\textflat
 21008 \let\natural\textnatural
 21009 \let\sharp\textsharp
 21010 \let\recycle\textrecycle
 21011 \let\Wheelchair\textWheelchair
 21012 \let\Flag\textFlag
 21013 \let\MineSign\textMineSign
 21014 \let\ds military\textds military
 21015 \let\ds medical\textds medical
 21016 \let\ds juridical\textds juridical
 21017 \let\ds chemical\textds chemical
 21018 \let\ds biological\textds biological
 21019 \let\ds commercial\textds commercial
 21020 \let\manstar\textmanstar
 21021 \let\danger\textdanger
 21022 \let\FemaleFemale\textFemaleFemale
 21023 \let\MaleMale\textMaleMale
 21024 \let\FemaleMale\textFemaleMale
 21025 \let\Hermaphrodite\textHermaphrodite
 21026 \let\Neutral\textNeutral
 21027 \let\hexstar\texthexstar
 21028 \let\SunCloud\textSunCloud
 21029 \let\Rain\textRain
 21030 \let\noway\textnoway
 21031 \let\Mountain\textMountain
 21032 \let\Tent\textTent
 21033 \let\ScissorRight\textScissorRight
 21034 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21035 \let\ScissorHollowRight\textScissorHollowRight
 21036 \let\PhoneHandset\textPhoneHandset
 21037 \let\Tape\textTape
 21038 \let\Plane\textPlane
 21039 \let\Envelope\textEnvelope
 21040 \let\Peace\textPeace
 21041 \let\WritingHand\textWritingHand
 21042 \let\PencilRightDown\textPencilRightDown
 21043 \let\PencilRight\textPencilRight
 21044 \let\PencilRightUp\textPencilRightUp
 21045 \let\NibRight\textNibRight
 21046 \let\NibSolidRight\textNibSolidRight
 21047 \let\Checkmark\textCheckmark
 21048 \let\CheckmarkBold\textCheckmarkBold
 21049 \let\XSolid\textXSolid
 21050 \let\XSolidBold\textXSolidBold
 21051 \let\XSolidBrush\textXSolidBrush
 21052 \let\PlusOutline\textPlusOutline

21053 \let\Plus\textPlus
 21054 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21055 \let\PlusCenterOpen\textPlusCenterOpen
 21056 \let\Cross\textCross
 21057 \let\CrossOpenShadow\textCrossOpenShadow
 21058 \let\CrossOutline\textCrossOutline
 21059 \let\CrossMaltese\textCrossMaltese
 21060 \let\DavidStar\textDavidStar
 21061 \let\FourAsterisk\textFourAsterisk
 21062 \let\JackStar\textJackStar
 21063 \let\JackStarBold\textJackStarBold
 21064 \let\ClowerTips\textClowerTips
 21065 \let\FourStar\textFourStar
 21066 \let\FourStarOpen\textFourStarOpen
 21067 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21068 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21069 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21070 \let\FiveStarOutline\textFiveStarOutline
 21071 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21072 \let\FiveStarConvex\textFiveStarConvex
 21073 \let\FiveStarShadow\textFiveStarShadow
 21074 \let\AsteriskBold\textAsteriskBold
 21075 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21076 \let\EightStarTaper\textEightStarTaper
 21077 \let\EightStarConvex\textEightStarConvex
 21078 \let\SixStar\textSixStar
 21079 \let\EightStar\textEightStar
 21080 \let\EightStarBold\textEightStarBold
 21081 \let\TwelveStar\textTwelveStar
 21082 \let\SixteenStarLight\textSixteenStarLight
 21083 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21084 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21085 \let\Asterisk\textAsterisk
 21086 \let\SixFlowerAlternate\textSixFlowerAlternate
 21087 \let\FiveFlowerPetal\textFiveFlowerPetal
 21088 \let\FiveFlowerOpen\textFiveFlowerOpen
 21089 \let\EightFlowerPetal\textEightFlowerPetal
 21090 \let\SunshineOpenCircled\textSunshineOpenCircled
 21091 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21092 \let\SnowflakeChevron\textSnowflakeChevron
 21093 \let\Snowflake\textSnowflake
 21094 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21095 \let\Sparkle\textSparkle
 21096 \let\SparkleBold\textSparkleBold
 21097 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21098 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21099 \let\EightAsterisk\textEightAsterisk
 21100 \let\CircleShadow\textCircleShadow
 21101 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21102 \let\SquareTopRight\textSquareTopRight
 21103 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21104 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21105 \let\DiamandSolid\textDiamandSolid
 21106 \let\RectangleThin\textRectangleThin

21107 `\let\Rectangle\textRectangle`
 21108 `\let\RectangleBold\textRectangleBold`
 21109 `\let\perp\textperp`
 21110 `\let\notperp\textnotperp`
 21111 `\let\veedot\textveedot`
 21112 `\let\wedgedot\textwedgedot`
 21113 `\let\leftspoon\textleftspoon`
 21114 `\let\lbrackdbl\textlbrackdbl`
 21115 `\let\rbrackdbl\textrbrackdbl`
 21116 `\let\circlearrowleft\textcirclearrowleft`
 21117 `\let\circlearrowright\textcirclearrowright`
 21118 `\let\longleftarrow\textlongleftarrow`
 21119 `\let\longrightarrow\textlongrightarrow`
 21120 `\let\longleftarrow\textlongleftarrow`
 21121 `\let\Longleftarrow\textLongleftarrow`
 21122 `\let\Longrightarrow\textLongrightarrow`
 21123 `\let\Longleftarrow\textLongleftarrow`
 21124 `\let\longmapsto\textlongmapsto`
 21125 `\let\Longmapsfrom\textLongmapsfrom`
 21126 `\let\Longmapsto\textLongmapsto`
 21127 `\let\nwsearrow\textnwsearrow`
 21128 `\let\neswarrow\textneswarrow`
 21129 `\let\lhooknarrow\textlhooknarrow`
 21130 `\let\rhooknarrow\texthooknarrow`
 21131 `\let\lhooksearrow\texthooksearrow`
 21132 `\let\rhooksearrow\texthooksearrow`
 21133 `\let\leadsto\textleadsto`
 21134 `\let\rcurvearrowne\textrcurvearrowne`
 21135 `\let\lcurvearrowse\textlcurvearrowse`
 21136 `\let\lcurvearrowsw\textlcurvearrowsw`
 21137 `\let\rcurvearrowse\textrcurvearrowse`
 21138 `\let\lcurvearrowdown\textlcurvearrowdown`
 21139 `\let\rcurvearrowdown\textrcurvearrowdown`
 21140 `\let\rcurvearrowleft\textrcurvearrowleft`
 21141 `\let\rcurvearrowright\textrcurvearrowright`
 21142 `\let\leftrightharpoon\textleftrightharpoon`
 21143 `\let\rightleftharpoon\textrightleftharpoon`
 21144 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 21145 `\let\updownharpoonleftright\textupdownharpoonleftright`
 21146 `\let\leftleftharpoons\textleftleftharpoons`
 21147 `\let\upupharpoons\textupupharpoons`
 21148 `\let\rightleftharpoons\textrightleftharpoons`
 21149 `\let\downdownharpoons\textdowndownharpoons`
 21150 `\let\leftbarharpoon\textleftbarharpoon`
 21151 `\let\barleftharpoon\textbarleftharpoon`
 21152 `\let\rightbarharpoon\textrightbarharpoon`
 21153 `\let\barleftharpoon\textbarleftharpoon`
 21154 `\let\updownharpoons\textupdownharpoons`
 21155 `\let\downupharpoons\textdownupharpoons`
 21156 `\let\moo\textmoo`
 21157 `\let\llparenthesis\textllparenthesis`
 21158 `\let\rrparenthesis\textrrparenthesis`
 21159 `\let\invdiameter\textinvdiameter`
 21160 `\let\obar\textobar`

21161 $\backslash\text{let}\backslash\text{obslash}\backslash\text{textobslash}$
 21162 $\backslash\text{let}\backslash\text{obot}\backslash\text{textobot}$
 21163 $\backslash\text{let}\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 21164 $\backslash\text{let}\backslash\text{olessthan}\backslash\text{textolessthan}$
 21165 $\backslash\text{let}\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 21166 $\backslash\text{let}\backslash\text{boxslash}\backslash\text{textboxslash}$
 21167 $\backslash\text{let}\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 21168 $\backslash\text{let}\backslash\text{boxast}\backslash\text{textboxast}$
 21169 $\backslash\text{let}\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 21170 $\backslash\text{let}\backslash\text{boxbox}\backslash\text{textboxbox}$
 21171 $\backslash\text{let}\backslash\text{Valve}\backslash\text{textValve}$
 21172 $\backslash\text{let}\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 21173 $\backslash\text{let}\backslash\text{shuffle}\backslash\text{textshuffle}$
 21174 $\backslash\text{let}\backslash\text{uplus}\backslash\text{textuplus}$
 21175 $\backslash\text{let}\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 21176 $\backslash\text{let}\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 21177 $\backslash\text{let}\backslash\text{Join}\backslash\text{textJoin}$
 21178 $\backslash\text{let}\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 21179 $\backslash\text{let}\backslash\text{circplus}\backslash\text{textcircplus}$
 21180 $\backslash\text{let}\backslash\text{minusdot}\backslash\text{textminusdot}$
 21181 $\backslash\text{let}\backslash\text{dotimes}\backslash\text{textdotimes}$
 21182 $\backslash\text{let}\backslash\text{dtimes}\backslash\text{texdtimes}$
 21183 $\backslash\text{let}\backslash\text{odiv}\backslash\text{textodiv}$
 21184 $\backslash\text{let}\backslash\text{invneg}\backslash\text{textinvneg}$
 21185 $\backslash\text{let}\backslash\text{sqdoublecap}\backslash\text{textsdoublecap}$
 21186 $\backslash\text{let}\backslash\text{capdot}\backslash\text{textcapdot}$
 21187 $\backslash\text{let}\backslash\text{sqdoublecup}\backslash\text{textsdoublecup}$
 21188 $\backslash\text{let}\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 21189 $\backslash\text{let}\backslash\text{doublevee}\backslash\text{textdoublevee}$
 21190 $\backslash\text{let}\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 21191 $\backslash\text{let}\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 21192 $\backslash\text{let}\backslash\text{eqdot}\backslash\text{texteqdot}$
 21193 $\backslash\text{let}\backslash\text{neqdot}\backslash\text{textneqdot}$
 21194 $\backslash\text{let}\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 21195 $\backslash\text{let}\backslash\text{leqslant}\backslash\text{textleqslant}$
 21196 $\backslash\text{let}\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 21197 $\backslash\text{let}\backslash\text{geqslant}\backslash\text{textgeqslant}$
 21198 $\backslash\text{let}\backslash\text{ngeqslant}\backslash\text{textngeqslant}$
 21199 $\backslash\text{let}\backslash\text{lessapprox}\backslash\text{textlessapprox}$
 21200 $\backslash\text{let}\backslash\text{nlessapprox}\backslash\text{textnlessapprox}$
 21201 $\backslash\text{let}\backslash\text{gtrapprox}\backslash\text{textgtrapprox}$
 21202 $\backslash\text{let}\backslash\text{ngtrapprox}\backslash\text{textngtrapprox}$
 21203 $\backslash\text{let}\backslash\text{lneq}\backslash\text{textlneq}$
 21204 $\backslash\text{let}\backslash\text{gneq}\backslash\text{textgneq}$
 21205 $\backslash\text{let}\backslash\text{lnapprox}\backslash\text{textlnapprox}$
 21206 $\backslash\text{let}\backslash\text{gnapprox}\backslash\text{textgnapprox}$
 21207 $\backslash\text{let}\backslash\text{lesseqqgtr}\backslash\text{textlesseqqgtr}$
 21208 $\backslash\text{let}\backslash\text{gtreqqlless}\backslash\text{textgtreqqlless}$
 21209 $\backslash\text{let}\backslash\text{eqslantless}\backslash\text{texteqslantless}$
 21210 $\backslash\text{let}\backslash\text{eqslantgtr}\backslash\text{texteqslantgtr}$
 21211 $\backslash\text{let}\backslash\text{leftslice}\backslash\text{textleftslice}$
 21212 $\backslash\text{let}\backslash\text{rightslice}\backslash\text{textrightslice}$
 21213 $\backslash\text{let}\backslash\text{preceq}\backslash\text{textpreceq}$
 21214 $\backslash\text{let}\backslash\text{npreceq}\backslash\text{textnpreceq}$

21215 \let\succeq\textsucceq
 21216 \let\nsucceq\textnsucceq
 21217 \let\precneq\textprecneq
 21218 \let\succneq\textsuccneq
 21219 \let\preceqq\textpreceqq
 21220 \let\npreceqq\textnpreceqq
 21221 \let\succeqq\textsucceqq
 21222 \let\nsucceqq\textnsucceqq
 21223 \let\precneqq\textprecneqq
 21224 \let\succneqq\textsuccneqq
 21225 \let\precapprox\textprecapprox
 21226 \let\nprecapprox\textnprecapprox
 21227 \let\succapprox\textsuccapprox
 21228 \let\nsuccapprox\textnsuccapprox
 21229 \let\precnapprox\textprecnapprox
 21230 \let\succnapprox\textsuccnapprox
 21231 \let\subseteqq\textsubseteqq
 21232 \let\nsubseteqq\textnsubseteqq
 21233 \let\supseteqq\textsupseteqq
 21234 \let\nsupseteqq\textnsupseteqq
 21235 \let\dashV\textdashV
 21236 \let\ndashV\textndashV
 21237 \let\Dashv\textDashv
 21238 \let\ndashv\textndashv
 21239 \let\DashV\textDashV
 21240 \let\ndashV\textndashV
 21241 \let\downmodels\textdownmodels
 21242 \let\ndownmodels\textndownmodels
 21243 \let\upmodels\textupmodels
 21244 \let\nupmodels\textnupmodels
 21245 \let\upspoon\textupspoon
 21246 \let\interleave\textinterleave
 21247 \let\slash\textslash
 21248 \let\pentagon\textpentagon
 21249 \let\varhexagon\textvarhexagon
 21250 \let\jinferior\textjinferior
 21251 \let\slashdiv\textslashdiv
 21252 \let\fivedots\textfivedots
 21253 \let\oo\textoo
 21254 \let\GaPa\textGaPa
 21255 \let\HaPa\textHaPa
 21256 \let\ViPa\textViPa
 21257 \let\AcPa\textAcPa
 21258 \let\SePa\textSePa
 21259 \let\ZwPa\textZwPa
 21260 \let\fullnote\textfullnote
 21261 \let\halfnote\texthalfnote
 21262 \let\Vier\textVier
 21263 \let\Acht\textAcht
 21264 \let\Sech\textSech
 21265 \let\Zwdr\textZwdr
 21266 \let\Mundus\textMundus
 21267 \let\Moon\textMoon
 21268 \let\ManFace\textManFace

21269 \let\WomanFace\textWomanFace
 21270 \let\Fax\textFax
 21271 \let\Fire\textFire
 21272 \let\Bicycle\textBicycle
 21273 \let\Gentsroom\textGentsroom
 21274 \let\Ladiesroom\textLadiesroom
 21275 \let\ccnc\textccnc
 21276 \let\ccsa\textccsa
 21277 \let\Info\textInfo
 21278 \let\CESign\textCESign
 21279 \let\neg\textneg
 21280 \let\times\texttimes
 21281 \let\div\textdiv
 21282 \let\pm\textpm
 21283 \let\cdot\textcdot
 21284 }% \psdmapshortnames
 21285 \newcommand*{\psdaliasnames}{%
 21286 \let\epsdice\HyPsd@DieFace
 21287 \let\fcdice\HyPsd@DieFace
 21288 \let\MoonPha\HyPsd@MoonPha
 21289 \let\mathdollar\textdollar
 21290 \let\EyesDollar\textdollar
 21291 \let\binampersand\textampersand
 21292 \let\with\textampersand
 21293 \let\mathunderscore\textunderscore
 21294 \let\textvertline\textbar
 21295 \let\mathsterling\textsterling
 21296 \let\pounds\textsterling
 21297 \let\brokenvert\textbrokenbar
 21298 \let\mathsection\textsection
 21299 \let\S\textsection
 21300 \let\mathparagraph\textparagraph
 21301 \let\MultiplicationDot\textperiodcentered
 21302 \let\Squaredot\textperiodcentered
 21303 \let\vartimes\textmultiply
 21304 \let\MVMultiplication\textmultiply
 21305 \let\eth\dh
 21306 \let\crossd\textcrd
 21307 \let\textbard\textcrd
 21308 \let\bard\textcrd
 21309 \let\textcrh\texthbar
 21310 \let\crossh\texthbar
 21311 \let\planck\texthbar
 21312 \let\eng\ng
 21313 \let\engma\ng
 21314 \let\crossb\textcrb
 21315 \let\textbarb\textcrb
 21316 \let\barb\textcrb
 21317 \let\Florin\textflorin
 21318 \let\hv\texthvlig
 21319 \let\hausak\texthtk
 21320 \let\crossnilambda\textcrlambda
 21321 \let\barlambda\textcrlambda
 21322 \let\lambdabar\textcrlambda

21323 \let\lambdash\textcrlambda
 21324 \let\textnrleg\textPUnrleg
 21325 \let\textpipevar\textpipe
 21326 \let\textdoublepipevar\textdoublepipe
 21327 \let\textdoublebarpipevar\textdoublebarpipe
 21328 \let\textcrg\textgslash
 21329 \let\textdblig\textPUdblig
 21330 \let\textqplig\textPUqplig
 21331 \let\textcentoldstyle\textslashc
 21332 \let\textbarc\textslashc
 21333 \let\inva\textturna
 21334 \let\vara\textscripta
 21335 \let\invscripta\textturnscripta
 21336 \let\rotvara\textturnscripta
 21337 \let\hookb\texthtb
 21338 \let\hausab\texthtb
 21339 \let\varopeno\textopeno
 21340 \let\curlyc\textctc
 21341 \let\taild\textrtaild
 21342 \let\hookd\texthtd
 21343 \let\hausad\texthtd
 21344 \let\er\textrhooschwa
 21345 \let\epsi\textniepsilon
 21346 \let\hookrepsilon\textrhoorepsilon
 21347 \let\closedrepsilon\textcloserepsilon
 21348 \let\barj\textbardotlessj
 21349 \let\hookg\texthtg
 21350 \let\varg\textscriptg
 21351 \let\vod\textipagamma
 21352 \let\invh\textturnh
 21353 \let\udesc\textturnh
 21354 \let\hookh\texthth
 21355 \let\voicedh\texthth
 21356 \let\hookheng\texththeng
 21357 \let\ibar\textbari
 21358 \let\vari\textniota
 21359 \let\tildel\texttilde
 21360 \let\latfric\textbeltl
 21361 \let\taill\textrtail
 21362 \let\lz\textlyoghlig
 21363 \let\invm\textturnm
 21364 \let\rotr\textturnm
 21365 \let\legm\textturnmrleg
 21366 \let\labdentals\textltailm
 21367 \let\emgma\textltailm
 21368 \let\nj\textltailn
 21369 \let\enya\textltailn
 21370 \let\tailn\textrtailn
 21371 \let\closedniomega\textcloseomega
 21372 \let\varomega\textcloseomega
 21373 \let\invr\textturnr
 21374 \let\rotr\textturnr
 21375 \let\invlegr\textturnlonglegr
 21376 \let\tailinvr\textturnrrtail

21377 \let\legr\textlonglegr
 21378 \let\tailr\textrtailr
 21379 \let\flapr\textfishhookr
 21380 \let\flap\textfishhookr
 21381 \let\tails\textrtails
 21382 \let\curlyesh\textctesh
 21383 \let\clickt\textturnt
 21384 \let\tailt\textrtailt
 21385 \let\ubar\textbaru
 21386 \let\rotOmega\textniupsilon
 21387 \let\invv\textturnv
 21388 \let\pwedge\textturnv
 21389 \let\invw\textturnw
 21390 \let\rotw\textturnw
 21391 \let\invy\textturny
 21392 \let\roty\textturny
 21393 \let\tailz\textrtailz
 21394 \let\curlyz\textctz
 21395 \let\curlyyogh\textctyogh
 21396 \let\ejective\textglotstop
 21397 \let\glottal\textglotstop
 21398 \let\reveject\textrevglotstop
 21399 \let\clickc\textstretchc
 21400 \let\textstretchcvar\textstretchc
 21401 \let\clickb\textbullseye
 21402 \let\textObullseye\textbullseye
 21403 \let\textctjvar\textctj
 21404 \let\textturnsck\textturnk
 21405 \let\dz\textdzlig
 21406 \let\tesh\textteshlig
 21407 \let\digamma\textdigammagreek
 21408 \let\hardsign\cyrhrdsn
 21409 \let\softsign\cyrsoftsn
 21410 \let\hebsin\hebshin
 21411 \let\textsc\textPUsc
 21412 \let\textscm\textPUscm
 21413 \let\textscp\textPUscp
 21414 \let\textrevscr\textPUrevscr
 21415 \let\textrhooca\textPURhooka
 21416 \let\textrhooke\textPURhooka
 21417 \let\textrhookepsilon\textPURhookepsilon
 21418 \let\textrhoookopeno\textPURhookopeno
 21419 \let\textdoublevertline\textbardbl
 21420 \let\dag\textdagger
 21421 \let\ddagger\textdaggerdbl
 21422 \let\ddag\textdaggerdbl
 21423 \let\mathellipsis\textellipsis
 21424 \let\EurDig\texteuro
 21425 \let\EURdig\texteuro
 21426 \let\EurHv\texteuro
 21427 \let\EURhv\texteuro
 21428 \let\EurCr\texteuro
 21429 \let\EURcr\texteuro
 21430 \let\EurTm\texteuro

21431 \let\EURtm\texteuro
 21432 \let\Eur\texteuro
 21433 \let\Denarius\textDeleatur
 21434 \let\agemO\textmho
 21435 \let\EstimatedSign\textestimated
 21436 \let\Ecommerce\textestimated
 21437 \let\bindnasrepma\textinvamp
 21438 \let\parr\textinvamp
 21439 \let\MVRightArrow\textrightarrow
 21440 \let\MVRightarrow\textrightarrow
 21441 \let\MVArrowDown\textdownarrow
 21442 \let\Force\textdownarrow
 21443 \let\textglobrise\textnearrow
 21444 \let\textglobfall\textsearrow
 21445 \let\Lightning\textlightning
 21446 \let\Conclusion\textrightarrow
 21447 \let\dashedleftarrow\textdashleftarrow
 21448 \let\dashedrightarrow\textdashrightarrow
 21449 \let\varnothing\textemptyset
 21450 \let\owns\textni
 21451 \let\notni\textnotowner
 21452 \let\varprop\textpropto
 21453 \let\varangle\textsphericalangle
 21454 \let\Anglesign\textsphericalangle
 21455 \let\AngleSign\textsphericalangle
 21456 \let\notdivides\textnmid
 21457 \let\varowedge\textowedge
 21458 \let\varovee\textovee
 21459 \let\varint\textint
 21460 \let\varoint\textoint
 21461 \let\downtherefore\textbecause
 21462 \let\textdotdiv\textdotminus
 21463 \let\AC\textsim
 21464 \let\wreath\textwr
 21465 \let\nthickapprox\textnapprox
 21466 \let\VHF\texttriplesim
 21467 \let\notasymp\textnasympt
 21468 \let\Doteq\textdoteqdot
 21469 \let\corresponds\texthateq
 21470 \let\Corresponds\texthateq
 21471 \let\nequal\textneq
 21472 \let\Congruent\textequiv
 21473 \let\NotCongruent\textnequiv
 21474 \let\notequiv\textnequiv
 21475 \let\LessOrEqual\textleq
 21476 \let\LargerOrEqual\textgeq
 21477 \let\apprle\textlessim
 21478 \let\apprge\textgtrsim
 21479 \let\varoplus\textoplus
 21480 \let\varominus\textominus
 21481 \let\varotimes\textotimes
 21482 \let\varoslash\textoslash
 21483 \let\varodot\textodot
 21484 \let\ocirc\textcircledcirc

21485 \let\varocircle\textcircledcirc
 21486 \let\varoast\textcircledast
 21487 \let\oasterisk\textcircledast
 21488 \let\rightvdash\textvdash
 21489 \let\leftvdash\textdashv
 21490 \let\leftvdash\textndashv
 21491 \let\downvdash\texttop
 21492 \let\upvdash\textbot
 21493 \let\nperp\textnupvdash
 21494 \let\models\textvDash
 21495 \let\rightmodels\textvDash
 21496 \let\rightVdash\textVdash
 21497 \let\rightModels\textVDash
 21498 \let\rightvdash\textnvdash
 21499 \let\rightmodels\textnvDash
 21500 \let\rightmodels\textnvDash
 21501 \let\rightVdash\textnVdash
 21502 \let\rightModels\textnVDash
 21503 \let\lessclosed\textlhd
 21504 \let\gtrclosed\textrhd
 21505 \let\leqclosed\textunlhd
 21506 \let\trianglelefteq\textunlhd
 21507 \let\geqclosed\textunrhd
 21508 \let\trianglerighteq\textunrhd
 21509 \let\Bowtie\textbowtie
 21510 \let\varcurlyvee\textcurlyvee
 21511 \let\varcurlywedge\textcurlywedge
 21512 \let\doublecap\textCap
 21513 \let\doublecup\textCup
 21514 \let\varsubsetneq\textsubsetneq
 21515 \let\varsupsetneq\textsupsetneq
 21516 \let\lessclosed\textntriangleleft
 21517 \let\ngtrclosed\textntriangleright
 21518 \let\Clocklogo\textclock
 21519 \let\ClockLogo\textclock
 21520 \let\baro\textstmaryrdbaro
 21521 \let\varparallel\textbbslash
 21522 \let\CleaningA\textCircledA
 21523 \let\Kutline\textCuttingLine
 21524 \let\CutLine\textCuttingLine
 21525 \let\Cutline\textCuttingLine
 21526 \let\MoveUp\textUParrow
 21527 \let\APLup\textbigtriangleup
 21528 \let\Bleech\textbigtriangleup
 21529 \let\MoveDown\textDOWNarrow
 21530 \let\APLdown\textbigtriangledown
 21531 \let\Diamond\textdiamond
 21532 \let\varbigcirc\textbigcircle
 21533 \let\Telefon\textPhone
 21534 \let\Box\textboxempty
 21535 \let\CheckedBox\textCheckedbox
 21536 \let\XBox\textCrossedbox
 21537 \let\CrossedBox\textCrossedbox
 21538 \let\rightpointleft\textHandLeft

21539 \let\leftpointright\textHandRight
 21540 \let\PointingHand\textHandRight
 21541 \let\Pointinghand\textHandRight
 21542 \let\Radiation\textRadioactivity
 21543 \let\Yinyang\textYinYang
 21544 \let\YingYang\textYinYang
 21545 \let\Yingyang\textYinYang
 21546 \let\Frowny\textfrownie
 21547 \let\Smiley\textsmiley
 21548 \let\Sun\textsun
 21549 \let\Mercury\textmercury
 21550 \let\textfemale\textPUfemale
 21551 \let\female\textPUfemale
 21552 \let\venus\textPUfemale
 21553 \let\Venus\textPUfemale
 21554 \let\Female\textPUfemale
 21555 \let\Earth\textearth
 21556 \let\mars\textmale
 21557 \let\Mars\textmale
 21558 \let\Male\textmale
 21559 \let\Jupiter\textjupiter
 21560 \let\Saturn\textsaturn
 21561 \let\Uranus\texturanus
 21562 \let\Neptune\textneptune
 21563 \let\Pluto\textpluto
 21564 \let\Aries\textaries
 21565 \let\Taurus\texttaurus
 21566 \let\Gemini\textgemini
 21567 \let\Cancer\textcancer
 21568 \let\Leo\textleo
 21569 \let\Virgo\textvirgo
 21570 \let\Libra\textlibra
 21571 \let\Scorpio\textscorpio
 21572 \let\Sagittarius\textsagittarius
 21573 \let\Capricorn\textcapricornus
 21574 \let\Aquarius\textaquarius
 21575 \let\Pisces\textpisces
 21576 \let\spadesuit\textspadesuitblack
 21577 \let\Heart\textheartsuitwhite
 21578 \let\heartsuit\textheartsuitwhite
 21579 \let\diamondsuit\textdiamondsuitwhite
 21580 \let\clubsuit\textclubsuitblack
 21581 \let\leighthnote\textmusicalnote
 21582 \let\Recycling\textrecycle
 21583 \let\VarFlag\textFlag
 21584 \let\textxswup\textdsmilitary
 21585 \let\textuncrfemale\textPUuncrfemale
 21586 \let\Football\textSoccerBall
 21587 \let\CutLeft\textScissorRightBrokenBottom
 21588 \let\Cutright\textScissorRightBrokenBottom
 21589 \let\RightScissors\textScissorRight
 21590 \let\Leftscissors\textScissorRight
 21591 \let\Letter\textEnvelope
 21592 \let\Writinghand\textWritingHand

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21593 \let\checkmark\textCheckmark
21594 \let\davidstar\textDavidStar
21595 \let\llbracket\textlbrackdbl
21596 \let\rrbracket\textrrackdbl
21597 \let\RightTorque\textlcurvearrowdown
21598 \let\Righttorque\textlcurvearrowdown
21599 \let\LeftTorque\textrcurvearrowdown
21600 \let\Lefttorque\textrcurvearrowdown
21601 \let\textvarobar\textobar
21602 \let\circledbslash\textobslash
21603 \let\obackslash\textobslash
21604 \let\varobslash\textobslash
21605 \let\odplus\textobot
21606 \let\varolessthan\textolessthan
21607 \let\varogreaterthan\textogreaterthan
21608 \let\divdot\textminusdot
21609 \let\doublesqcap\textsquaddoublecap
21610 \let\doublesqcup\textsquaddoublecup
21611 \let\merge\textdoublevee
21612 \let\leftVdash\textdashV
21613 \let\nleftVdash\textndashV
21614 \let\leftmodels\textDashv
21615 \let\nleftmodels\textnDashv
21616 \let\leftModels\textDashV
21617 \let\nleftModels\textnDashV
21618 \let\varparallel\textsslash
21619 \let\textheng\textPUheng
21620 \let\textlhookfour\textPULhookfour
21621 \let\textscf\textPUscf
21622 \let\textaoilig\textPUaolig
21623 \let\Ganz\textfullnote
21624 \let\Halb\texthalfnote
21625 \let\Womanface\textWomanFace
21626 \let\Faxmachine\textFax
21627 \let\CEsign\textCESign
21628 }% \psdaliasnames
21629 </psdextra>

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52 End of file hyccheck.tex

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21630 <*check>
21631 \typeout{}
21632 \begin{document}
21633 \end{document}
21634 </check>

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