

Hypertext marks in \LaTeX

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2010/05/12 v6.81d

1 Documentation overview for `hyperref`

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

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

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

ChangeLog This file records the version history (also available as text file).

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thumbpdf`” at Euro \TeX 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 \LaTeX ”

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3 File hyccheck.tex

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

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

```

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

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

```

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

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

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hyccheck}{%
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 `\cmdl` 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#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\l%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```
231 \Hy@SetCatcodes
```

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

```

232 \RequirePackage{ltxcmds}[2010/03/09]
233 \RequirePackage{keyval}[1997/11/10]
234 \RequirePackage{kvsetkeys}[2007/09/29]
235 \RequirePackage{pdfescape}[2007/11/11]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{ifvtex}
238 \RequirePackage{ifxetex}[2006/08/21]
239 \RequirePackage{hycolor}
240 \RequirePackage{letltxmacro}[2008/06/13]
241 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
242 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
243 \def\Hy@Info#1{\PackageInfo{hyperref}{#1}}

```

4.2 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`.

```

244 \ifundefined{AfterBeginDocument}{%
245   \def\AfterBeginDocument{\AtBeginDocument}%
246 }{%

```

`\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.

```

247 \def\Hy@AtBeginDocument{%
248   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
249 }

```

`\Hy@AtEndOfPackage`

```
250 \def\Hy@AtEndOfPackage{%
```

```

251 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
252 }

```

\Hy@AtBeginDocumentHook

```

253 \def\Hy@AtBeginDocumentHook{}

```

\Hy@AtEndOfPackageHook

```

254 \def\Hy@AtEndOfPackageHook{}

```

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

```

255 \AtEndOfPackage{%
256   \Hy@AtEndOfPackageHook
257   \let\Hy@AtEndOfPackageHook\@undefined
258   \AfterBeginDocument{%
259     \Hy@AtBeginDocumentHook}%
260   \let\Hy@AtBeginDocumentHook\@undefined
261   }%
262 }

```

4.3 Switches

```

263 \newif\ifHy@typexml
264 \newif\ifHy@activeanchor
265 \newif\ifHy@backref
266 \newif\ifHy@bookmarks
267 \newif\ifHy@bookmarksnumbered
268 \newif\ifHy@bookmarksopen
269 \newif\ifHy@breaklinks
270 \newif\ifHy@centerwindow
271 \newif\ifHy@CJKbookmarks
272 \newif\ifHy@colorlinks
273 \newif\ifHy@draft
274 \let\Hy@finaltrue\Hy@draftfalse
275 \let\Hy@finalfalse\Hy@drafttrue
276 \newif\ifHy@escapeform
277 \newif\ifHy@figures
278 \newif\ifHy@fitwindow
279 \newif\ifHy@frenchlinks
280 \newif\ifHy@hyperfootnotes
281 \newif\ifHy@hyperindex
282 \newif\ifHy@hypertextnames
283 \newif\ifHy@implicit
284 \newif\ifHy@linktocpage
285 \newif\ifHy@localanchorname
286 \newif\ifHy@menubar
287 \newif\ifHy@naturalnames
288 \newif\ifHy@nesting
289 \newif\ifHy@newwindowset
290 \newif\ifHy@newwindow
291 \newif\ifHy@ocgcolorlinks
292 \newif\ifHy@pageanchor
293 \newif\ifHy@pagelabels
294 \newif\ifHy@pdfpagehidden
295 \newif\ifHy@pdfstring
296 \newif\ifHy@plainpages
297 \newif\ifHy@psize
298 \newif\ifHy@raiselinks

```

```

299 \newif\ifHy@seminarslides
300 \newif\ifHy@setpagesize
301 \newif\ifHy@texht
302 \newif\ifHy@toolbar
303 \newif\ifHy@unicode
304 \newif\ifHy@usetitle
305 \newif\ifHy@verbose
306 \newif\ifHy>windowui
307 \newif\ifHy@displaydoctitle
308 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

309 \Hy@backreffalse
310 \Hy@bookmarksnumberedfalse
311 \Hy@bookmarksopenfalse
312 \Hy@bookmarkstrue
313 \Hy@breaklinksfalse
314 \Hy@centerwindowfalse
315 \Hy@CJKbookmarksfalse
316 \Hy@escapeformfalse
317 \Hy@figuresfalse
318 \Hy@fitwindowfalse
319 \Hy@hyperfootnotetrue
320 \Hy@hyperindextrue
321 \Hy@hypertextnamestrue
322 \Hy@implicittrue
323 \Hy@linktocpagefalse
324 \Hy@localanchornamefalse
325 \Hy@menubartrue
326 \Hy@naturalnamesfalse
327 \Hy@nestingfalse
328 \Hy@newwindowsetfalse
329 \Hy@newwindowfalse
330 \Hy@pageanchortrue
331 \Hy@pagelabelstrue
332 \Hy@pdfpagehiddenfalse
333 \Hy@pdfstringfalse
334 \Hy@plainpagesfalse
335 \Hy@raiselinksfalse
336 \Hy@setpagesizetrue
337 \Hy@texhtfalse
338 \Hy@toolbartrue
339 \Hy@typexmlfalse
340 \Hy@unicodefalse
341 \Hy@usetitlefalse
342 \Hy@verbosefalse
343 \Hy>windowuitrue
344 \Hy@displaydoctitlefalse
345 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

348 \newdimen\@linkdim
349 \let\Hy@driver\@empty
350 \let\MaybeStopEarly\relax
351 \newcount\Hy@linkcounter
352 \newcount\Hy@pagecounter
353 \Hy@linkcounter0
354 \Hy@pagecounter0

```

5.1 Macros for recursions

`\Hy@ReturnAfterElseFi` The commands `\Hy@ReturnAfterElseFi` and `\Hy@ReturnAfterFi` avoid a too deep
`\Hy@ReturnAfterFi` \if-nesting especially for recursive macros.

```

355 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
356 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

357 \let\Hy@ReturnEnd\@empty
358 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
359 \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
`\Hy@safe@activetrue` babel is not loaded.

```

360 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
361 \def\Hy@safe@activetruefalse{\csname @safe@activetruefalse\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}
}

```

`\hypercalcbp`

```

362 \begingroup\expandafter\expandafter\expandafter\endgroup
363 \expandafter\ifx\csname dimexpr\endcsname\relax
364 \def\hypercalcbpdef#1#2{%
365 \begingroup
366 \toks@{%
367 \HyCal@scan#2\hypercalcbp\@nil
368 \expandafter\endgroup
369 \expandafter\def\expandafter#1\expandafter{\the\toks@}%
370 }%
371 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
372 \toks@\expandafter{\the\toks@ #1}%
373 \ifx\#2\%
374 \else
375 \Hy@ReturnAfterFi{%
376 \HyCal@do#2\@nil
377 }%
378 \fi
379 }%
380 \def\HyCal@do#1#2\@nil{%
381 \ifpackageloaded{calc}{}%
382 \Hy@Warning{%
383 For calculations \string\hypercalcbp\space needs\MessageBreak
384 package calc or e-TeX%
385 }%
386 }%
387 \setlength{\dimen@}{#1}%
388 \setlength{\dimen@}{0.99626401\dimen@}%
389 \edef\x{%
390 \toks@{%
391 \the\toks@
392 \strip@pt\dimen@
393 }%
394 }\x
395 \HyCal@scan#2\@nil
396 }%
397 \else
398 \def\hypercalcbp#1{%
399 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
400 }%
401 \def\hypercalcbpdef{\def}%
402 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

- They are surrounded by parentheses. The hexadecimal form is not supported.

- Like PostScript language strings they use the same escaping mechanism:

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

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a 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 catcodes 10 until 12.

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

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

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

```
404 \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 (v \TeX 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.

```
405 \escapechar'\%
```

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

```
406 \edef\0{\string\0}%
407 \edef\1{\string\1}%
408 \edef\2{\string\2}%
409 \edef\3{\string\3}%
```

Setting font encoding. The unicode encoding uses $\backslash 8$ and $\backslash 9$ as marker for the higher byte. $\backslash 8$ is an abbreviation for the higher bytes 0 until 7 that can be expressed by one digit. $\backslash 8$ will be converted to $\backslash 00$. However $\backslash 9$ only marks the next three digits as higher byte and will be removed later.

The encoding is set by $\backslash \text{enc@update}$ for optimizing reasons.

```
410 \ifHy@unicode
411 \edef\8{\string\8}%
412 \edef\9{\string\9}%
413 \fontencoding{PU}%
414 \HyPsd@UTFviii
415 \def\ifpdfstringunicode##1##2{##1}%
416 \else
417 \fontencoding{PD1}%
418 \def\ifpdfstringunicode##1##2{##2}%
419 \fi
420 \enc@update
```

Internal encoding commands. $\backslash \text{pdfstringdef}$ 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 $\backslash \text{@inmathwarn}$ will be disabled (see below).

```
421 \@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 ($\backslash \text{edef}$), so that the assignments of $\backslash \text{@changed@cmd}$ don't take place. To patch this behaviour I only found $\backslash \text{@inmathwarn}$ as a usable hook. While an $\backslash \text{edef}$ a warning message by $\backslash \text{@inmathwarn}$ or $\backslash \text{TextSymbolUnavailable}$ cannot be give out, so $\backslash \text{@inmathwarn}$ should be disabled. And with the help of it the assignments in $\backslash \text{@changed@cmd}$ can easily be caught (see below).

```
422 \let\@inmathwarn\HyPsd@inmathwarn
```

Unknown composite characters are built with $\backslash \text{add@accent}$, so it is redefined to provide a warning.

```
423 \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.

```
424 \let\{\textbraceleft
425 \let\}\textbraceright
426 \let\%\textbackslash
427 \let\#\textnumbersign
428 \let\$\textdollar
```

```

429 \let%\textpercent
430 \let\&\textampersand
431 % \let\~\textasciitilde
432 \let\_ \textunderscore
433 \let\P\textparagraph
434 \let\ldots\textellipsis
435 \let\dots\textellipsis

```

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

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

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

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

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

```

436 \def\{\pdfstringdefWarn\}%
437 \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.

```

438 \def\TeX{\TeX}%
439 \def\LaTeX{\LaTeX}%
440 \def\LaTeXe{\LaTeX2e}%
441 \def\exTeX{e-TeX}%
442 \def\SlitTeX{\SlitTeX}%
443 \def\MF{Metafont}%
444 \def\MP{Metapost}%

```

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

```

445 \let\fontencoding\@gobble
446 \let\fontfamily\@gobble
447 \let\fontseries\@gobble
448 \let\fontshape\@gobble
449 \let\fontsize\@gobbletwo
450 \let\selectfont\@empty
451 \let\usefont\@gobblefour
452 \let\emph\@firstofone
453 \let\textnormal\@firstofone
454 \let\textrm\@firstofone
455 \let\textsf\@firstofone
456 \let\texttt\@firstofone
457 \let\textbf\@firstofone
458 \let\textmd\@firstofone
459 \let\textit\@firstofone
460 \let\textsc\@firstofone
461 \let\textsl\@firstofone
462 \let\textup\@firstofone
463 \let\normalfont\@empty
464 \let\rmfamily\@empty
465 \let\sfamily\@empty

```

```

466 \let\ttfamily\@empty
467 \let\bfseries\@empty
468 \let\mdseries\@empty
469 \let\itshape\@empty
470 \let\scshape\@empty
471 \let\slshape\@empty
472 \let\upshape\@empty
473 \let\em\@empty
474 \let\rm\@empty
475 \let\Huge\@empty
476 \let\LARGE\@empty
477 \let\Large\@empty
478 \let\footnotesize\@empty
479 \let\huge\@empty
480 \let\large\@empty
481 \let\normalsize\@empty
482 \let\scriptsize\@empty
483 \let\small\@empty
484 \let\tiny\@empty
485 \let\mathversion\@gobble
486 \let\phantom\@gobble
487 \let\vphantom\@gobble
488 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

490 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
491 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

492 \let\textlatin\@firstofone
493 \ltx@ifundefined{language@group}{\@firstofone}%
494 \csname HyPsd@babel@language@group\endcsname
495 }%
496 \HyPsd@GreekPatch
497 \HyPsd@SpanishPatch
498 \HyPsd@RussianPatch
499 \HyPsd@BabelPatch
500 \let\@safe@activetrue\relax
501 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

502 \let\cyr\relax

```

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

```

503 \let\es@roman\@Roman

```

Package german.

```

504 \let\glqq\textglqq
505 \let\grqq\textgrqq
506 \let\glq\textglq

```

```

507 \let\grq\textgrq
508 \let\flqq\textflqq
509 \let\frqq\textfrqq
510 \let\flq\textflq
511 \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}

512 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

513 \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.

```

514 \let\hspace\HyPsd@hspace

```

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

```

515 \let\label\@gobble
516 \let\index\@gobble
517 \let\glossary\@gobble
518 \let\href\@secondoftwo
519 \let\@mkboth\@gobbletwo

```

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

```

520 \let\ref\HyPsd@ref
521 \let\pageref\HyPsd@pageref
522 \let\nameref\HyPsd@nameref
523 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

524 \let\leavevmode\@empty
525 \let\mbox\@empty

```

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

```

526 \def\halign{\pdfstringdefWarn\halign\@gobble}%
527 \let\ignorespaces\HyPsd@ignorespaces
528 \let\Hy@SectionAnchorHref\@gobble

```

Patch for cjk bookmarks.

```

529 \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`).

```
530 \Hy@pdfstringtrue
531 \pdfstringdefPreHook
```

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

```
532 \HyPsd@LetUnexpandableSpace\space
533 \HyPsd@LetUnexpandableSpace\ %
534 \HyPsd@LetUnexpandableSpace~%
535 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
536 \ltx@ifundefined{@xspace}{%
537   \let\xspace\HyPsd@ITALCORR
538 }{%
539   \let\xspace\HyPsd@XSPACE
540 }%
541 \let\/\HyPsd@ITALCORR
542 \let\bgroup\/%
543 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
544 \let\discretionary\@gobbletwo
    \@ifstar is defined in  $\LaTeX$  as follows:
```

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

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

A mimicry of `\@ifnextchar` only with expandable 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:

```
545 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
546 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
547 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
548 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

\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 \TeX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. \TeX 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 \LaTeX '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 \LaTeX 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 \TeX , 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).

```

550 \begingroup
551   \let\GenericError\@gobblefour
552   \let\GenericWarning\@gobbletwo
553   \let\GenericInfo\@gobbletwo

```

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

```

554 \ifx\nofrenchguillemets\@undefined
555   \else
556     \nofrenchguillemets
557   \fi

```

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

```

558 \let\Hy@temp\xdef
559 \let\def\HyPsd@DefCommand
560 \let\gdef\HyPsd@DefCommand
561 \let\edef\HyPsd@DefCommand
562 \let\xdef\HyPsd@DefCommand
563 \let\futurelet\HyPsd@LetCommand
564 \let\let\HyPsd@LetCommand
565 \Hy@temp#1{#2}%
566 \endgroup

```

6.2.3 Postprocessing

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

```
567 \ifx#1\@empty
568 \else
```

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

- T_EX 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 T_EX'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.
- T_EX 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.

```
569 \HyPsd@ProtectSpaces#1%
570 \let\HyPsd@String\@empty
571 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
572 \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 \HyPsd@CheckCatcodes the command \HyPsd@RemoveMask is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if \HyPsd@CheckCatcodes is called.

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

```
573 \let\HyPsd@SPACEOPTI\relax
574 {%
575 \let\HyPsd@String\@empty
576 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
577 \global\let#1\HyPsd@String
578 }%
579 \expandafter\HyPsd@RemoveMask\expandafter
580 \expandafter\@empty#1\HyPsd@end#1%
```


\HyPsd@CheckCatcodes should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```
581 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
582 \let\HyPsd@String\@empty
583 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
584 \global\let#1\HyPsd@String
```

Backslash. The double backslash disturbs parsing octal sequences, for example in an string like abc\\051 the sequence \051 is detected although the second \ belongs to the first backslash.

```
585 \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.

```
586 \ifHy@unicode
587 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
588 \HyPsd@SPACEOPTI#1%
589 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
590 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
591 {\HyPsd@SPACEOPTI\80\273}#1%
592 \else
593 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
594 \expandafter\HyPsd@Subst\expandafter{%
595 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
596 \string\273}{\HyPsd@SPACEOPTI\273}#1%
597 \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.

```
598 \ifHy@unicode
599 \HyPsd@StringSubst{\)}{\80\051}#1%
600 \HyPsd@Subst){\80\051}#1%
601 \let\HyPsd@empty\relax
602 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
603 {\HyPsd@empty\80\051}#1%
604 \else
605 \HyPsd@StringSubst{\)}{\051}#1%
606 \HyPsd@Subst){\051}#1%
607 \let\HyPsd@empty\relax
```

```

608      \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
609      \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.

```

610      \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
611      \ltx@ifundefined{@xspace}{%
612      }{%
613          \let\HyPsd@xspace\relax
614          \expandafter\HyPsd@Subst\expandafter
615              {\HyPsd@XSPACE}\HyPsd@xspace#1%
616          \let\HyPsd@xspace\HyPsd@doxspace
617      }%
618      \xdef#1{#1\HyPsd@empty}%

```

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

Since newer AcrobatReader versions now show the en- and emdash in a correct way (AR7/Linux, AR8/Linux), the substitution code for them is enabled starting with version 6.781.

```

619      \HyPsd@Subst{---}\textemdash#1%
620      \HyPsd@Subst{--}\textendash#1%
621 %      \HyPsd@Subst{fi}\textfi#1%
622 %      \HyPsd@Subst{fl}\textfl#1%
623      \HyPsd@Subst{!'}\textexclamdown#1%
624      \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

625      \let\HyPsd@empty\@empty

```

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

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

```

626      \ifHy@unicode
627          \HyPsd@StringSubst{\textparenleft#1%
628          \HyPsd@Subst(\textparenleft#1%
629      \else

```

```

630 \HyPsd@StringSubst\({\050}#1%
631 \HyPsd@Subst({\050}#1%
632 \HyPsd@StringSubst{\050}{\string\{ }#1%
633 \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.

```

634 \ifHy@unicode
635 \edef\HyPsd@SPACEOPTI{\80\040}%
636 \else
637 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
638 \fi
639 \xdef#1{#1\@empty}%
640 \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.

```

641 \endgroup
642 \begingroup
643 \ifHy@unicode
644 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

645 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
646 \ltx@ifundefined{StringEncodingConvertTest}{%
647 }{%
648 \EdefUnescapeString\HyPsd@temp#1%
649 \ifxetex
650 \let\HyPsd@UnescapedString\HyPsd@temp
651 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
652 {utf16be}{ascii-print}{%
653 \EdefEscapeString\HyPsd@temp\HyPsd@temp
654 \global\let#1\HyPsd@temp
655 \HyPsd@EscapeTeX#1%
656 \Hy@unicodedefalse
657 }{%
658 \HyPsd@ToBigChars#1%
659 }%
660 \else
661 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
662 {utf16be}{pdfdoc}{%
663 \EdefEscapeString\HyPsd@temp\HyPsd@temp
664 \global\let#1\HyPsd@temp
665 \HyPsd@EscapeTeX#1%
666 \Hy@unicodedefalse
667 }{%
668 \fi
669 }%
670 \fi
671 \fi
672 \HyPsd@XeTeXBigCharsfalse

```

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

```
673 \pdfstringdefPostHook#1%
674 \endgroup
675 }
```

`\Hy@pdfstringdef`

```
676 \def\Hy@pdfstringdef#1#2{%
677 \pdfstringdef\Hy@gtemp{#2}%
678 \let#1\Hy@gtemp
679 }
```

6.3 Encodings

6.3.1 Xe_{TeX}

```
680 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
681 \catcode\z@=12 %
682 \ifxetex
683 \expandafter\@firstofone
684 \else
685 \let\HyPsd@XeTeXBigCharstrue\@empty
686 \let\HyPsd@XeTeXBigCharsfalse\@empty
687 \expandafter\@gobble
688 \fi
689 {%
690 \newif\ifHyPsd@XeTeXBigChars
691 \def\HyPsd@XeTeXBigCharsfalse{%
692 \global\let\ifHyPsd@XeTeXBigChars\iffalse
693 }%
694 \def\HyPsd@XeTeXBigCharstrue{%
695 \global\let\ifHyPsd@XeTeXBigChars\iftrue
696 }%
697 \def\HyPsd@ToBigChars#1{%
698 \ifHyPsd@XeTeXBigChars
699 \EdefEscapeHex\HyPsd@UnescapedString{%
700 \expandafter\@gobbletwo\HyPsd@UnescapedString
701 }%
702 \begingroup
703 \toks@{%
704 \escapechar=92\relax
705 \let\x\HyPsd@ToBigChar
706 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
707 \relax\relax\relax\relax\relax\relax
708 \edef\x{%
709 \endgroup
710 \gdef\noexpand#1{\the\toks@}%
711 }%
712 \x
713 \fi
714 }%
715 \def\HyPsd@ToBigChar#1#2#3#4{%
716 \ifx\relax#1\relax
717 \let\x\relax
718 \else
719 \count@=#1#2#3#4\relax
720 \let\y\@empty
```

```

721 \lccode\z@=\count@
722 \ifnum\count@=40 % (
723 \let\y\@backslashchar
724 \else
725 \ifnum\count@=41 % )
726 \let\y\@backslashchar
727 \else
728 \ifnum\count@=92 % backslash
729 \let\y\@backslashchar
730 \else
731 \ifnum\count@=10 % newline
732 \edef\y###1{\string\n}%
733 \else
734 \ifnum\count@=13 % carriage return
735 \edef\y###1{\string\r}%
736 \fi
737 \fi
738 \fi
739 \fi
740 \fi
741 \lowercase{%
742 \toks@\expandafter{%
743 \the\expandafter\toks@
744 \y
745 ^^@%
746 }%
747 }%
748 \fi
749 \x
750 }%
751 }
752 \Hy@temp

```

6.3.2 Workaround for package linguex

```

753 \@ifpackageloaded{linguex}{%
754 \let\HyLinguex@OrgB\b
755 \let\HyLinguex@OrgC\c
756 \let\HyLinguex@OrgD\d
757 \def\HyLinguex@Restore{%
758 \let\b\HyLinguex@OrgB
759 \let\c\HyLinguex@OrgC
760 \let\d\HyLinguex@OrgD
761 }%
762 \Hy@AtEndOfPackage{%
763 \pdfstringdefDisableCommands{%
764 \ltx@ifundefined{oldb}{\let\b\oldb}%
765 \ltx@ifundefined{oldc}{\let\c\oldc}%
766 \ltx@ifundefined{oldd}{\let\d\oldd}%
767 }%
768 }%
769 }{%
770 \let\HyLinguex@Restore\relax
771 }%

```

6.3.3 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with $\text{\LaTeX 2}_{\epsilon}$'s NFSS. Because the informational strings are not set by \TeX 's typesetting mechanism but for inter-

preting 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.

```

772 \ifundefined{T@PD1}{%
773   \input{pdlenc.def}%
774   \HyLinguex@Restore
775 }{}
776 \DeclareFontFamily{PD1}{pdf}{}
777 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
778 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.4 PU encoding

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

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

```

779 \def\HyPsd@InitUnicode{%
780   \ifundefined{T@PU}{%
781     \input{puenc.def}%
782     \HyLinguex@Restore
783   }{}%
784   \DeclareFontFamily{PU}{pdf}{}%
785   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
786   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
787   \let\HyPsd@InitUnicode\relax
788 }

```

6.4 Additional user commands

6.4.1 \texorpdfstring

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

```

789 \def\texorpdfstring{%
790   \ifHy@pdfstring
791     \expandafter\@secondoftwo
792   \else
793     \expandafter\@firstoftwo
794   \fi
795 }

```

6.4.2 Hooks for \pdfstringdef

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

```

796 \ifundefined{pdfstringdefPreHook}{%
797   \let\pdfstringdefPreHook\@empty
798 }{}

```

```

799 \@ifundefined{pdfstringdefPostHook}{%
800   \let\pdfstringdefPostHook\@gobble
801 }{}

```

`\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`.

```

802 \def\pdfstringdefDisableCommands{%
803   \begingroup
804   \makeatletter
805   \HyPsd@DisableCommands
806 }

```

`\HyPsd@DisableCommands`

```

807 \long\def\HyPsd@DisableCommands#1{%
808   \toks0=\expandafter{\pdfstringdefPreHook}%
809   \toks1={#1}%
810   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
811   \endgroup
812 }

```

`\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`.

```

813 \def\pdfstringdefWarn#1{%
814   \expandafter\noexpand\csname\<>-string#1\endcsname
815 }

```

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.

```

816 \begingroup

```

```

817 \catcode0=12 %
818 \def\x{\endgroup
819 \def\HyPsd@ignorespaces{%
820 \romannumeral\expandafter'\expandafter^^@%
821 \romannumeral'^^@%
822 }%
823 }%
824 \x

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```

825 \def\HyPsd@BabelPatch{%
826 \let\HyOrg@languageshorthands\languageshorthands
827 \let\languageshorthands\HyPsd@LanguageShorthands
828 }
829 \RequirePackage{pdfdoccmds}[2009/04/10]
830 \begingroup\expandafter\expandafter\expandafter\endgroup
831 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
832 \let\HyPsd@langshort@system\@empty
833 \def\HyPsd@LanguageShorthands#1{%
834 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
835 \HyPsd@langshort@system
836 \expandafter\@gobble
837 \else
838 \expandafter\@firstofone
839 \fi
840 {%
841 \HyOrg@languageshorthands{#1}%
842 }%
843 }%
844 \else
845 \def\HyPsd@LanguageShorthands#1{%
846 \ifnum\pdf@strcmp{#1}{system}=\z@
847 \expandafter\@gobble
848 \else
849 \expandafter\@firstofone
850 \fi
851 {%
852 \HyOrg@languageshorthands{#1}%
853 }%
854 }%
855 \fi
856 \def\Hy@temp{%
857 \@ifpackageloaded{babel}{%
858 \@ifpackagelater{babel}{2008/03/16}{%
859 \let\Hy@temp\@empty
860 }{%

```



```

861 \def\HyPsd@BabelPatch{%
862 \let\HyOrg@languageshorthands\languageshorthands
863 }%
864 }%
865 }{}%
866 }
867 \Hy@temp
868 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
869 \newif\ifHy@next

Nothing to do for english.
870 \ltx@ifundefined{danish@sh@.sel}{}{}%
871 \def\HyPsd@babel@danish{%
872 \declare@shorthand{danish}{"}{}%
873 \declare@shorthand{danish}{"}~{}{}%
874 }%
875 }
876 \ltx@ifundefined{dutch@sh@.sel}{}{}%
877 \def\HyPsd@babel@dutch{%
878 \declare@shorthand{dutch}{"}{}%
879 \declare@shorthand{dutch}{"}~{}{}%
880 }%
881 }
882 \ltx@ifundefined{finnish@sh@.sel}{}{}%
883 \def\HyPsd@babel@finnish{%
884 \declare@shorthand{finnish}{"}{}%
885 }%
886 }
887 \ltx@ifundefined{french@sh@.sel}{}{}%
888 \def\HyPsd@babel@frenchb{%
889 \def\guill@spacing{ }%
890 }%
891 }
892 \ltx@ifundefined{german@sh@.sel}{}{}%
893 \def\HyPsd@babel@german{%
894 \declare@shorthand{german}{"}f{}f{}%
895 \declare@shorthand{german}{"}|{}{}%
896 \declare@shorthand{german}{"}~{}{}%
897 }%
898 }
899 \ltx@ifundefined{macedonian@sh@.sel}{}{}%
900 \def\HyPsd@babel@macedonian{%
901 \declare@shorthand{macedonian}{"}|{}{}%
902 \declare@shorthand{macedonian}{"}~{}{}%
903 }%
904 }{}
905 \ltx@ifundefined{ngerman@sh@.sel}{}{}%
906 \def\HyPsd@babel@ngerman{%
907 \declare@shorthand{ngerman}{"}|{}{}%
908 \declare@shorthand{ngerman}{"}~{}{}%
909 }%
910 }
911 \ltx@ifundefined{portuges@sh@.sel}{}{}%
912 \def\HyPsd@babel@portuges{%
913 \declare@shorthand{portuges}{"}|{}{}%
914 }%
915 }

```

```

916 \ltx@ifundefined{russian@sh@"@sel}{-}{%
917   \def\HyPsd@babel@russian{%
918     \declare@shorthand{russian}{-}{-}%
919     \declare@shorthand{russian}{-}{-}%
920   }%
921 }
922 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
923   \def\HyPsd@babel@slovene{%
924     \declare@shorthand{slovene}{-}{-}%
925   }%
926 }

```

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

```

927 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
928   \def\HyPsd@babel@spanish{%
929     \declare@shorthand{spanish}{<<}{\guillemotleft}%
930     \declare@shorthand{spanish}{>>}{\guillemotright}%
931     \declare@shorthand{spanish}{=}{}-%
932     \declare@shorthand{spanish}{-}{-}%
933     \declare@shorthand{spanish}{!}{\textexclamdown}%
934     \declare@shorthand{spanish}{?}{\textquestiondown}%
935   }%
936 }
937 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
938   \def\HyPsd@babel@swedish{%
939     \declare@shorthand{swedish}{-}{-}%
940     \declare@shorthand{swedish}{-}{-}%
941   }%
942 }
943 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
944   \def\HyPsd@babel@ukrainian{%
945     \declare@shorthand{ukrainian}{-}{-}%
946     \declare@shorthand{ukrainian}{-}{-}%
947   }%
948 }
949 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
950   \def\HyPsd@babel@usorbian{%
951     \declare@shorthand{usorbian}{f}{f}%
952     \declare@shorthand{usorbian}{-}{-}%
953   }%
954 }
955 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
956   \let\HyPsd@GreekPatch\@empty
957 }{%
958   \def\HyPsd@GreekPatch{%
959     \let\greeknumeral\HyPsd@greeknumeral
960     \let\Greeknatural\HyPsd@greeknumeral
961   }%
962 }
963 \def\HyPsd@greeknumeral#1{%
964   \HyPsd@GreekNum\@firstoftwo{#1}%
965 }
966 \def\HyPsd@Greeknumeral#1{%
967   \HyPsd@GreekNum\@secondoftwo{#1}%
968 }
969 \def\HyPsd@GreekNum#1#2{%
970   \ifHy@unicode
971     \ifnum#2<\@ne

```

```

972 \@arabic{#2}%
973 \else
974 \ifnum#2<1000000 %
975 \HyPsd@@GreekNum#1{#2}%
976 \else
977 \@arabic{#2}%
978 \fi
979 \fi
980 \else
981 \@arabic{#2}%
982 \fi
983 }
984 \def\HyPsd@@GreekNum#1#2{%
985 \ifnum#2<\@m
986 \ifnum#2<10 %
987 \expandafter\HyPsd@GreekNumI
988 \expandafter\@gobble\expandafter#1\number#2%
989 \else
990 \ifnum#2<100 %
991 \expandafter\HyPsd@GreekNumII
992 \expandafter\@gobble\expandafter#1\number#2%
993 \else
994 \expandafter\HyPsd@GreekNumIII
995 \expandafter\@gobble\expandafter#1\number#2%
996 \fi
997 \fi
998 \ifnum#2>\z@
999 \textnumeralsigngreek
1000 \fi
1001 \else
1002 \ifnum#2<\@M
1003 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1004 \else
1005 \ifnum#2<100000 %
1006 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1007 \else
1008 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1009 \fi
1010 \fi
1011 \fi
1012 }
1013 \def\HyPsd@GreekNumI#1#2#3{%
1014 #1{%
1015 \ifnum#3>\z@
1016 \textnumeralsignlowergreek
1017 \fi
1018 }%
1019 \expandafter#2%
1020 \ifcase#3 %
1021 {}{}%
1022 \or\textalpha\textAlpha
1023 \or\textbeta\textBeta
1024 \or\textgamma\textGamma
1025 \or\textdelta\textDelta
1026 \or\textepsilon\textEpsilon
1027 \or\textstigmagreek\textStigmagreek
1028 \or\textzeta\textZeta

```

```

1029 \or\texteta\textEta
1030 \or\texttheta\textTheta
1031 \else
1032   {}{}%
1033 \fi
1034 }
1035 \def\HyPsd@GreekNumII#1#2#3#4{%
1036   #1{%
1037     \ifnum#3>\z@
1038       \textnumeralsignlowergreek
1039     \fi
1040   }%
1041   \expandafter#2%
1042   \ifcase#3 %
1043     {}{}%
1044     \or\textiota\textIota
1045     \or\textkappa\textKappa
1046     \or\textlambda\textLambda
1047     \or\textmu\textMu
1048     \or\textnu\textNu
1049     \or\textxi\textXi
1050     \or\textomicron\textOmicron
1051     \or\textpi\textPi
1052     \or\textkoppagreek\textKoppagreek
1053     \else
1054       {}{}%
1055     \fi
1056   \HyPsd@GreekNumI#1#2#4%
1057 }
1058 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1059   #1{%
1060     \ifnum#3>\z@
1061       \textnumeralsignlowergreek
1062     \fi
1063   }%
1064   \expandafter#2%
1065   \ifcase#3 %
1066     {}{}%
1067     \or\textrho\textRho
1068     \or\textsigma\textSigma
1069     \or\texttau\textTau
1070     \or\textupsilon\textUpsilon
1071     \or\textphi\textPhi
1072     \or\textchi\textChi
1073     \or\textpsi\textPsi
1074     \or\textomega\textOmega
1075     \or\textsampigreek\textSampigreek
1076     \else
1077       {}{}%
1078     \fi
1079   \HyPsd@GreekNumII#1#2#4#5%
1080 }
1081 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1082   \HyPsd@GreekNumI\@firstofone#1#2%
1083   \HyPsd@@GreekNum#1{#3#4#5}%
1084 }
1085 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%

```

```

1086 \HyPsd@GreekNumII\@firstofone#1#2#3%
1087 \HyPsd@@GreekNum#1{#4#5#6}%
1088 }
1089 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1090 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1091 \HyPsd@@GreekNum#1{#5#6#7}%
1092 }

1093 \def\HyPsd@SpanishPatch{%
1094 \ltx@ifundefined{es@save@dot}{%
1095 }{%
1096 \let\.\es@save@dot
1097 }%
1098 }

```

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

```

1099 \def\HyPsd@RussianPatch{%
1100 \ltx@ifundefined{russian@sh@"@-@}{%
1101 }{%
1102 \@namedef{russian@sh@"@-@}{-}%
1103 }%
1104 }

```

6.5.3 CJK patch

```

1105 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1106 \def\HyPsd@CJKhook{%
1107 \ltx@ifpackageloaded{CJK}{%
1108 \let\CJK@kern\relax
1109 \let\CJKkern\relax
1110 \let\CJK@CJK\relax
1111 \ifHy@CJKbookmarks
1112 \HyPsd@CJKhook@bookmarks
1113 \fi
1114 \HyPsd@CJKhook@unicode
1115 }{%
1116 }

```

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 (≥ 0x40).

```

1117 \begingroup
1118 \catcode"7F=\active
1119 \toks@{%
1120 \let\CJK@ignorespaces\empty
1121 \def\CJK@char#1{\@gobbletwo}%

```

```

1122 \let\CJK@charx\@gobblefour
1123 \let\CJK@punctchar\@gobblefour
1124 \def\CJK@punctcharx#1{\@gobblefour}%
1125 \catcode"7F=\active
1126 \def^^7f#1^^7f#2^^7f{%
1127   \string #1\HyPsd@DecimalToOctal{#2}%
1128 }%
1129 % ... ?
1130 \ifHy@unicode
1131   \def\Hy@cjkpku{\80}%
1132 \else
1133   \let\Hy@cjkpku\@empty
1134 \fi
1135 \HyPsd@CJKActiveChars
1136 }%
1137 \count@=127 %
1138 \@whilenum\count@<255 \do{%
1139   \advance\count@ by 1 %
1140   \lccode'\~=\count@
1141   \lowercase{%
1142     \toks@\expandafter{\the\toks@ ~}%
1143   }%
1144 }%
1145 \toks@\expandafter{\the\toks@ !}%
1146 \xdef\HyPsd@CJKhook@bookmarks{%
1147   \the\toks@
1148 }%
1149 \endgroup

```

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

```

1150 \def\HyPsd@CJKActiveChars#1{%
1151   \ifx#1!%
1152     \let\HyPsd@CJKActiveChars\relax
1153   \else
1154     \edef#1{\noexpand\Hy@cjkpku\string#1}%
1155   \fi
1156   \HyPsd@CJKActiveChars
1157 }

```

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

```

1158 \def\HyPsd@DecimalToOctal#1{%
1159   \ifcase #1 %
1160     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1161     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1162     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1163     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1164     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1165     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1166     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1167     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1168     \or @\or A\or B\or C\or D\or E\or F\or G%
1169     \or H\or I\or J\or K\or L\or M\or N\or O%
1170     \or P\or Q\or R\or S\or T\or U\or V\or W%
1171     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1172     \or \140\or a\or b\or c\or d\or e\or f\or g%
1173     \or h\or i\or j\or k\or l\or m\or n\or o%

```

```

1174 \or p\or q\or r\or s\or t\or u\or v\or w%
1175 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1176 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1177 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1178 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1179 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1180 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1181 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1182 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1183 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1184 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1185 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1186 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1187 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1188 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1189 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1190 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1191 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1192 \fi
1193 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1194 \def\HyPsd@CJKhook@unicode{%
1195 \let\Unicode\HyPsd@CJK@Unicode
1196 \let\CJKnumber\HyPsd@CJKnumber
1197 \let\CJKdigits\HyPsd@CJKdigits
1198 }

```

\HyPsd@CJK@Unicode

```

1199 \def\HyPsd@CJK@Unicode#1#2{%
1200 \ifnum#1<256 %
1201 \HyPsd@DecimalToOctalFirst{#1}%
1202 \HyPsd@DecimalToOctalSecond{#2}%
1203 \else
1204 \933%
1205 \expandafter\expandafter\expandafter\HyPsd@HighA
1206 \intcalcDiv{#1}{4}!%
1207 \933%
1208 \ifcase\intcalcMod{#1}{4} %
1209 4\or 5\or 6\or 7%
1210 \fi
1211 \HyPsd@DecimalToOctalSecond{#2}%
1212 \fi
1213 }

1214 \def\HyPsd@HighA#1!{%
1215 \expandafter\expandafter\expandafter\HyPsd@HighB
1216 \IntCalcDiv#1!64!!%
1217 \expandafter\expandafter\expandafter\HyPsd@HighD
1218 \IntCalcMod#1!64!!%
1219 }
1220 \def\HyPsd@HighB#1!{%
1221 \expandafter\expandafter\expandafter\HyPsd@HighC
1222 \IntCalcDec#1!!%
1223 }

```

```

1224 \def\HyPsd@HighC#1!{%
1225   \IntCalcDiv#1!4!%
1226   \@backslashchar
1227   \IntCalcMod#1!4!%
1228 }
1229 \def\HyPsd@HighD#1!{%
1230   \ifcase\IntCalcDiv#1!8! %
1231     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1232   \fi
1233   \ifcase\IntCalcMod#1!8! %
1234     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1235   \fi
1236 }
1237 \def\HyPsd@DecimalToOctalFirst#1{%
1238   \9%
1239   \ifcase#1 %
1240     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1241     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1242     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1243     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1244     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1245     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1246     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1247     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1248     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1249     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1250     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1251     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1252     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1253     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1254     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1255     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1256     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1257     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1258     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1259     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1260     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1261     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1262     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1263     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1264     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1265     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1266     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1267     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1268     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1269     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1270     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1271     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1272   \fi
1273 }
1274 \def\HyPsd@DecimalToOctalSecond#1{%
1275   \ifcase #1 %
1276     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1277     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1278     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1279     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1280     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%

```



```

1281 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1282 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1283 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1284 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1285 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1286 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1287 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1288 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1289 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1290 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1291 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1292 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1293 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1294 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1295 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1296 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1297 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1298 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1299 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1300 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1301 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1302 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1303 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1304 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1305 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1306 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1307 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1308 \fi
1309 }

1310 \def\HyPsd@CJKNnumber#1{%
1311 \ifnum#1<\z@
1312 \CJk@minus
1313 \expandafter\HyPsd@@CJKNnumber\expandafter{\number-\number#1}%
1314 \else
1315 \expandafter\HyPsd@@CJKNnumber\expandafter{\number#1}%
1316 \fi
1317 }

1318 \def\HyPsd@@CJKNnumber#1{%
1319 \ifcase#1 %
1320 \CJk@zero\or\CJk@one\or\CJk@two\or\CJk@three\or\CJk@four\or
1321 \CJk@five\or\CJk@six\or\CJk@seven\or\CJk@eight\or\CJk@nine\or
1322 \CJk@ten\or\CJk@ten\CJk@one\or\CJk@ten\CJk@two\or
1323 \CJk@ten\CJk@three\or\CJk@ten\CJk@four\or\CJk@ten\CJk@five\or
1324 \CJk@ten\CJk@six\or\CJk@ten\CJk@seven\or\CJk@ten\CJk@eight\or
1325 \CJk@ten\CJk@nine
1326 \else
1327 \ifnum#1<10000 %
1328 \HyPsd@CJKNnumberFour#1!\@empty{20}%
1329 \@empty
1330 \else
1331 \ifnum#1<100000000 %
1332 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1333 \IntCalcDiv#1!10000!%
1334 !\@empty{20}%
1335 \CJk@tenthousand
1336 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1337 \IntCalcMod#1!10000!%

```

```

1338      !\CJK@zero{10}%
1339      \@empty
1340      \else
1341      \expandafter\HyPsd@CJKnumberLarge
1342      \number\IntCalcDiv#1!100000000!\expandafter!%
1343      \number\IntCalcMod#1!100000000!!%
1344      \fi
1345      \fi
1346      \fi
1347  }
1348  \def\HyPsd@CJKnumberLarge#1!#2!{%
1349  \HyPsd@CJKnumberFour#1!{}{20}%
1350  \CJK@hundredmillion
1351  \ifnum#2=\z@
1352  \else
1353  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1354  \IntCalcDiv#2!10000!%
1355  !\CJK@zero{10}%
1356  \CJK@tenthousand
1357  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1358  \IntCalcMod#2!10000!%
1359  !\CJK@zero{10}%
1360  \@empty
1361  \fi
1362  }
1363  \def\HyPsd@CJKnumberFour#1!#2#3{%
1364  \ifnum#1=\z@
1365  \expandafter\@gobble
1366  \else
1367  \ifnum#1<1000 %
1368  #2%
1369  \HyPsd@CJKnumberThree#1!{}{#3}%
1370  \else
1371  \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1372  \CJK@thousand
1373  \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1374  \IntCalcMod#1!1000!%
1375  !\CJK@zero{10}%
1376  \fi
1377  \fi
1378  }
1379  \def\HyPsd@CJKnumberThree#1!#2#3{%
1380  \ifnum#1=\z@
1381  \else
1382  \ifnum#1<100 %
1383  #2%
1384  \HyPsd@CJKnumberTwo#1!{}{#3}%
1385  \else
1386  \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1387  \CJK@hundred
1388  \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1389  \IntCalcMod#1!100!%
1390  !\CJK@zero{10}%
1391  \fi
1392  \fi
1393  }
1394  \def\HyPsd@CJKnumberTwo#1!#2#3{%

```

```

1395 \ifnum#1=\z@
1396 \else
1397 \ifnum#1<#3 %
1398   #2%
1399   \HyPsd@@CJKnumber{#1}%
1400 \else
1401   \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1402   \CJK@ten
1403   \ifnum\IntCalcMod#1!10!=\z@
1404   \else
1405   \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1406   \fi
1407 \fi
1408 \fi
1409 }

1410 \def\HyPsd@CJKdigits#1{%
1411   \ifx*#1\relax
1412   \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1413   \else
1414   \HyPsd@@CJKdigits\CJK@null{#1}%
1415   \fi
1416 }

1417 \def\HyPsd@@CJKdigits#1#2{%
1418   \ifx\#2\%
1419   \else
1420   \HyPsd@@@CJKdigits#1#2\@nil
1421   \fi
1422 }%

1423 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1424   \HyPsd@CJKdigit#1{#2}%
1425   \ifx\#3\%
1426   \expandafter\@gobble
1427   \else
1428   \expandafter\@firstofone
1429   \fi
1430   {%
1431   \HyPsd@@@CJKdigits#1#3\@nil
1432   }%
1433 }

1434 \def\HyPsd@CJKdigit#1#2{%
1435   \ifcase#2 %
1436   #1\or
1437   \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1438   \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1439   \fi
1440 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

1441 \def\HyPsd@inmathwarn#1#2{%
1442   \ifx#2\expandafter
1443     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1444       \HyPsd@GLYPHERR
1445       \expandafter\@gobble\string#1%
1446       >%
1447       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1448     \else
1449       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1450     \fi
1451   \else
1452     \expandafter#2%
1453   \fi
1454 }
1455 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1456 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1457 \def\HyPsd@add@accent#1#2{%
1458   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1459   #2%
1460 }%

```

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`.

```
1461 \def\HyPsd@LetUnexpandableSpace#1{%
1462   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1463 }
```

`\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.

```
1464 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1465 \edef\HyPsd@XSPACE{\string#\string X}
1466 \edef\HyPsd@ITALCORR{\string#\string I}
1467 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1468 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1469 \def\HyPsd@@hspace#1*#2\END{%
1470   \ifx\#2\%
1471     \HyPsd@hspacetest{#1}%
1472   \else
1473     \expandafter\HyPsd@hspacetest
1474   \fi
1475 }
```

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

```
1476 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1477 \ltx@ifundefined{tocsection}{%
1478   \let\HyPsd@AMSClassfix\relax
1479 }{%
1480   \def\HyPsd@AMSClassfix{%
1481     \let\tocpart\HyPsd@tocsection
1482     \let\tocchapter\HyPsd@tocsection
1483     \let\tocappendix\HyPsd@tocsection
1484   }
```

```

1484 \let\tocsection\HyPsd@tocsection
1485 \let\tocsubsection\HyPsd@tocsection
1486 \let\tocsubsubsection\HyPsd@tocsection
1487 \let\tocparagraph\HyPsd@tocsection
1488 }%
1489 \def\HyPsd@tocsection#1#2#3{%
1490 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1491 #3%
1492 }%
1493 }

```

6.5.11 Reference commands

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

```

1494 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1495 \def\HyPsd@@ref#1*#2\END{%
1496 \ifx\#2\%
1497 \HyPsd@@@ref{#1}%
1498 \else
1499 \expandafter\HyPsd@@@ref
1500 \fi
1501 }%

```

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

```

1502 \def\HyPsd@@@ref#1{%
1503 \expandafter\ifx\csname r@#1\endcsname\relax
1504 ??%
1505 \else
1506 \expandafter\expandafter\expandafter
1507 \@car\csname r@#1\endcsname\@nil
1508 \fi
1509 }

```

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

```

1510 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1511 \def\HyPsd@@pageref#1*#2\END{%
1512 \ifx\#2\%
1513 \HyPsd@@@pageref{#1}%
1514 \else
1515 \expandafter\HyPsd@@@pageref
1516 \fi
1517 }

```

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

```

1518 \def\HyPsd@@@pageref#1{%
1519 \expandafter\ifx\csname r@#1\endcsname\relax
1520 ??%
1521 \else
1522 \expandafter\expandafter\expandafter\expandafter
1523 \expandafter\expandafter\expandafter\@car
1524 \expandafter\expandafter\expandafter\@gobble

```

```

1525 \csname r@#1\endcsname{}\@nil
1526 \fi
1527 }

```

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

```

1528 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1529 \def\HyPsd@@nameref#1*#2\END{%
1530 \ifx\#2\%
1531 \HyPsd@@@nameref{#1}%
1532 \else
1533 \expandafter\HyPsd@@@nameref
1534 \fi
1535 }

```

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

```

1536 \def\HyPsd@@@nameref#1{%
1537 \expandafter\ifx\csname r@#1\endcsname\relax
1538 ??%
1539 \else
1540 \expandafter\expandafter\expandafter\expandafter
1541 \expandafter\expandafter\expandafter\@car
1542 \expandafter\expandafter\expandafter\@gobbletwo
1543 \csname r@#1\endcsname{}\@nil
1544 \fi
1545 }

```

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

```

1546 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1547 \def\HyPsd@@autoref#1*#2\END{%
1548 \ifx\#2\%
1549 \HyPsd@@@autoref{#1}%
1550 \else
1551 \expandafter\HyPsd@@@autoref
1552 \fi
1553 }

```

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

```

1554 \def\HyPsd@@@autoref#1{%
1555 \expandafter\ifx\csname r@#1\endcsname\relax
1556 ??%
1557 \else
1558 \expandafter\expandafter\expandafter\HyPsd@autorefname
1559 \csname r@#1\endcsname{}\@nil
1560 \expandafter\expandafter\expandafter
1561 \@car\csname r@#1\endcsname\@nil
1562 \fi
1563 }

```

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

```

1564 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%

```

```

1565 \ifx\#4\%
1566 \else
1567 \HyPsd@@autorefname#4.\@nil
1568 \fi
1569 }

```

\HyPsd@@autorefname

```

1570 \def\HyPsd@@autorefname#1.#2\@nil{%
1571 \ltx@ifundefined{#1autorefname}{%
1572 \ltx@ifundefined{#1name}{%
1573 }{%
1574 \csname#1name\endcsname\space
1575 }%
1576 }{%
1577 \csname#1autorefname\endcsname\space
1578 }%
1579 }

```

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 cause 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 doesn't have the meaning of \relax, \HyPsd@CheckCatcodes will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

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

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

\HyPsd@DefCommand

\HyPsd@LetCommand

```

1580 \begingroup
1581 \def\x#1#2{%
1582 \endgroup
1583 \let#1\def
1584 \def\HyPsd@DefCommand##1##2##3{%
1585 #1%
1586 \expandafter\noexpand

```



```

1587 \csname\expandafter\@gobble\string##1\@empty\endcsname
1588 \@gobble
1589 }%
1590 \let#2\let
1591 \def\HyPsd@@LetCommand##1{%
1592 \expandafter\ifx\csname##1\expandafter\endcsname
1593 \csname iftrue\endcsname
1594 \pdfstringdefWarn\let
1595 \expandafter\@gobble
1596 \else
1597 \expandafter\ifx\csname##1\expandafter\endcsname
1598 \csname iffalse\endcsname
1599 \pdfstringdefWarn\let
1600 \expandafter\expandafter\expandafter\@gobble
1601 \else
1602 #2%
1603 \expandafter\noexpand
1604 \csname##1\expandafter\expandafter\expandafter\endcsname
1605 \fi
1606 \fi
1607 }%
1608 }%
1609 \expandafter\x\csname <def>-command\expandafter\endcsname
1610 \csname <let>-command\endcsname
1611 \def\HyPsd@LetCommand#1{%
1612 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1613 \expandafter\expandafter\expandafter{%
1614 \expandafter\@gobble\string#1\@empty
1615 }%
1616 }

```

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).

```

1617 \def\HyPsd@ifnextchar#1{%
1618 \pdfstringdefWarn#1%
1619 \expandafter\@gobbletwo\@gobble
1620 }

```

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`.

```

1621 \def\HyPsd@protected@testopt#1{%

```

```

1622 \pdfstringdefWarn#1%
1623 \@gobbletwo
1624 }

```

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:

```

1625 \def\HyPsd@Warning#1{%
1626   \begingroup
1627   \def\space{ }%
1628   \Hy@Warning{#1}%
1629   \endgroup
1630 }

```

6.6.2 Protecting spaces

```

1631 \RequirePackage{etexcmds}[2007/09/09]
1632 \ifetex@unexpanded
1633   \expandafter\@secondoftwo
1634 \else
1635   \expandafter\@firstoftwo
1636 \fi
1637 {%

```

`\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`.

```

1638 \def\HyPsd@ProtectSpaces#1{%
1639   \iftrue
1640     \expandafter\HyPsd@@ProtectSpacesFi
1641     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1642   \fi
1643 }%

```

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

```

1644 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1645   \fi
1646   \ifx\scrollmode#2\scrollmode
1647     \HyPsd@RemoveMask#1\HyPsd@End#3%
1648   \else
1649     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1650     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1651   \fi
1652 }%

```

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.

```

1653 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1654   \toks@{\expandafter{#1}}%
1655   \xdef#2{\the\toks@}%
1656 }%

```

```

1657 }{%
1658   \let\HyPsd@fi\fi
1659   \def\HyPsd@ProtectSpaces#1{%
1660     \xdef#1{%
1661       \iftrue
1662         \expandafter\HyPsd@@ProtectSpacesFi
1663         \expandafter|\expandafter\@empty#1| %
1664       \HyPsd@fi
1665     }%
1666     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1667   }%
1668   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1669     \fi
1670     \etex@unexpanded{#1}%
1671     \ifx\scrollmode#2\scrollmode
1672     \else
1673       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1674     \HyPsd@fi
1675   }%
1676   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1677     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1678   }%
1679 }

```

6.6.3 Remove grouping braces

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

```

1680 \def\HyPsd@RemoveBraces#1{%
1681   \ifx\scrollmode#1\scrollmode
1682   \else
1683     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1684   \fi
1685 }

```

`\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 `\Hy@ReturnAfterFi`.

```

1686 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1687   \fi
1688   \def\Hy@temp@A{#1#2}%
1689   \def\Hy@temp@B{#3}%
1690   \ifx\Hy@temp@A\Hy@temp@B
1691     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1692       \HyPsd@String#1%
1693     }%
1694   \ifx\scrollmode#2\scrollmode
1695   \else
1696     \Hy@ReturnAfterFiFiEnd{%
1697       \HyPsd@RemoveBraces{#2}%
1698     }%

```

```

1699 \fi
1700 \else
1701 \def\Hy@temp@A{#1}%
1702 \HyPsd@AppendItalcorr\HyPsd@String
1703 \ifx\Hy@temp@A\@empty
1704 \Hy@ReturnAfterElseFiFiEnd{%
1705 \HyPsd@RemoveBraces{#2}%
1706 }%
1707 \else
1708 \HyPsd@ProtectSpaces\Hy@temp@A
1709 \HyPsd@AppendItalcorr\Hy@temp@A
1710 \Hy@ReturnAfterFiFiEnd{%
1711 \expandafter\HyPsd@RemoveBraces\expandafter
1712 {\Hy@temp@A#2}%
1713 }%
1714 \fi
1715 \fi
1716 \Hy@ReturnEnd
1717 }

```

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

```

1718 \def\HyPsd@AppendItalcorr#1{%
1719 \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1}%
1720 }
1721 \def\HyPsd@@AppendItalcorr#1#2{%
1722 \expandafter\def\expandafter#2\expandafter{#2#1}%
1723 }

```

6.6.4 Catcode check

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).

```

1724 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1725 \global\let\HyPsd@Rest\relax
1726 \ifcat\relax\noexpand#1\relax
1727 \ifx#1\protect
1728 \else
1729 \ifx#1\penalty
1730 \setbox\z@=\hbox{%
1731 \afterassignment\HyPsd@AfterCountRemove
1732 \count@=#2\HyPsd@End
1733 }%
1734 \else
1735 \ifx#1\kern
1736 \setbox\z@=\hbox{%
1737 \afterassignment\HyPsd@AfterDimenRemove

```

```

1738         \dimen@=#2\HyPsd@End
1739     }%
1740 \else
1741     \ifx#1\hskip
1742     \setbox\z@=\hbox{%
1743         \afterassignment\HyPsd@AfterSkipRemove
1744         \skip@=#2\HyPsd@End
1745     }%
1746 \else
1747     \HyPsd@CatcodeWarning{#1}%
1748 \fi
1749 \fi
1750 \fi
1751 \fi
1752 \else
1753 \ifcat#1A% letter
1754 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1755     \HyPsd@String#1%
1756 }%
1757 \else
1758 \ifcat#1 % SPACE
1759 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1760     \HyPsd@String\HyPsd@SPACEOPTI
1761 }%
1762 \else
1763 \ifcat$#1%
1764 \HyPsd@CatcodeWarning{math shift}%
1765 \else
1766 \ifcat&#1%
1767 \HyPsd@CatcodeWarning{alignment tab}%
1768 \else
1769 \ifcat^#1%
1770 \HyPsd@CatcodeWarning{superscript}%
1771 \else
1772 \ifcat_#1%
1773 \HyPsd@CatcodeWarning{subscript}%
1774 \else
1775 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1776     \HyPsd@String#1%
1777 }%
1778 \fi
1779 \fi
1780 \fi
1781 \fi
1782 \fi
1783 \fi
1784 \fi
1785 \ifx\HyPsd@Rest\relax
1786 \ifx\scrollmode#2\scrollmode
1787 \else
1788 \Hy@ReturnAfterFiFiEnd{%
1789     \HyPsd@CheckCatcodes#2\HyPsd@End
1790 }%
1791 \fi
1792 \else
1793 \ifx\HyPsd@Rest\@empty
1794 \else

```

```

1795 \Hy@ReturnAfterFiFiEnd{%
1796 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1797 }%
1798 \fi
1799 \fi
1800 \Hy@ReturnEnd
1801 }

```

Remove counts, dimens, skips.

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

```

1802 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1803 \gdef\HyPsd@Rest{#1}%
1804 }

```

`\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.

```

1805 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1806 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1807 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1808 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1809 \else
1810 \ifdim\dimen@=\z@
1811 \else
1812 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1813 \fi
1814 \gdef\HyPsd@Rest{#1}%
1815 \fi
1816 }

```

`\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).

```

1817 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1818 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1819 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1820 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1821 \else
1822 \ifdim\skip@=\z@
1823 \else
1824 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1825 \fi
1826 \gdef\HyPsd@Rest{#1}%
1827 \fi
1828 }

```

Catcode warnings.

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

```

1829 \def\HyPsd@CatcodeWarning#1{%
1830 \HyPsd@Warning{%
1831 Token not allowed in a PDF string (%
1832 \ifHy@unicode
1833 Unicode%
1834 \else

```

```

1835     PDFDocEncoding%
1836     \fi
1837   ):%
1838   \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1839 }%
1840 }
1841 \begingroup
1842 \catcode‘\|=0 %
1843 \catcode‘\|=12 %
1844 |gdef|HyPsd@RemoveCmdPrefix#1{%
1845   |expandafter|HyPsd@@RemoveCmdPrefix
1846   |string#1|@empty\<>-|@empty|@empty
1847 }%
1848 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1849 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1850 \def\HyPsd@RemoveSpaceWarning#1{%
1851   \HyPsd@Warning{%
1852     Token not allowed in a PDF string (%)
1853     \ifHy@unicode
1854       Unicode%
1855     \else
1856       PDFDocEncoding%
1857     \fi
1858   ):%
1859   \MessageBreak #1\MessageBreak
1860   removed%
1861 }%
1862 }

```

\HyPsd@ReplaceSpaceWarning

```

1863 \def\HyPsd@ReplaceSpaceWarning#1{%
1864   \HyPsd@Warning{%
1865     Token not allowed in a PDF string (%)
1866     \ifHy@unicode
1867       Unicode%
1868     \else
1869       PDFDocEncoding%
1870     \fi
1871   ):%
1872   \MessageBreak #1\MessageBreak
1873   replaced by space%
1874 }%
1875 }

```

6.6.5 Check for wrong glyphs

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

```

1876 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1877   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1878     \HyPsd@String#1%
1879   }%
1880   \ifx\\#2\\%
1881   \else
1882     \Hy@ReturnAfterFi{%

```

```

1883 \HyPsd@GlyphProcessWarning#2\@empty
1884 }%
1885 \fi
1886 }
1887 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1888 \HyPsd@@GlyphProcessWarning#1++>%
1889 \HyPsd@GlyphProcess#2\@empty
1890 }
1891 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1892 \ifx\#2\%
1893 \HyPsd@Warning{%
1894 Glyph not defined in %
1895 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1896 removing \@backslashchar#1'%
1897 }%
1898 \else
1899 \HyPsd@Warning{%
1900 Composite letter \@backslashchar#1+#2'\MessageBreak
1901 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1902 \MessageBreak
1903 removing \@backslashchar#1'%
1904 }%
1905 \fi
1906 }

```

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.

```

1907 \def\HyPsd@spaceopti#1{ % first space
1908 \ifx\HyPsd@spaceopti#1%
1909 \040%
1910 \else
1911 #1%
1912 \fi
1913 }%

```

6.6.6 Replacing tokens

\HyPsd@Subst To save tokens \HyPsd@StringSubst is an wrapper for the command \HyPsd@Subst that does all the work: In string stored in command #3 it replaces the tokens #1 with #2.

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.

1914 \def\HyPsd@Subst#1#2#3{%
1915 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1916 \fi
1917 ##1%
1918 \ifx\scrollmode##2\scrollmode
1919 \else
1920 #2%
1921 \HyPsd@@ReplaceFi##2\END
1922 \fi
1923 }%

```



```

1924 \xdef#3{%
1925   \iftrue
1926     \expandafter\HyPsd@@ReplaceFi#3#1\END
1927   \fi
1928 }%
1929 }

```

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

```

1930 \def\HyPsd@StringSubst#1{%
1931   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1932 }

```

`\HyPsd@EscapeTeX`

```

1933 \begingroup
1934 \lccode'\!='\%%
1935 \lccode'\|='\\%
1936 \lccode'\(='{\%
1937 \lccode'\)='}\%
1938 \lccode'0=\ltx@zero
1939 \lccode'1=\ltx@zero
1940 \lccode'3=\ltx@zero
1941 \lccode'4=\ltx@zero
1942 \lccode'5=\ltx@zero
1943 \lccode'7=\ltx@zero
1944 \lowercase{\endgroup
1945 \def\HyPsd@EscapeTeX#1{%
1946   \HyPsd@Subst!{|045}#1%
1947   \HyPsd@Subst({|173}#1%
1948   \HyPsd@Subst){|175}#1%
1949 }%
1950 }

```

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.

```

1951 \def\HyPsd@doxspace#1{%
1952   \ifx#1\relax\else
1953     \ifx#1.\else
1954       \ifx#1:\else
1955         \ifx#1,\else
1956           \ifx#1;\else
1957             \ifx#1!\else
1958               \ifx#1?\else
1959                 \ifx#1/\else
1960                   \ifx#1-\else
1961                     \ifx#1'\else
1962                       \HyPsd@SPACEOPTI
1963                     \fi
1964                   \fi
1965                 \fi
1966               \fi
1967             \fi
1968           \fi

```

```

1969  \fi
1970  \fi
1971  \fi
1972  \fi
1973  #1%
1974 }%

```

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.

```

1975 \begingroup
1976 \catcode'\|=0 %
1977 \catcode'\=12 %

```

\HyPsd@ConvertToUnicode

```

1978 |gdef|HyPsd@ConvertToUnicode#1{%
1979 |xdef#1{%
1980 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1981 }%
1982 |ifx#1|@empty
1983 |else
1984 |xdef#1{%
1985 \376\377%
1986 #1%
1987 }%
1988 |fi
1989 }%

```

\HyPsd@DoConvert

```

1990 |gdef|HyPsd@DoConvert#1{%
1991 |ifx#1|@empty
1992 |else
1993 |Hy@ReturnAfterFi{%
1994 |ifx#1\%%
1995 \%%
1996 |expandafter|HyPsd@DoEscape
1997 |else
1998 |HyPsd@Char{#1}%
1999 |expandafter|HyPsd@DoConvert
2000 |fi
2001 }%
2002 |fi
2003 }%

```

\HyPsd@DoEscape

```

2004 |gdef|HyPsd@DoEscape#1{%
2005 |ifx#19%
2006 |expandafter|HyPsd@GetTwoBytes
2007 |else
2008 |Hy@ReturnAfterFi{%
2009 |ifx#18%
2010 00%
2011 |expandafter|HyPsd@GetTwoBytes
2012 |else

```

```

2013      #1%
2014      |expandafter|HyPsd@GetOneByte
2015      |fi
2016      }%
2017      |fi
2018      }%

```

`\HyPsd@GetTwoBytes`

```

2019 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2020   #1\#2#3#4%
2021   |HyPsd@DoConvert
2022   }%

```

`\HyPsd@GetOneByte`

```

2023 |gdef|HyPsd@GetOneByte#1#2{%
2024   #1#2%
2025   |HyPsd@DoConvert
2026   }%
2027 |endgroup

```

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

```

2028 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2029   \xdef#4{#4#1#2}%
2030   \HyPsd@@ConvertToUnicode#3\END#4%
2031 }

```

`\HyPsd@Char`

```

2032 \begingroup
2033 \catcode0=9 %
2034 \catcode'\^=7 %
2035 \catcode'\^^=12 %
2036 \def\x{^^^0000}%
2037 \expandafter\endgroup
2038 \ifx\x\@empty
2039   \def\HyPsd@Char#1{%
2040     \ifnum'#1<128 %
2041       \@backslashchar 000#1%
2042     \else
2043       \ifnum'#1<65536 %
2044         \expandafter\HyPsd@CharTwoByte\number'#1!%
2045       \else
2046         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2047         \intcalcSub{'#1}{65536}!%
2048       \fi
2049     \fi
2050   }%
2051 \def\HyPsd@CharTwoByte#1!{%
2052   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2053   \IntCalcDiv#1!256!!%
2054   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2055   \IntCalcMod#1!256!!%
2056 }%
2057 \def\HyPsd@CharOctByte#1!{%
2058   \@backslashchar
2059   \IntCalcDiv#1!64!%
2060   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2061   \IntCalcMod#1!8!%

```

```

2062 }%
2063 \def\HyPsd@CharSurrogate#1!{%
2064 \@backslashchar 33%
2065 \IntCalcDiv#1!262144!%
2066 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2067 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2068 \@backslashchar 33%
2069 \expandafter\expandafter\expandafter\IntCalcAdd
2070 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2071 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2072 \IntCalcMod#1!256!!%
2073 }%
2074 \else
2075 \def\HyPsd@Char#1{%
2076 \@backslashchar 000#1%
2077 }%
2078 \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`

```

2079 \begingroup\expandafter\expandafter\expandafter\endgroup
2080 \expandafter\ifx\csname numexpr\endcsname\relax
2081 \let\HyPsd@UTFviii\relax
2082 \else
2083 \begingroup
2084 \lccode'\~='^f4\relax
2085 \lowercase{\endgroup
2086 \def\HyPsd@UTFviii{%
2087 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2088 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2089 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2090 \ifx~\HyPsd@UTFviii@ccxliv@undef
2091 \let~\HyPsd@UTFviii@ccxliv@def
2092 \fi
2093 \let\unichar\HyPsd@unichar
2094 }%
2095 }%
2096 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2097 \edef\HyPsd@UTFviii@ccxliv@def{%
2098 \noexpand\UTFviii@four@octets\string ~^f4%
2099 }%

```

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

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

$$\begin{aligned} b &:= A - 4 * (A/4) & (2) \\ c &:= B/8 - 8 * ((8 * (B/8))/8) & (3) \\ d &:= B - 8 * (B/8) & (4) \\ & & (5) \end{aligned}$$

```

2100 \def\HyPsd@UTFviii@two#1#2{%
2101 \expandafter\HyPsd@UTFviii@@two
2102 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2103 \number'#1\expandafter| %
2104 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2105 \number'#2 \@nil
2106 }%
2107 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2108 \expandafter\8%
2109 \number\numexpr #1-48\expandafter\relax
2110 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2111 \number\numexpr #3-8*%
2112 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2113 \number\numexpr #4-8*#3\relax
2114 }%

```

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

$$\begin{aligned} a &:= A/4 - 56 & (6) \\ b &:= 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) & (7) \\ c &:= B/4 - 32 - ((B - 128 < 32)?0 : 8) & (8) \\ d &:= B - 4 * (B/4) & (9) \\ e &:= C/8 - 16 & (10) \\ f &:= C - 8 * (C/8) & (11) \\ & & (12) \end{aligned}$$

```

2115 \def\HyPsd@UTFviii@three#1#2#3{%
2116 \expandafter\HyPsd@UTFviii@@three
2117 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2118 \number'#1\expandafter| %
2119 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2120 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2121 \number'#2\expandafter| %
2122 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2123 \number'#3 \@nil
2124 }%
2125 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2126 \expandafter\9%
2127 \number\numexpr #1-56\expandafter\relax
2128 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2129 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2130 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2131 \number\numexpr #6-16\expandafter\relax
2132 \number\numexpr #7-8*#6\relax
2133 }%

```

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 = uuuuu - 1
UTF-16: 110110ww wwzzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

2134 \def\HyPsd@UTFviii@four#1#2{%
2135 \expandafter\HyPsd@@UTFviii@four\number
2136 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2137 \expandafter|\number
2138 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2139 }%
2140 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2141 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2142 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2143 \ifodd#2 %
2144 \number\dimexpr(#2-1)/2\relax
2145 \else
2146 \number\dimexpr#2/2\relax
2147 \fi
2148 \number\dimexpr\ifodd#2 4+\fi
2149 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2150 \933%
2151 \expandafter\HyPsd@@@UTFviii@four\number
2152 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2153 }%
2154 \def\HyPsd@@@UTFviii@four#1|#2{%
2155 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2156 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2157 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2158 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2159 }%

```

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

```

2160 \def\HyPsd@unichar#1{%
2161 \ifHy@unicode
2162 \ifnum#1>"10FFFF %
2163 \HyPsd@UnicodeReplacementCharacter % illegal
2164 \else
2165 \ifnum#1>"FFFF %

```

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

```

2166 \expandafter\HyPsd@unichar\expandafter{%
2167 \number\dimexpr 55296+
2168 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2169 \relax\relax\relax
2170 }%

```

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

```

2171 \expandafter\HyPsd@unichar\expandafter{%
2172 \number\dimexpr#1-9216%
2173 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2174 \relax\relax\relax
2175 }%
2176 \else
2177 \ifnum#1>"7FF %
2178 \9%
2179 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2180 \number
2181 \dimexpr.00390625\dimexpr\number#1sp\relax\relax

```

```

2182     }%
2183     \else
2184     \8%
2185     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2186     \fi
2187     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2188     \number
2189     \numexpr#1-256*\number
2190     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2191     }%
2192     \fi
2193     \fi
2194     \else
2195     .% unsupported (Unicode -> PDF Doc Encoding)
2196     \fi
2197 }%
2198 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2199 \def\HyPsd@unichar@first@byte#1{%
2200 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2201 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2202 \number
2203 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2204 \relax\relax\relax
2205 }%
2206 }%
2207 \def\HyPsd@unichar@second@byte#1{%
2208 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2209 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2210 \number
2211 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2212 \relax\relax\relax
2213 }%
2214 }%
2215 \def\HyPsd@unichar@octtwo#1{%
2216 \number\dimexpr.125\dimexpr#1sp\relax\relax
2217 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2218 \relax\relax\relax
2219 }%
2220 \fi

```

7 Support of other packages

7.1 Class memoir

```

2221 \@ifclassloaded{memoir}{%
2222 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2223 }{}

```

7.2 Package subfigure

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

```

2224 \@ifpackageloaded{subfigure}{%
2225 \ltx@ifundefined{sub@label}{%
2226 \Hy@hypertexnamesfalse
2227 }{%
2228 \renewcommand*{\sub@label}[1]{%
2229 \@bsphack

```

```

2230 \subfig@oldlabel{#1}%
2231 \if@filesw
2232 \beginingroup
2233 \edef\@currentlabstr{%
2234 \expandafter\strip@prefix\meaning\@currentlabelname
2235 }%
2236 \protected@write\@auxout{}\@currentlabstr
2237 \string\newlabel{sub@#1}{%
2238 {\@nameuse{@@thesub\@capttype}}%
2239 {\thepage}%
2240 }%
2241 \expandafter\strip@period\@currentlabstr
2242 \relax.\relax\@@@%
2243 }%
2244 {\@currentHref}%
2245 }%
2246 }%
2247 }%
2248 \endgroup
2249 \fi
2250 \@esphack
2251 }%
2252 \@ifpackagelater{subfigure}{2002/03/26}{\%
2253 \providecommand*\@toclevel@subfigure{1}%
2254 \providecommand*\@toclevel@subtable{1}%
2255 }%
2256 }%
2257 }{}

```

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:

```

2258 \ltx@ifundefined{XR@addURL}{\%
2259 }{}

```

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.

```

2260 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2261 \def\xr@dURL#1#2#3#4#5\{\%
2262 {#1}{#2}%
2263 \if!#4!%
2264 \else
2265 {#3}{#4}{\xr@URL}%
2266 \fi
2267 }%
2268 }

```

```

2269 \def\Hy@true{true}
2270 \def\Hy@false{false}

```

Providing dummy definitions.

```

2271 \let\literalps@out\@gobble
2272 \newcommand\pdfbookmark[3]{}
2273 \def\Acrobatmenu#1#2{\leavevmode#2}
2274 \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

```
2275 \let\HyperRaiseLinkHook\@empty
2276 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2277 \def\Hy@raisedlink#1{%
2278   \ifvmode
2279     #1%
2280   \else
2281     \penalty\@M
2282     \smash{%
2283       \begingroup
2284         \let\HyperRaiseLinkLength\@tempdima
2285         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2286         \HyperRaiseLinkHook
2287       \expandafter\endgroup
2288       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2289     }%
2290   \fi
2291 }
```

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

```
2292 \def\Hy@SaveLastskip{%
2293   \let\Hy@RestoreLastskip\relax
2294   \ifvmode
2295     \ifdim\lastskip=\z@
2296       \let\Hy@RestoreLastskip\nobreak
2297     \else
2298       \begingroup
2299         \skip@=-\lastskip
2300         \edef\x{%
2301           \endgroup
2302           \def\noexpand\Hy@RestoreLastskip{%
2303             \noexpand\ifvmode
2304               \noexpand\nobreak
2305               \vskip\the\skip@
2306               \vskip\the\lastskip\relax
2307             \noexpand\fi
2308           }%
2309         }%
2310       \x
2311     \fi
2312   \else
2313     \ifhmode
2314       \ifdim\lastskip=\z@
```

```

2315     \let\Hy@RestoreLastskip\nobreak
2316   \else
2317     \begingroup
2318     \skip@=-\lastskip
2319     \edef\x{%
2320       \endgroup
2321       \def\noexpand\Hy@RestoreLastskip{%
2322         \noexpand\ifhmode
2323         \noexpand\nobreak
2324         \hskip\the\skip@
2325         \hskip\the\lastskip\relax
2326         \noexpand\fi
2327       }%
2328     }%
2329   \x
2330 \fi
2331 \fi
2332 \fi
2333 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2334 \def\Hy@boolkey{ \@dblarg\Hy@@boolkey}
2335 \def\Hy@@boolkey[#1]#2#3{%
2336   \edef\Hy@tempa{#3}%
2337   \lowercase\expandafter{%
2338     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2339   }%
2340   \ifx\Hy@tempa\@empty
2341     \let\Hy@tempa\Hy@true
2342   \fi
2343   \ifx\Hy@tempa\Hy@true
2344   \else
2345     \ifx\Hy@tempa\Hy@false
2346     \else
2347       \let\Hy@tempa\relax
2348     \fi
2349   \fi
2350   \ifx\Hy@tempa\relax
2351     \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2352   \else
2353     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2354     \csname Hy@#2\Hy@tempa\endcsname
2355   \fi
2356 }

```

\Hy@WarnOptionValue

```

2357 \def\Hy@WarnOptionValue#1#2#3{%
2358   \Hy@Warning{%
2359     Unexpected value ‘#1’\MessageBreak
2360     of option ‘#2’ instead of\MessageBreak
2361     #3%
2362   }%

```

2363 }

\Hy@DisableOption

```
2364 \def\Hy@DisableOption#1{%
2365   \@ifundefined{KV@Hyp@#1@default}{%
2366     \define@key{Hyp}{#1}%
2367   }{%
2368     \define@key{Hyp}{#1}[]%
2369   }%
2370   {\Hy@WarnOptionDisabled{#1}}}%
2371 }
```

\Hy@WarnOptionDisabled

```
2372 \def\Hy@WarnOptionDisabled#1{%
2373   \Hy@Warning{%
2374     Option ‘#1’ has already been used,\MessageBreak
2375     setting the option has no effect%
2376   }%
2377 }
```

\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.

```
2378 \def\Hy@CheckOptionValue#1#2#3{%
2379   \begingroup
2380   \edef\x{#1}%
2381   \@onelevel@sanitize\x
2382   \let\y=y%
2383   \def\do##1##2{%
2384     \def\z{##1}%
2385     \@onelevel@sanitize\z
2386     \ifx\x\z
2387       \let\y=n%
2388       \let\do\@gobbletwo
2389     \fi
2390   }%
2391   #3%
2392   \ifx\y y%
2393     \def\do##1##2{%
2394       * ‘##1’%
2395       \ifx\##2\\\else\space(##2)\fi
2396       \MessageBreak
2397     }%
2398     \Hy@Warning{%
2399       Values of option ‘#2’:\MessageBreak
2400       #3%
2401       * An empty value disables the option.\MessageBreak
2402       Unknown value ‘\x’%
2403     }%
2404   \fi
2405   \endgroup
2406 }
```

\Hy@DefNameKey #1: option name

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

```
2407 \def\Hy@DefNameKey#1{%
```

```

2408 \expandafter\Hy@@DefNameKey\cscname @#1\endcscname{#1}%
2409 }

```

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

```

2410 \def\Hy@@DefNameKey#1#2#3{%
2411   \define@key{Hyp}{#2}{%
2412     \edef#1{##1}%
2413     \ifx#1\@empty
2414     \else
2415       \Hy@CheckOptionValue{##1}{#2}{#3}%
2416     \fi
2417   }%
2418   \let#1\@empty
2419 }

```

\Hy@UseNameKey

```

2420 \def\Hy@UseNameKey#1#2{%
2421   \ifx#2\@empty
2422   \else
2423     /#1/#2%
2424   \fi
2425 }

```

9.2 Defining the options

```

2426 \define@key{Hyp}{implicit}[true]{%
2427   \Hy@boolkey{implicit}{#1}%
2428 }
2429 \define@key{Hyp}{draft}[true]{%
2430   \Hy@boolkey{draft}{#1}%
2431 }
2432 \define@key{Hyp}{final}[true]{%
2433   \Hy@boolkey{final}{#1}%
2434 }
2435 \let\KV@Hyp@nolinks\KV@Hyp@draft
2436 \def\Hy@ObsoletePaperOption#1{%
2437   \Hy@WarningNoLine{%
2438     Option ‘#1’ is no longer used%
2439   }%
2440   \define@key{Hyp}{#1}[true]{}%
2441 }
2442 \def\Hy@temp#1{%
2443   \define@key{Hyp}{#1}[true]{%
2444     \Hy@ObsoletePaperOption{#1}%
2445   }%
2446 }
2447 \Hy@temp{a4paper}
2448 \Hy@temp{a5paper}
2449 \Hy@temp{b5paper}
2450 \Hy@temp{letterpaper}
2451 \Hy@temp{legalpaper}
2452 \Hy@temp{executivepaper}
2453 \define@key{Hyp}{setpagesize}[true]{%
2454   \Hy@boolkey{setpagesize}{#1}%

```

```

2455 }
2456 \define@key{Hyp}{debug}[true]{%
2457   \Hy@boolkey[debug]{verbose}{#1}%
2458 }
2459 \define@key{Hyp}{linktocpage}[true]{%
2460   \Hy@boolkey{linktocpage}{#1}%
2461   \ifHy@linktocpage
2462     \let\Hy@linktoc\Hy@linktoc@page
2463   \else
2464     \let\Hy@linktoc\Hy@linktoc@section
2465   \fi
2466 }
2467 \chardef\Hy@linktoc@none=0 %
2468 \chardef\Hy@linktoc@section=1 %
2469 \chardef\Hy@linktoc@page=2 %
2470 \chardef\Hy@linktoc@all=3 %
2471 \ifHy@linktocpage
2472   \let\Hy@linktoc\Hy@linktoc@page
2473 \else
2474   \let\Hy@linktoc\Hy@linktoc@section
2475 \fi
2476 \define@key{Hyp}{linktoc}{%
2477   \@ifundefined{Hy@linktoc@#1}{%
2478     \Hy@Warning{%
2479       Unexpected value '#1' of\MessageBreak
2480       option 'linktoc' instead of 'none',\MessageBreak
2481       'section', 'page' or 'all'%
2482     }%
2483   }{%
2484     \expandafter\let\expandafter\Hy@linktoc
2485     \csname Hy@linktoc@#1\endcsname
2486   }%
2487 }
2488 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2489 \let\XR@ext\relax
2490 \define@key{Hyp}{verbose}[true]{%
2491   \Hy@boolkey{verbose}{#1}%
2492 }
2493 \define@key{Hyp}{typexml}[true]{%
2494   \Hy@boolkey{typexml}{#1}%
2495 }

```

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.

```

2496 \define@key{Hyp}{raiselinks}[true]{%
2497   \Hy@boolkey{raiselinks}{#1}%
2498 }

```

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

```

2499 \def\Hy@setbreaklinks#1{%
2500   \csname breaklinks#1\endcsname
2501 }
2502 \def\Hy@breaklinks@unsupported{%
2503   \ifx\Hy@setbreaklinks\@gobble
2504     \ifHy@breaklinks
2505       \Hy@WarningNoLine{%

```

```

2506      You have enabled option 'breaklinks'.\MessageBreak
2507      But driver '\Hy@driver.def' does not support this.\MessageBreak
2508      Expect trouble with the link areas of broken links%
2509    }%
2510  \fi
2511 \fi
2512 }

```

```

2513 \define@key{Hyp}{breaklinks}[true]{%
2514   \Hy@boolkey{breaklinks}{#1}%
2515   \let\Hy@setbreaklinks\@gobble
2516 }

```

```

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

```

Determines whether an automatic anchor is put on each page

```

2520 \define@key{Hyp}{pageanchor}[true]{%
2521   \Hy@boolkey{pageanchor}{#1}%
2522 }

```

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.

```

2523 \define@key{Hyp}{plainpages}[true]{%
2524   \Hy@boolkey{plainpages}{#1}%
2525 }

```

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

```

2526 \define@key{Hyp}{naturalnames}[true]{%
2527   \Hy@boolkey{naturalnames}{#1}%
2528 }

```

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

```

2529 \define@key{Hyp}{hypertextnames}[true]{%
2530   \Hy@boolkey{hypertextnames}{#1}%
2531 }

```

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

```

2532 \define@key{Hyp}{nesting}[true]{%
2533   \Hy@boolkey{nesting}{#1}%
2534 }

```

```

2535 \define@key{Hyp}{unicode}[true]{%
2536   \Hy@boolkey{unicode}{#1}%
2537   \ifHy@unicode
2538     \def\HyPsd@pdfencoding{unicode}%
2539     \HyPsd@LoadUnicode
2540   \else
2541     \def\HyPsd@pdfencoding{pdfdoc}%
2542   \fi
2543 }
2544 \def\HyPsd@LoadUnicode{%
2545   \@ifundefined{T@PU}{%
2546     \input{puenc.def}%
2547     \HyLinguex@Restore
2548   }{}%
2549   \DeclareFontFamily{PU}{pdf}{}%
2550   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2551   \DeclareFontSubstitution{PU}{pdf}{m}{n}%

```

```

2552 \global\let\HyPsd@LoadUnicode\relax
2553 }
2554 \Hy@AtBeginDocument{%
2555   \ifx\HyPsd@LoadUnicode\relax
2556   \else
2557   \def\HyPsd@LoadUnicode{%
2558     \PackageError{hyperref}{%
2559       Unicode support for bookmarks is not available.\MessageBreak
2560       Activate unicode support by using one of the options\MessageBreak
2561       'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2562       in the preamble%
2563     }\@ehc
2564     \global\let\HyPsd@LoadUnicode\relax
2565     \global\Hy@unicodedefalse
2566     \global\let\Hy@unicodetrue\Hy@unicodedefalse
2567   }%
2568 \fi
2569 }

2570 \define@key{Hyp}{pdfencoding}{%
2571   \edef\HyPsd@temp{#1}%
2572   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2573     \let\HyPsd@pdfencoding\HyPsd@temp
2574     \Hy@unicodedefalse
2575   \else
2576     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2577       \z@
2578     \else
2579       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2580         \z@
2581       \else
2582         \@ne
2583       \fi
2584     \fi
2585     \let\HyPsd@pdfencoding\HyPsd@temp
2586     \hypersetup{unicode}%
2587     \ifHy@unicode
2588       \def\HyPsd@pdfencoding{#1}%
2589       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2590         \HyPsd@LoadStringEncoding
2591       \fi
2592     \else
2593       \Hy@Warning{Cannot switch to unicode bookmarks}%
2594       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2595     \fi
2596   \else
2597     \@onelevel@sanitize\HyPsd@temp
2598     \Hy@Warning{%
2599       Values of option 'pdfencoding':\MessageBreak
2600       'pdfdoc', 'unicode', 'auto'.\MessageBreak
2601       Ignoring unknown value '\HyPsd@temp'%
2602     }%
2603   \fi
2604 \fi
2605 }

2606 \def\HyPsd@pdfencoding@auto{auto}
2607 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2608 \def\HyPsd@pdfencoding@unicode{unicode}

```

```

2609 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2610 \def\HyPsd@LoadStringEnc{%
2611   \RequirePackage{stringenc}[2009/12/15]%
2612   \let\HyPsd@LoadStringEnc\relax
2613 }
2614 \Hy@AtBeginDocument{%
2615   \ifpackageloaded{stringenc}{%
2616     \let\HyPsd@LoadStringEnc\relax
2617   }{%
2618     \def\HyPsd@LoadStringEnc{%
2619       \Hy@WarningNoLine{%
2620         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2621         in the preamble or load the package there%
2622       }%
2623     }%
2624   }%
2625 }

2626 \def\hypersetup{\setkeys{Hyp}}

2627 \newif\ifHy@setpdfversion
2628 \define@key{Hyp}{pdfversion}{%
2629   \ifundefined{Hy@pdfversion@#1}{%
2630     \PackageWarning{hyperref}{%
2631       Unsupported PDF version '#1'\MessageBreak
2632       Valid values: 1.2 until 1.9%
2633     }%
2634   }{%
2635     \Hy@setpdfversiontrue
2636     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2637   }%
2638 }
2639 \@namedef{Hy@pdfversion@1.2}{2}%
2640 \@namedef{Hy@pdfversion@1.3}{3}%
2641 \@namedef{Hy@pdfversion@1.4}{4}%
2642 \@namedef{Hy@pdfversion@1.5}{5}%
2643 \@namedef{Hy@pdfversion@1.6}{6}%
2644 \@namedef{Hy@pdfversion@1.7}{7}%
2645 \@namedef{Hy@pdfversion@1.8}{8}%
2646 \@namedef{Hy@pdfversion@1.9}{9}%
2647 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2648 \define@key{Hyp}{hyperref}[true]{}
2649 \define@key{Hyp}{tex4ht}[true]{%
2650   \Hy@texhttrue
2651   \setkeys{Hyp}{colorlinks=true}%
2652   \def\BeforeTeXIVht{\usepackage{color}}}%
2653 \def\Hy@driver{htex4ht}%
2654 \def\MaybeStopEarly{%
2655   \typeout{Hyperref stopped early}%
2656   \Hy@AtBeginDocument{%
2657     \PDF@FinishDoc
2658     \gdef\PDF@FinishDoc{}%
2659   }%
2660   \endinput
2661 }%
2662 }

```



```

2663 \define@key{Hyp}{pdfetex}[true]{%
2664   \def\Hy@driver{hpdtex}%
2665 }
2666 \define@key{Hyp}{nativepdf}[true]{%
2667   \def\Hy@driver{hdvips}%
2668 }
2669 \define@key{Hyp}{dvipdfm}[true]{%
2670   \def\Hy@driver{hdvipdfm}%
2671 }
2672 \define@key{Hyp}{dvipdfmx}[true]{%
2673   \def\Hy@driver{hdvipdfm}%
2674 }
2675 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2676   \expandafter\ifx\csname if#1\expandafter\endcsname
2677     \csname iftrue\endcsname
2678     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2679   \else
2680     \chardef\SpecialDvipdfmxOutlineOpen\z@
2681   \fi
2682 }
2683 \define@key{Hyp}{xetex}[true]{%
2684   \def\Hy@driver{hxtex}%
2685 }
2686 \define@key{Hyp}{pdfmark}[true]{%
2687   \def\Hy@driver{hdvips}%
2688 }
2689 \define@key{Hyp}{dvips}[true]{%
2690   \def\Hy@driver{hdvips}%
2691 }
2692 \define@key{Hyp}{hypertex}[true]{%
2693   \def\Hy@driver{hypertex}%
2694 }
2695 \let\Hy@MaybeStopNow\relax
2696 \define@key{Hyp}{vtex}[true]{%
2697   \begingroup\expandafter\expandafter\expandafter\endgroup
2698   \expandafter\ifx\csname OpMode\endcsname\relax
2699     \@latex@error{Non-VTeX processor}{}%
2700     \global\let\Hy@MaybeStopNow\endinput
2701   \endinput
2702 \else
2703   \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2704     \def\Hy@driver{hvtex}%
2705   \else
2706     \ifnum\OpMode=10\relax
2707       \def\Hy@driver{hvtexhtm}%
2708       \def\MaybeStopEarly{%
2709         \typeout{Hyperref stopped early}%
2710         \Hy@AtBeginDocument{%
2711           \PDF@FinishDoc
2712           \gdef\PDF@FinishDoc{}}%
2713       }%
2714       \endinput
2715     }%
2716   \else
2717     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2718     \global\let\Hy@MaybeStopNow\endinput
2719   \endinput

```

```

2720   \fi
2721   \fi
2722 \fi
2723 }
2724 \define@key{Hyp}{vtxpdfmark}[true]{%
2725   \begingroup\expandafter\expandafter\expandafter\endgroup
2726   \expandafter\ifx\csname OpMode\endcsname\relax
2727     \@latex@error{Non-VTeX processor}{}%
2728     \let\Hy@MaybeStopNow\endinput
2729   \endinput
2730 \else
2731   \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2732     \def\Hy@driver{hvtexmrk}%
2733   \else
2734     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2735     \let\Hy@MaybeStopNow\endinput
2736   \endinput
2737   \fi
2738 \fi
2739 }
2740 \define@key{Hyp}{dviwindo}[true]{%
2741   \def\Hy@driver{hdviwind}%
2742   \setkeys{Hyp}{colorlinks}%
2743   \ifpdf
2744   \else
2745     \ifxetex
2746     \else
2747       \PassOptionsToPackage{dviwindo}{color}%
2748     \fi
2749   \fi
2750 }
2751 \define@key{Hyp}{dvipsone}[true]{%
2752   \def\Hy@driver{hdvipson}%
2753 }
2754 \define@key{Hyp}{textures}[true]{%
2755   \def\Hy@driver{htexture}%
2756 }
2757 \define@key{Hyp}{latex2html}[true]{%
2758   \Hy@AtBeginDocument{\@@@textothtmlX}%
2759 }

```

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

```

2760 \define@key{Hyp}{ps2pdf}[true]{%
2761   \def\Hy@driver{hdvips}%
2762   \providecommand*\@pdfborder{0 0 1}%
2763 }

```

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.

```

2764 \define@key{Hyp}{hyperfigures}[true]{%
2765   \Hy@boolkey[hyperfigures]{figures}{#1}%
2766 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2767 \define@key{Hyp}{hyperfootnotes}[true]{%
2768   \Hy@boolkey[hyperfootnotes]{#1}%

```

2769 }

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

```
2770 \def\back@none{none}
2771 \def\back@section{section}
2772 \def\back@page{page}
2773 \def\back@slide{slide}
2774 \define@key{Hyp}{backref}[section]{%
2775   \lowercase{\def\Hy@tempa{#1}}}%
2776   \ifx\Hy@tempa\@empty
2777     \let\Hy@tempa\back@section
2778   \fi
2779   \ifx\Hy@tempa\Hy@false
2780     \let\Hy@tempa\back@none
2781   \fi
2782   \ifx\Hy@tempa\back@slide
2783     \let\Hy@tempa\back@section
2784   \fi
2785   \ifx\Hy@tempa\back@page
2786     \PassOptionsToPackage{hyperpageref}{backref}%
2787     \Hy@backreftrue
2788   \else
2789     \ifx\Hy@tempa\back@section
2790       \PassOptionsToPackage{hyperref}{backref}%
2791       \Hy@backreftrue
2792     \else
2793       \ifx\Hy@tempa\back@none
2794         \Hy@backreffalse
2795       \else
2796         \Hy@WarnOptionValue{#1}{backref}{%
2797           'section', 'slide', 'page', 'none',\MessageBreak
2798           or 'false'}%
2799       \fi
2800     \fi
2801   \fi
2802 }
2803 \define@key{Hyp}{pagebackref}[true]{%
2804   \edef\Hy@tempa{#1}%
2805   \lowercase\expandafter{%
2806     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2807   }%
2808   \ifx\Hy@tempa\@empty
2809     \let\Hy@tempa\Hy@true
2810   \fi
2811   \ifx\Hy@tempa\Hy@true
2812     \PassOptionsToPackage{hyperpageref}{backref}%
2813     \Hy@backreftrue
2814   \else
2815     \ifx\Hy@tempa\Hy@false
2816       \Hy@backreffalse
2817     \else
2818       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2819     \fi
2820   \fi
2821 }
```

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

```

2822 \define@key{Hyp}{hyperindex}[true]{%
2823   \Hy@boolkey{hyperindex}{#1}%
2824 }

```

Configuration of encap char.

```

2825 \define@key{Hyp}{encap}[|]{%
2826   \def\HyInd@EncapChar{#1}%
2827 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2828 \def\HyLang@afrikaans{%
2829   \def\equationautorefname{Vergelyking}%
2830   \def\footnoteautorefname{Voetnota}%
2831   \def\itemautorefname{Item}%
2832   \def\figureautorefname{Figuur}%
2833   \def\tableautorefname{Tabel}%
2834   \def\partautorefname{Deel}%
2835   \def\appendixautorefname{Bylae}%
2836   \def\chapterautorefname{Hoofstuk}%
2837   \def\sectionautorefname{Afdeling}%
2838   \def\subsectionautorefname{Subafdeling}%
2839   \def\subsubsectionautorefname{Subsubafdeling}%
2840   \def\paragraphautorefname{Paragraaf}%
2841   \def\subparagraphautorefname{Subparagraaf}%
2842   \def\FancyVerbLineautorefname{Lyn}%
2843   \def\theoremautorefname{Teorema}%
2844   \def\pageautorefname{Bladsy}%
2845 }
2846 \def\HyLang@english{%
2847   \def\equationautorefname{Equation}%
2848   \def\footnoteautorefname{footnote}%
2849   \def\itemautorefname{item}%
2850   \def\figureautorefname{Figure}%
2851   \def\tableautorefname{Table}%
2852   \def\partautorefname{Part}%
2853   \def\appendixautorefname{Appendix}%
2854   \def\chapterautorefname{chapter}%
2855   \def\sectionautorefname{section}%
2856   \def\subsectionautorefname{subsection}%
2857   \def\subsubsectionautorefname{subsubsection}%
2858   \def\paragraphautorefname{paragraph}%
2859   \def\subparagraphautorefname{subparagraph}%
2860   \def\FancyVerbLineautorefname{line}%
2861   \def\theoremautorefname{Theorem}%
2862   \def\pageautorefname{page}%
2863 }
2864 \def\HyLang@french{%
2865   \def\equationautorefname{'Equation}%
2866   \def\footnoteautorefname{note}%
2867   \def\itemautorefname{item}%
2868   \def\figureautorefname{Figure}%
2869   \def\tableautorefname{Tableau}%
2870   \def\partautorefname{Partie}%
2871   \def\appendixautorefname{Appendice}%
2872   \def\chapterautorefname{chapitre}%

```

```

2873 \def\sectionautorefname{section}%
2874 \def\subsectionautorefname{sous-section}%
2875 \def\subsubsectionautorefname{sous-sous-section}%
2876 \def\paragraphautorefname{paragraphe}%
2877 \def\subparagraphautorefname{sous-paragraphe}%
2878 \def\FancyVerbLineautorefname{ligne}%
2879 \def\theoremautorefname{Th\'eor\'eme}%
2880 \def\pageautorefname{page}%
2881 }
2882 \def\HyLang@german{%
2883 \def\equationautorefname{Gleichung}%
2884 \def\footnoteautorefname{Fu\ss note}%
2885 \def\itemautorefname{Punkt}%
2886 \def\figureautorefname{Abbildung}%
2887 \def\tableautorefname{Tabelle}%
2888 \def\partautorefname{Teil}%
2889 \def\appendixautorefname{Anhang}%
2890 \def\chapterautorefname{Kapitel}%
2891 \def\sectionautorefname{Abschnitt}%
2892 \def\subsectionautorefname{Unterabschnitt}%
2893 \def\subsubsectionautorefname{Unterunterabschnitt}%
2894 \def\paragraphautorefname{Absatz}%
2895 \def\subparagraphautorefname{Unterabsatz}%
2896 \def\FancyVerbLineautorefname{Zeile}%
2897 \def\theoremautorefname{Theorem}%
2898 \def\pageautorefname{Seite}%
2899 }
2900 \def\HyLang@italian{%
2901 \def\equationautorefname{Equazione}%
2902 \def\footnoteautorefname{nota}%
2903 \def\itemautorefname{punto}%
2904 \def\figureautorefname{Figura}%
2905 \def\tableautorefname{Tabella}%
2906 \def\partautorefname{Parte}%
2907 \def\appendixautorefname{Appendice}%
2908 \def\chapterautorefname{Capitolo}%
2909 \def\sectionautorefname{sezione}%
2910 \def\subsectionautorefname{sottosezione}%
2911 \def\subsubsectionautorefname{sottosottosezione}%
2912 \def\paragraphautorefname{paragrafo}%
2913 \def\subparagraphautorefname{sottoparagrafo}%
2914 \def\FancyVerbLineautorefname{linea}%
2915 \def\theoremautorefname{Teorema}%
2916 \def\pageautorefname{Pag.\@}%
2917 }
2918 \def\HyLang@magyar{%
2919 \def\equationautorefname{Egyenlet}%
2920 \def\footnoteautorefname{l\'abjegyzet}%
2921 \def\itemautorefname{Elem}%
2922 \def\figureautorefname{'Abra}%
2923 \def\tableautorefname{T\'abl\'azat}%
2924 \def\partautorefname{R\'esz}%
2925 \def\appendixautorefname{F\'uggel\'ek}%
2926 \def\chapterautorefname{fejezet}%
2927 \def\sectionautorefname{szakasz}%
2928 \def\subsectionautorefname{alszakasz}%
2929 \def\subsubsectionautorefname{alalszakasz}%

```


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

```
2966 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2967 % \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.

```
2968 \def\itemautorefname{\cyr\cyrp.}%
2969 % \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.

```
2970 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2971 \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.

```
2972 \def\partautorefname{\cyr\cyrch.}%
2973 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2974 \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.

```
2975 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2976 % \def\appendixautorefname{%
2977 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2978 % }%
```

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.

```
2979 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2980 \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.

```
2981 \def\paragraphautorefname{\cyr\cyrp.}%
2982 \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.

```
2983 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2984 % \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.

```
2985 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2986 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2987 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2988 % \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 . . .

```
2989 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2990 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2991 % \def\Accttheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2992 \def\pageautorefname{\cyr\cyrs.}%
```

```
2993 }
```

```
2994 \def\HyLang@spanish{%
```

```
2995 \def\equationautorefname{Ecuaci\'on}%
```

```
2996 \def\footnoteautorefname{Nota a pie de p\'agina}%
```

```
2997 \def\itemautorefname{Elemento}%
```

```
2998 \def\figureautorefname{Figura}%
```

```
2999 \def\tableautorefname{Tabla}%
```

```
3000 \def\partautorefname{Parte}%
```

```
3001 \def\appendixautorefname{Ap\'endice}%
```

```
3002 \def\chapterautorefname{Cap\'itulo}%
```

```
3003 \def\sectionautorefname{Secci\'on}%
```

```
3004 \def\subsectionautorefname{Subsecci\'on}%
```

```
3005 \def\subsubsectionautorefname{Subsubsecci\'on}%
```

```
3006 \def\paragraphautorefname{P\'arrafo}%
```

```
3007 \def\subparagraphautorefname{Subp\'arrafo}%
```

```
3008 \def\FancyVerbLineautorefname{L\'inea}%
```

```
3009 \def\theoremautorefname{Teorema}%
```

```
3010 \def\pageautorefname{P\'agina}%
```

```
3011 }
```

```
3012 \def\HyLang@vietnamese{%
```

```
3013 \def\equationautorefname{Ph\uhorn{}}\ohorn{}}ng tr\'inh}%
```

```
3014 \def\footnoteautorefname{Ch\'u th\'ich}%
```

```
3015 \def\itemautorefname{m\{d\{u\}c}%
```

```
3016 \def\figureautorefname{H\'inh}%
```

```
3017 \def\tableautorefname{B\h{a}ng}%
```

```
3018 \def\partautorefname{Ph\'acircumflex{n}%
```

```
3019 \def\appendixautorefname{Ph\{d\{u\}l\{d\{u\}c}%
```

```
3020 \def\chapterautorefname{ch\uhorn{}}\ohorn{}}ng}%
```

```
3021 \def\sectionautorefname{m\{d\{u\}c}%
```

```
3022 \def\subsectionautorefname{m\{d\{u\}c}%
```

```
3023 \def\subsubsectionautorefname{m\{d\{u\}c}%
```

```
3024 \def\paragraphautorefname{\dj{}}o\{d\{a\}n}%
```

```
3025 \def\subparagraphautorefname{\dj{}}o\{d\{a\}n}%
```

```
3026 \def\FancyVerbLineautorefname{d\'ong}%
```

```
3027 \def\theoremautorefname{\DJ{}}\{d\{i\}nh l\'y}%
```

```
3028 \def\pageautorefname{Trang}%
```

```
3029 }
```

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

```
3030 \def\HyLang@addto#1#2{%
```

```
3031 #2%
```

```
3032 \@temptokena{#2}%
```



```

3033 \ifx#1\relax
3034 \let#1\@empty
3035 \fi
3036 \ifx#1\@undefined
3037 \edef#1{\the\@temptokena}%
3038 \else
3039 \toks@\expandafter{#1}%
3040 \edef#1{\the\toks@\the\@temptokena}%
3041 \fi
3042 \@temptokena{}\toks@\@temptokena
3043 }

3044 \def\HyLang@DeclareLang#1#2#3{%
3045 \@ifpackagewith{babel}{#1}{%
3046 \expandafter\HyLang@addto
3047 \csname extras#1\expandafter\endcsname
3048 \csname HyLang@#2\endcsname
3049 \begingroup
3050 \edef\x{\endgroup
3051 #3%
3052 }%
3053 \x
3054 \@namedef{HyLang@#1@done}{}%
3055 }{}%
3056 \begingroup
3057 \edef\x##1##2{%
3058 \noexpand\ifx##2\relax
3059 \errmessage{No definitions for language #2' found!}%
3060 \noexpand\fi
3061 \endgroup
3062 \noexpand\define@key{Hyp}{#1}[]{%
3063 \noexpand\@ifundefined{HyLang@#1@done}{%
3064 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3065 #3%
3066 \noexpand\@namedef{HyLang@#1@done}{}%
3067 }{}%
3068 }%
3069 }%
3070 \expandafter\x\csname extras#1\expandafter\endcsname
3071 \csname HyLang@#2\endcsname
3072 }

3073 \HyLang@DeclareLang{english}{english}{}
3074 \HyLang@DeclareLang{UKenglish}{english}{}
3075 \HyLang@DeclareLang{british}{english}{}
3076 \HyLang@DeclareLang{USenglish}{english}{}
3077 \HyLang@DeclareLang{american}{english}{}
3078 \HyLang@DeclareLang{german}{german}{}
3079 \HyLang@DeclareLang{austrian}{german}{}
3080 \HyLang@DeclareLang{ngerman}{german}{}
3081 \HyLang@DeclareLang{naustrian}{german}{}
3082 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3083 \HyLang@DeclareLang{brazil}{portuges}{}
3084 \HyLang@DeclareLang{brazilian}{portuges}{}
3085 \HyLang@DeclareLang{portuguese}{portuges}{}
3086 \HyLang@DeclareLang{spanish}{spanish}{}
3087 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3088 \HyLang@DeclareLang{french}{french}{}
3089 \HyLang@DeclareLang{frenchb}{french}{}

```

```

3090 \HyLang@DeclareLang{francais}{french}{}
3091 \HyLang@DeclareLang{acadian}{french}{}
3092 \HyLang@DeclareLang{canadien}{french}{}
3093 \HyLang@DeclareLang{italian}{italian}{}
3094 \HyLang@DeclareLang{magyar}{magyar}{}
3095 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3096 \define@key{Hyp}{vietnamese}[]{}%
3097 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3098 \Hy@AtEndOfPackage{%
3099 \ifundefined{T@PU}{}{}%
3100 \input{puvnenc.def}%
3101 }%
3102 }%
3103 }
3104 \define@key{Hyp}{vietnam}[]{}%
3105 \HyLang@addto\extravietnam\HyLang@vietnamese
3106 \Hy@AtEndOfPackage{%
3107 \ifundefined{T@PU}{}{}%
3108 \input{puvnenc.def}%
3109 }%
3110 }%
3111 }

```

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

```

3112 \define@key{Hyp}{arabic}[]{}%
3113 \Hy@AtEndOfPackage{%
3114 \ifundefined{T@PU}{}{}%
3115 \input{puarenc.def}%
3116 }%
3117 }%
3118 }

```

13 Options to change appearance of links

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

```

3119 \define@key{Hyp}{colorlinks}[true]{}%
3120 \Hy@boolkey{colorlinks}{#1}%
3121 }
3122 \define@key{Hyp}{ocgcolorlinks}[true]{}%
3123 \Hy@boolkey{ocgcolorlinks}{#1}%
3124 }
3125 \Hy@AtBeginDocument{%
3126 \begingroup
3127 \ifundefined{OBJ@OCG@view}{}%
3128 \ifHy@ocgcolorlinks
3129 \Hy@Warning{%
3130 Driver does not support ‘ocgcolorlinks’,\MessageBreak
3131 using ‘colorlinks’ instead%
3132 }%
3133 \fi
3134 }{}%
3135 \endgroup
3136 }
3137 \define@key{Hyp}{frenchlinks}[true]{}%
3138 \Hy@boolkey{frenchlinks}{#1}%

```

3139 }

14 Bookmarking

```

3140 \begingroup\expandafter\expandafter\expandafter\endgroup
3141 \expandafter\ifx\csname chapter\endcsname\relax
3142   \def\toclevel@part{0}%
3143 \else
3144   \def\toclevel@part{-1}%
3145 \fi
3146 \def\toclevel@chapter{0}
3147 \def\toclevel@section{1}
3148 \def\toclevel@subsection{2}
3149 \def\toclevel@subsubsection{3}
3150 \def\toclevel@paragraph{4}
3151 \def\toclevel@subparagraph{5}
3152 \def\toclevel@figure{0}
3153 \def\toclevel@table{0}
3154 \@ifpackageloaded{listings}{%
3155   \providecommand*\theHlstlisting{\thelstlisting}%
3156   \providecommand*\toclevel@lstlisting{0}%
3157 }{}
3158 \@ifpackageloaded{listing}{%
3159   \providecommand*\theHlisting{\thelisting}%
3160   \providecommand*\toclevel@listing{0}%
3161 }{}

3162 \define@key{Hyp}{bookmarks}[true]{%
3163   \Hy@boolkey{bookmarks}{#1}%
3164 }

3165 \define@key{Hyp}{bookmarksopen}[true]{%
3166   \Hy@boolkey{bookmarksopen}{#1}%
3167 }
```

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.

```

3168 \let\Hy@bookmarksdepth\c@tocdepth
3169 \define@key{Hyp}{bookmarksdepth}[]{%
3170   \begingroup
3171     \edef\x{#1}%
3172     \ifx\x\empty
3173       \global\let\Hy@bookmarksdepth\c@tocdepth
3174     \else
3175       \@ifundefined{toclevel@\x}{%
3176         \@onelevel@sanitize\x
3177         \edef\y{\expandafter\@car\x\@nil}%
3178         \ifcase 0\expandafter\ifx\y-1\fi
3179           \expandafter\ifnum\expandafter\y>47 %
```

```

3180         \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3181         \Hy@Warning{Unknown document division name (\x)}%
3182     \else
3183         \setbox\z@=\hbox{%
3184             \count@=\x
3185             \xdef\Hy@bookmarksdepth{\the\count@}%
3186         }%
3187     \fi
3188 }{%
3189     \setbox\z@=\hbox{%
3190         \count@=\csname toclevel@\x\endcsname
3191         \xdef\Hy@bookmarksdepth{\the\count@}%
3192     }%
3193 }%
3194 \fi
3195 \endgroup
3196 }

```

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

```

3197 \define@key{Hyp}{bookmarksopenlevel}{%
3198   \def\@bookmarksopenlevel{#1}%
3199 }
3200 \def\@bookmarksopenlevel{\maxdimen}
3201 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3202 \define@key{Hyp}{bookmarkstype}{%
3203   \def\Hy@bookmarkstype{#1}%
3204 }
3205 \def\Hy@bookmarkstype{toc}

```

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

```

3206 \define@key{Hyp}{bookmarksnumbered}[true]{%
3207   \Hy@boolkey{bookmarksnumbered}{#1}%
3208 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3209 \define@key{Hyp}{CJKbookmarks}[true]{%
3210   \Hy@boolkey{CJKbookmarks}{#1}%
3211 }
3212 \def\Hy@temp#1{%
3213   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3214 }
3215 \def\Hy@@temp#1#2#3{%
3216   \define@key{Hyp}{#2color}{%
3217     \HyColor@HyperrefColor{##1}#1%
3218   }%
3219   \def#1{#3}%
3220 }
3221 \Hy@temp{link}{red}
3222 \Hy@temp{anchor}{black}
3223 \Hy@temp{cite}{green}
3224 \Hy@temp{file}{cyan}
3225 \Hy@temp{url}{magenta}
3226 \Hy@temp{menu}{red}
3227 \Hy@temp{run}{\@filecolor}
3228 \define@key{Hyp}{pagecolor}{%
3229   \Hy@WarningPageColor
3230 }

```

```

3231 \def\Hy@WarningPageColor{%
3232   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3233   \global\let\Hy@WarningPageColor\relax
3234 }

3235 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3236 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3237 \let\@baseurl\@empty
3238 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3239 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3240 \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.

```

3241 \let\@pdfpagetransition\relax
3242 \define@key{Hyp}{pdfpagetransition}{\def\@pdfpagetransition{#1}}

```

`\@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.

```

3243 \let\@pdfpageduration\relax
3244 \define@key{Hyp}{pdfpageduration}{\def\@pdfpageduration{#1}}

```

The entry for the `/Hid` key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the `/Hid` key is not written to the pdf page object in order not to enlarge the pdf file.

```

3245 \newif\ifHy@useHidKey
3246 \Hy@useHidKeyfalse
3247 \define@key{Hyp}{pdfpagehidden}[true]{%
3248   \Hy@boolkey{pdfpagehidden}{#1}%
3249   \ifHy@pdfpagehidden
3250     \global\Hy@useHidKeytrue
3251   \fi
3252 }

```

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).

```

3253 \def\Hy@ColorList{cite,file,link,menu,run,url}
3254 \@for\Hy@temp:=\Hy@ColorList\do{%
3255   \edef\Hy@temp{%
3256     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3257       \noexpand\HyColor@HyperrefBorderColor
3258         {##1}%
3259       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3260       {hyperref}%
3261       {\Hy@temp bordercolor}%
3262     }%
3263   }%

```

```

3264 \Hy@temp
3265 }
3266 \define@key{Hyp}{pagebordercolor}{%
3267 \Hy@WarningPageBorderColor
3268 }
3269 \def\Hy@WarningPageBorderColor{%
3270 \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3271 \global\let\Hy@WarningPageBorderColor\relax
3272 }

3273 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3274 \Hy@DefNameKey{pdfhighlight}{%
3275 \do{/I}{Invert}%
3276 \do{/N}{None}%
3277 \do{/O}{Outline}%
3278 \do{/P}{Push}%
3279 }
3280 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3281 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3282 \def\Hy@setpdfborder{%
3283 \ifx\@pdfborder\@empty
3284 \else
3285 /Border[\@pdfborder]%
3286 \fi
3287 \ifx\@pdfborderstyle\@empty
3288 \else
3289 /BS<<\@pdfborderstyle>>%
3290 \fi
3291 }
3292 \Hy@DefNameKey{pdfpagemode}{%
3293 \do{UseNone}{}%
3294 \do{UseOutlines}{}%
3295 \do{UseThumbs}{}%
3296 \do{FullScreen}{}%
3297 \do{UseOC}{PDF 1.5}%
3298 \do{UseAttachments}{PDF 1.6}%
3299 }
3300 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3301 \do{UseNone}{}%
3302 \do{UseOutlines}{}%
3303 \do{UseThumbs}{}%
3304 \do{FullScreen}{}%
3305 \do{UseOC}{PDF 1.5}%
3306 \do{UseAttachments}{PDF 1.6}%
3307 }
3308 \Hy@DefNameKey{pdfdirection}{%
3309 \do{L2R}{Left to right}%
3310 \do{R2L}{Right to left}%
3311 }
3312 \Hy@DefNameKey{pdfviewarea}{%
3313 \do{MediaBox}{}%
3314 \do{CropBox}{}%
3315 \do{BleedBox}{}%
3316 \do{TrimBox}{}%
3317 \do{ArtBox}{}%
3318 }
3319 \Hy@DefNameKey{pdfviewclip}{%
3320 \do{MediaBox}{}%

```

```

3321 \do{CropBox}{}%
3322 \do{BleedBox}{}%
3323 \do{TrimBox}{}%
3324 \do{ArtBox}{}%
3325 }
3326 \Hy@DefNameKey{pdfprintarea}{%
3327 \do{MediaBox}{}%
3328 \do{CropBox}{}%
3329 \do{BleedBox}{}%
3330 \do{TrimBox}{}%
3331 \do{ArtBox}{}%
3332 }
3333 \Hy@DefNameKey{pdfprintclip}{%
3334 \do{MediaBox}{}%
3335 \do{CropBox}{}%
3336 \do{BleedBox}{}%
3337 \do{TrimBox}{}%
3338 \do{ArtBox}{}%
3339 }
3340 \Hy@DefNameKey{pdfprintscaling}{%
3341 \do{AppDefault}{}%
3342 \do{None}{}%
3343 }
3344 \Hy@DefNameKey{pdfduplex}{%
3345 \do{Simplex}{}%
3346 \do{DuplexFlipShortEdge}{}%
3347 \do{DuplexFlipLongEdge}{}%
3348 }
3349 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3350 \do{true}{}%
3351 \do{false}{}%
3352 }
3353 \define@key{Hyp}{pdfprintpagerange}{%
3354 \def\@pdfprintpagerange{#1}%
3355 }
3356 \Hy@DefNameKey{pdfnumcopies}{%
3357 \do{2}{two copies}%
3358 \do{3}{three copies}%
3359 \do{4}{four copies}%
3360 \do{5}{five copies}%
3361 }
3362 \define@key{Hyp}{pdfusetitle}[true]{%
3363 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3364 }
3365 \def\HyXeTeX@CheckUnicode{%
3366 \ifxetex
3367 \ifHy@unicode
3368 \else
3369 \Hy@WarningNoLine{%
3370 XeTeX driver only supports unicode.\MessageBreak
3371 Enabling option 'unicode'%
3372 }%
3373 \setkeys{Hyp}{unicode}%
3374 \fi
3375 \else
3376 \let\HyXeTeX@CheckUnicode\relax
3377 \fi

```

```

3378 }
3379 \def\HyPsd@PrerenderUnicode#1{%
3380   \begingroup
3381     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3382     \else
3383       \sbox0{%
3384         \let\GenericInfo\@gobbletwo
3385         \let\GenericWarning\@gobbletwo
3386         \let\GenericError\@gobblefour
3387         \PrerenderUnicode{#1}%
3388       }%
3389     \fi
3390   \endgroup
3391 }
3392 \define@key{Hyp}{pdftitle}{%
3393   \HyXeTeX@CheckUnicode
3394   \HyPsd@XeTeXBigCharstrue
3395   \HyPsd@PrerenderUnicode{#1}%
3396   \pdfstringdef\@pdftitle{#1}%
3397 }
3398 \define@key{Hyp}{pdfauthor}{%
3399   \HyXeTeX@CheckUnicode
3400   \HyPsd@XeTeXBigCharstrue
3401   \HyPsd@PrerenderUnicode{#1}%
3402   \pdfstringdef\@pdfauthor{#1}%
3403 }
3404 \define@key{Hyp}{pdfproducer}{%
3405   \HyXeTeX@CheckUnicode
3406   \HyPsd@XeTeXBigCharstrue
3407   \HyPsd@PrerenderUnicode{#1}%
3408   \pdfstringdef\@pdfproducer{#1}%
3409 }
3410 \define@key{Hyp}{pdfcreator}{%
3411   \HyXeTeX@CheckUnicode
3412   \HyPsd@XeTeXBigCharstrue
3413   \HyPsd@PrerenderUnicode{#1}%
3414   \pdfstringdef\@pdfcreator{#1}%
3415 }
3416 \define@key{Hyp}{pdfcreationdate}{%
3417   \begingroup
3418     \Hy@unicodedefalse
3419     \pdfstringdef\@pdfcreationdate{#1}%
3420   \endgroup
3421 }
3422 \define@key{Hyp}{pdfmoddate}{%
3423   \begingroup
3424     \Hy@unicodedefalse
3425     \pdfstringdef\@pdfmoddate{#1}%
3426   \endgroup
3427 }
3428 \define@key{Hyp}{pdfsubject}{%
3429   \HyXeTeX@CheckUnicode
3430   \HyPsd@XeTeXBigCharstrue
3431   \HyPsd@PrerenderUnicode{#1}%
3432   \pdfstringdef\@pdfsubject{#1}%
3433 }
3434 \define@key{Hyp}{pdfkeywords}{%

```



```

3435 \HyXeTeX@CheckUnicode
3436 \HyPsd@XeTeXBigCharstrue
3437 \HyPsd@PrerenderUnicode{#1}%
3438 \pdfstringdef\@pdfkeywords{#1}%
3439 }
3440 \define@key{Hyp}{pdftrapped}{%
3441   \lowercase{\edef\Hy@temp{#1}}%
3442   \ifx\Hy@temp\HyInfo@trapped@true
3443     \def\@pdftrapped{True}%
3444   \else
3445     \ifx\Hy@temp\HyInfo@trapped@false
3446       \def\@pdftrapped{False}%
3447     \else
3448       \ifx\Hy@temp\HyInfo@trapped@unknown
3449         \def\@pdftrapped{Unknown}%
3450       \else
3451         \ifx\Hy@temp\@empty
3452           \else
3453             \Hy@Warning{%
3454               Unsupported value ‘#1’\MessageBreak
3455               for option ‘pdftrapped’%
3456             }%
3457           \fi
3458         \def\@pdftrapped{}%
3459       \fi
3460     \fi
3461   \fi
3462 }
3463 \def\HyInfo@trapped@true{true}
3464 \def\HyInfo@trapped@false{false}
3465 \def\HyInfo@trapped@unknown{unknown}
3466 \def\HyInfo@TrappedUnsupported{%
3467   \ifx\@pdftrapped\@empty
3468     \else
3469       \Hy@WarningNoLine{‘pdftrapped’ is not supported by this driver}%
3470       \gdef\HyInfo@TrappedUnsupported{}%
3471     \fi
3472 }
3473 \define@key{Hyp}{pdfinfo}{%
3474   \kvsetkeys{pdfinfo}{#1}%
3475 }
3476 \def\Hy@temp#1{%
3477   \lowercase{\Hy@temp@A{#1}}{#1}%
3478 }
3479 \def\Hy@temp@A#1#2{%
3480   \define@key{pdfinfo}{#2}{%
3481     \hypersetup{pdf#1={##1}}%
3482   }%
3483 }
3484 \Hy@temp{Title}
3485 \Hy@temp{Author}
3486 \Hy@temp{Keywords}
3487 \Hy@temp{Subject}
3488 \Hy@temp{Creator}
3489 \Hy@temp{Producer}
3490 \Hy@temp{CreationDate}
3491 \Hy@temp{ModDate}

```

```

3492 \Hy@temp{Trapped}
3493 \newif\ifHyInfo@AddonUnsupported
3494 \kv@set@family@handler{pdfinfo}{%
3495   \HyInfo@AddonHandler{#1}{#2}%
3496 }
3497 \let\HyInfo@do\relax
3498 \def\HyInfo@AddonHandler#1#2{%
3499   \ifx\kv@value\relax
3500     \Hy@Warning{%
3501       Option 'pdfinfo': ignoring key '\kv@key' without value%
3502     }%
3503   \else
3504     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3505     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3506     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3507       \ifHyInfo@AddonUnsupported
3508         \Hy@Warning{%
3509           This driver does not support additional\MessageBreak
3510           information entries, therefore\MessageBreak
3511           '\kv@key' is ignored%
3512         }%
3513       \else
3514         \define@key{pdfinfo}{\HyInfo@Key}{%
3515           \HyXeTeX@CheckUnicode
3516           \HyPsd@XeTeXBigCharstrue
3517           \HyPsd@PrerenderUnicode{##1}%
3518           \pdfstringdef\HyInfo@Value{##1}%
3519           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3520             \HyInfo@Value
3521         }%
3522         \edef\HyInfo@AddonList{%
3523           \HyInfo@AddonList
3524           \HyInfo@do{\HyInfo@Key}%
3525         }%
3526         \kv@parse@normalized{%
3527           \HyInfo@Key={#2}%
3528         }{%
3529           \kv@processor@default{pdfinfo}%
3530         }%
3531       \fi
3532     \else
3533       \kv@parse@normalized{%
3534         \HyInfo@Key={#2}%
3535       }{%
3536         \kv@processor@default{pdfinfo}%
3537       }%
3538     \fi
3539   \fi
3540 }
3541 \def\HyInfo@GenerateAddons{%
3542   \ifHyInfo@AddonUnsupported
3543     \def\HyInfo@Addons{}%
3544   \else
3545     \begingroup
3546     \toks@{}%
3547     \def\HyInfo@do##1{%
3548       \EdefEscapeName\HyInfo@Key{##1}%

```

```

3549 \edef\x{%
3550 \toks@{%
3551 \the\toks@
3552 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3553 }%
3554 }%
3555 \x
3556 }%
3557 \HyInfo@AddonList
3558 \edef\x{\endgroup
3559 \def\noexpand\HyInfo@Addons{\the\toks@}%
3560 }%
3561 \x
3562 \fi
3563 }
3564 \def\HyInfo@AddonList{}

3565 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3566 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3567 \let\setpdfinkmargin\@gobble
3568 \def\calculate@pdfview#1 #2\{\%
3569 \def\@pdfview{#1}%
3570 \ifx\#2\%
3571 \def\@pdfviewparams{-32768}%
3572 \else
3573 \def\@pdfviewparams{#2}%
3574 \fi
3575 }

3576 \begingroup\expandafter\expandafter\expandafter\endgroup
3577 \expandafter\ifx\csname numexpr\endcsname\relax
3578 \def\Hy@number#1{%
3579 \expandafter\@firstofone\expandafter{\number#1}%
3580 }%
3581 \else
3582 \def\Hy@number#1{%
3583 \the\numexpr#1\relax
3584 }%
3585 \fi
3586 \define@key{Hyp}{pdfstartpage}{%
3587 \ifx\#1\%
3588 \def\@pdfstartpage{}%
3589 \else
3590 \edef\@pdfstartpage{\Hy@number{#1}}%
3591 \fi
3592 }%
3593 \define@key{Hyp}{pdfstartview}{%
3594 \ifx\#1\%
3595 \def\@pdfstartview{}%
3596 \else
3597 \hypercalcbpdef\@pdfstartview{/#1}%
3598 \fi
3599 }
3600 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3601 \define@key{Hyp}{pdftoolbar}[true]{%
3602 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3603 }
3604 \define@key{Hyp}{pdfmenubar}[true]{%
3605 \Hy@boolkey[pdfmenubar]{menubar}{#1}%

```

```

3606 }
3607 \define@key{Hyp}{pdfwindowui}[true]{%
3608   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3609 }
3610 \define@key{Hyp}{pdffitwindow}[true]{%
3611   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3612 }
3613 \define@key{Hyp}{pdfcenterwindow}[true]{%
3614   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3615 }
3616 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3617   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3618 }
3619 \define@key{Hyp}{pdfa}[true]{%
3620   \Hy@boolkey[pdfa]{#1}%
3621 }
3622 \define@key{Hyp}{pdfnewwindow}[true]{%
3623   \def\Hy@temp{#1}%
3624   \ifx\Hy@temp\@empty
3625     \Hy@newwindowsetfalse
3626   \else
3627     \Hy@newwindowsettrue
3628     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3629   \fi
3630 }
3631 \def\Hy@SetNewWindow{%
3632   \ifHy@newwindowset
3633     /NewWindow %
3634     \ifHy@newwindow true\else false\fi
3635   \fi
3636 }
3637 \Hy@DefNameKey{pdfpagelayout}{%
3638   \do{SinglePage}{}%
3639   \do{OneColumn}{}%
3640   \do{TwoColumnLeft}{}%
3641   \do{TwoColumnRight}{}%
3642   \do{TwoPageLeft}{PDF 1.5}%
3643   \do{TwoPageRight}{PDF 1.5}%
3644 }
3645 \define@key{Hyp}{pdflang}{%
3646   \def\@pdflang{#1}%
3647 }
3648 \define@key{Hyp}{pdfpagelabels}[true]{%
3649   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3650 }
3651 \define@key{Hyp}{pdfescapeform}[true]{%
3652   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3653 }

```

Default values:

```

3654 \def\@linkbordercolor{1 0 0}
3655 \def\@urlbordercolor{0 1 1}
3656 \def\@menubordercolor{1 0 0}
3657 \def\@filebordercolor{0 .5 .5}
3658 \def\@runbordercolor{0 .7 .7}
3659 \def\@citebordercolor{0 1 0}
3660 \def\@pdfhighlight{/I}
3661 \def\@pdftitle{}

```

```

3662 \def\@pdfauthor{}
3663 \let\@pdfproducer\relax
3664 \def\@pdfcreator{LaTeX with hyperref package}
3665 \def\@pdfcreationdate{}
3666 \def\@pdfmoddate{}
3667 \def\@pdfsubject{}
3668 \def\@pdfkeywords{}
3669 \def\@pdftrapped{}
3670 \def\@pdfpagescrop{}
3671 \def\@pdfstartview{ /Fit }
3672 \def\@pdfstartpage{1}
3673 \def\@pdfprintpagerange{}
3674 \def\@pdflang{}
3675 \let\PDF@SetupDoc\@empty
3676 \let\PDF@FinishDoc\@empty
3677 \let\phantomsection\@empty
3678 \let\special@paper\@empty
3679 \def\HyperDestNameFilter#1{#1}
3680 \Hy@AtBeginDocument{%
3681   \begingroup
3682     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3683     \dimen@=\x\relax
3684     \ifdim\dimen@>\z@
3685       \else
3686         \dimen@=11in\relax
3687         \Hy@WarningNoLine{%
3688           Height of page (\expandafter\string\x) %
3689           is invalid (\the\x),\MessageBreak
3690           using 11in%
3691         }%
3692       \fi
3693       \dimen@=0.99626401\dimen@
3694       \xdef\Hy@pageheight{\strip@pt\dimen@}%
3695     \endgroup
3696 }
3697 \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.

```

3698 \let\hyper@normalise\ExecuteOptions
3699 \let\ExecuteOptions\hypersetup
3700 \Hy@RestoreCatcodes
3701 \InputIfFileExists{hyperref.cfg}{-}{-}
3702 \Hy@SetCatcodes
3703 \let\ExecuteOptions\hyper@normalise
3704 \Hy@MaybeStopNow

```

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.

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

```

3705 \RequirePackage{kvoptions}[2009/07/21]
3706 \SetupKeyvalOptions{family=Hyp}
3707 \DeclareLocalOptions{%
3708   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3709 }

```

Add option tex4ht if package tex4ht is loaded.

```

3710 \ifpackageloaded{tex4ht}{%
3711   \ifpackagewith{hyperref}{tex4ht}{}%
3712     \PassOptionsToPackage{tex4ht}{hyperref}%
3713   }%
3714 }{}

3715 \let\ReadBookmarks\relax
3716 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3717 \Hy@AtBeginDocument{%
3718   \ifHy@draft
3719     \let\hyper@@anchor\@gobble
3720     \gdef\hyper@link#1#2#3{#3}%
3721     \let\hyper@anchorstart\@gobble
3722     \let\hyper@anchorend\@empty
3723     \let\hyper@linkstart\@gobbletwo
3724     \let\hyper@linkend\@empty
3725     \def\hyper@linkurl#1#2{#1}%
3726     \def\hyper@linkfile#1#2#3{#1}%
3727     \def\hyper@link@{#1}#2#3{}%
3728     \def\Acrobatmenu#1#2{\leavevmode#2}%
3729     \let\PDF@SetupDoc\@empty
3730     \let\PDF@FinishDoc\@empty
3731     \let\@fifthoffive\@secondoftwo
3732     \let\@secondoffive\@secondoftwo
3733     \let\ReadBookmarks\relax
3734     \let\WriteBookmarks\relax
3735     \Hy@WarningNoLine{ draft mode on}%
3736   \fi
3737   \Hy@DisableOption{draft}%
3738   \Hy@DisableOption{nolinks}%
3739   \Hy@DisableOption{final}%
3740 }

```

15.1 PDF/A

```

3741 \Hy@DisableOption{pdfa}

3742 \ifHy@pdfa
3743   \setkeys{Hyp}{pdfversion=1.4}%
3744   \def\Hy@Acrobatmenu#1#2{%
3745     \leavevmode
3746     \begingroup
3747       \edef\x{#1}%
3748       \@onelevel@sanitize\x
3749       \ifx\x\Hy@NextPage
3750         \let\y=Y%
3751       \else
3752         \ifx\x\Hy@PrevPage
3753           \let\y=Y%
3754         \else
3755           \ifx\x\Hy@FirstPage
3756             \let\y=Y%
3757           \else
3758             \ifx\x\Hy@LastPage
3759               \let\y=Y%

```

```

3760         \else
3761         \let\y=N%
3762         \fi
3763     \fi
3764 \fi
3765 \fi
3766 \expandafter\endgroup
3767 \ifx\y Y%
3768 \else
3769 \PackageError{hyperref}{%
3770     PDF/A: Named action '#1' is not permitted%
3771 } \@ehc
3772 {#2}%
3773 \expandafter\@gobble
3774 \fi
3775 }%
3776 \def\Hy@temp#1{%
3777     \expandafter\def\csname Hy@#1\endcsname{#1}%
3778     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3779 }%
3780 \Hy@temp{NextPage}%
3781 \Hy@temp{PrevPage}%
3782 \Hy@temp{FirstPage}%
3783 \Hy@temp{LastPage}%
3784 \else
3785 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3786 \fi

```

15.2 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.

```

3787 \Hy@nextfalse
3788 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
3789 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
3790 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}
3791 \ifHy@next
3792 \let\texttilde\~%
3793 \fi
3794 \ifHy@figures
3795 \Hy@Info{Hyper figures ON}%
3796 \else
3797 \Hy@Info{Hyper figures OFF}%
3798 \fi
3799 \ifHy@nesting
3800 \Hy@Info{Link nesting ON}%
3801 \else
3802 \Hy@Info{Link nesting OFF}%
3803 \fi
3804 \ifHy@hyperindex
3805 \Hy@Info{Hyper index ON}%
3806 \else
3807 \Hy@Info{Hyper index OFF}%
3808 \fi
3809 \ifHy@plainpages
3810 \Hy@Info{Plain pages ON}%
3811 \else

```

```

3812 \Hy@Info{Plain pages OFF}%
3813 \fi
3814 \ifHy@backref
3815 \Hy@Info{Backreferencing ON}%
3816 \else
3817 \Hy@Info{Backreferencing OFF}%
3818 \fi
3819 \ifHy@typexml
3820 \Hy@AtEndOfPackage{%
3821 \RequirePackage{color}%
3822 \RequirePackage{nameref}%
3823 }%
3824 \fi
3825 \Hy@DisableOption{typexml}
3826 \ifHy@implicit
3827 \typeout{Implicit mode ON; LaTeX internals redefined}%
3828 \else
3829 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3830 \def\MaybeStopEarly{%
3831 \typeout{Hyperref stopped early}%
3832 \Hy@AtBeginDocument{%
3833 \PDF@FinishDoc
3834 \gdef\PDF@FinishDoc{}}%
3835 }%
3836 \endinput
3837 }%
3838 \Hy@AtBeginDocument{%
3839 \let\autoref\ref
3840 \let\autopageref\pageref
3841 \ifx\@pdfpagemode\@empty
3842 \gdef\@pdfpagemode{UseNone}%
3843 \fi
3844 \global\Hy@backreffalse
3845 }%
3846 \Hy@AtEndOfPackage{%
3847 \global\let\ReadBookmarks\relax
3848 \global\let\WriteBookmarks\relax
3849 }%
3850 \fi
3851 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3852 \Hy@AtEndOfPackage{%
3853 \@ifpackageloaded{tex4ht}{%
3854 \def\Hy@driver{htex4ht}%
3855 \Hy@texhttrue
3856 }{}%

```

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.

```

3857 \ifx\Hy@driver\@empty
3858 \else
3859 \def\Hy@temp{hpdftex}%
3860 \ifpdf
3861 \ifx\Hy@driver\Hy@temp
3862 \else
3863 \Hy@WarningNoLine{%

```



```

3864     Wrong driver '\Hy@driver.def';\MessageBreak
3865     pdfTeX is running in PDF mode.\MessageBreak
3866     Forcing driver '\Hy@temp.def'%
3867   }%
3868   \let\Hy@driver\Hy@temp
3869 \fi
3870 \else
3871   \ifx\Hy@driver\Hy@temp
3872     \Hy@WarningNoLine{%
3873       Wrong driver '\Hy@driver.def';\MessageBreak
3874       pdfTeX is not running in PDF mode.\MessageBreak
3875       Using default driver%
3876     }%
3877     \let\Hy@driver\@empty
3878   \fi
3879 \fi
3880 \fi
3881 \ifx\Hy@driver\@empty
3882 \else
3883   \def\Hy@temp{hxdetex}%
3884   \ifxdetex
3885     \ifx\Hy@driver\Hy@temp
3886     \else
3887       \Hy@WarningNoLine{%
3888         Wrong driver '\Hy@driver.def';\MessageBreak
3889         XeTeX is running.\MessageBreak
3890         Forcing driver '\Hy@temp.def' for XeTeX%
3891       }%
3892       \let\Hy@driver\Hy@temp
3893     \fi
3894   \fi
3895 \fi
3896 \ifx\Hy@driver\@empty
3897 \else
3898   \def\Hy@temp{hvtexhtm}%
3899   \ifvtexhtml
3900     \ifx\Hy@driver\Hy@temp
3901     \else
3902       \Hy@WarningNoLine{%
3903         Wrong driver '\Hy@driver.def';\MessageBreak
3904         VTeX is running in HTML mode.\MessageBreak
3905         Forcing driver '\Hy@temp.def'%
3906       }%
3907       \let\Hy@driver\Hy@temp
3908     \fi
3909   \else
3910     \ifx\Hy@driver\Hy@temp
3911       \Hy@WarningNoLine{%
3912         Wrong driver '\Hy@driver.def';\MessageBreak
3913         VTeX is not running in HTML mode.\MessageBreak
3914         Using default driver%
3915       }%
3916       \let\Hy@driver\@empty
3917     \fi
3918   \fi
3919 \fi

```

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

```

3920 \ifx\Hy@driver\@empty
3921 \providecommand*{\Hy@defaultdriver}{hypertex}%
3922 \ifpdf
3923 \def\Hy@driver{hpdftex}%
3924 \else
3925 \ifxetex
3926 \def\Hy@driver{hxetex}%
3927 \else
3928 \ifvtexhtml
3929 \def\Hy@driver{hvtexhtm}%
3930 \def\MaybeStopEarly{%
3931 \typeout{Hyperref stopped early}%
3932 \Hy@AtBeginDocument{%
3933 \PDF@FinishDoc
3934 \gdef\PDF@FinishDoc{}}%
3935 }%
3936 \endinput
3937 }%
3938 \else
3939 \ifvtexpdf
3940 \def\Hy@driver{hvtex}%
3941 \else
3942 \ifvtexps
3943 \def\Hy@driver{hvtex}%
3944 \else
3945 \let\Hy@driver\Hy@defaultdriver
3946 \fi
3947 \fi
3948 \fi
3949 \fi
3950 \fi
3951 \ifx\Hy@driver\Hy@defaultdriver
3952 \def\Hy@temp{hdvwind}%
3953 \ifx\Hy@temp\Hy@driver
3954 \setkeys{Hyp}{colorlinks}%
3955 \PassOptionsToPackage{dviwindo}{color}%
3956 \fi
3957 \fi
3958 \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3959 \else
3960 \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3961 \fi
3962 \input{\Hy@driver.def}%
3963 \let\@unprocessedoptions\relax
3964 \Hy@RestoreCatcodes
3965 }

```

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.

```

3966 \newif\ifHy@DvipdfmxOutlineOpen
3967 \ifxetex
3968 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3969 \else
3970 \Hy@DvipdfmxOutlineOpentruer
3971 \fi
3972 \fi
3973 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

3974 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3975 \else
3976   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3977     \Hy@DvipdfmxOutlineOpentruetrue
3978   \fi
3979 \fi
3980 \Hy@DisableOption{tex4ht}
3981 \Hy@DisableOption{pdftex}
3982 \Hy@DisableOption{nativepdf}
3983 \Hy@DisableOption{dvipdfm}
3984 \Hy@DisableOption{dvipdfmx}
3985 \Hy@DisableOption{dvipdfmx-outline-open}
3986 \Hy@DisableOption{pdfmark}
3987 \Hy@DisableOption{dvips}
3988 \Hy@DisableOption{hypertex}
3989 \Hy@DisableOption{vtex}
3990 \Hy@DisableOption{vtexpdfmark}
3991 \Hy@DisableOption{dviwindo}
3992 \Hy@DisableOption{dvipsone}
3993 \Hy@DisableOption{textures}
3994 \Hy@DisableOption{latex2html}
3995 \Hy@DisableOption{ps2pdf}
3996 \Hy@DisableOption{xetex}
3997 \Hy@AtEndOfPackage{%
3998   \Hy@DisableOption{pdfversion}%
3999 }

```

15.2.2 Bookmarks

```

4000 \def\WriteBookmarks{0}
4001 \def\@bookmarkopenstatus#1{%
4002   \ifHy@bookmarksopen

```

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

```

4003   \ifnum#1<\expandafter\@firstofone\expandafter
4004     {\number\@bookmarksopenlevel} % explicit space
4005   \else
4006     -%
4007   \fi
4008 \else
4009   -%
4010 \fi
4011 }
4012 \ifHy@bookmarks
4013   \Hy@Info{Bookmarks ON}%
4014   \ifx\@pdfpagemode\@empty
4015     \def\@pdfpagemode{UseOutlines}%
4016   \fi
4017 \else
4018   \def\@bookmarkopenstatus#1{%
4019     \Hy@Info{Bookmarks OFF}%
4020     \Hy@AtEndOfPackage{%
4021       \global\let\ReadBookmarks\relax
4022       \global\let\WriteBookmarks\relax
4023     }%
4024     \ifx\@pdfpagemode\@empty
4025       \def\@pdfpagemode{UseNone}%
4026     \fi

```

```

4027 \fi
4028 \Hy@DisableOption{bookmarks}

```

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

```

4029 \def\Hy@CatcodeWrapper#1{%
4030   \def\Hy@endWrap{%
4031     \def\TMP@EnsureCode##1##2{%
4032       \edef\Hy@endWrap{%
4033         \Hy@endWrap
4034         \catcode##1 \the\catcode##1\relax
4035       }%
4036       \catcode##1 ##2\relax
4037     }%
4038     \TMP@EnsureCode{10}{12}% ^^J
4039     \TMP@EnsureCode{33}{12}% !
4040     \TMP@EnsureCode{34}{12}% "
4041     \TMP@EnsureCode{36}{3}% $ (math)
4042     \TMP@EnsureCode{38}{4}% & (alignment)
4043     \TMP@EnsureCode{39}{12}% '
4044     \TMP@EnsureCode{40}{12}% (
4045     \TMP@EnsureCode{41}{12}% )
4046     \TMP@EnsureCode{42}{12}% *
4047     \TMP@EnsureCode{43}{12}% +
4048     \TMP@EnsureCode{44}{12}% ,
4049     \TMP@EnsureCode{45}{12}% -
4050     \TMP@EnsureCode{46}{12}% .
4051     \TMP@EnsureCode{47}{12}% /
4052     \TMP@EnsureCode{58}{12}% :
4053     \TMP@EnsureCode{59}{12}% ;
4054     \TMP@EnsureCode{60}{12}% <
4055     \TMP@EnsureCode{61}{12}% =
4056     \TMP@EnsureCode{62}{12}% >
4057     \TMP@EnsureCode{63}{12}% ?
4058     \TMP@EnsureCode{91}{12}% [
4059     \TMP@EnsureCode{93}{12}% ]
4060     \TMP@EnsureCode{94}{7}% ^ (superscript)
4061     \TMP@EnsureCode{95}{8}% _ (subscript)
4062     \TMP@EnsureCode{96}{12}% '
4063     \TMP@EnsureCode{124}{12}% |
4064     \TMP@EnsureCode{126}{13}% ~ (active)
4065     ##1\relax
4066   \Hy@endWrap
4067 }

```

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

```

4068 \Hy@AtBeginDocument{%
4069   \ifHy@ocgcolorlinks
4070     \setkeys{Hyp}{colorlinks}%
4071     \ifHy@pdfa
4072       \Hy@Warning{%
4073         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4074         using 'colorlinks' instead of 'ocgcolorlinks'%
4075       }%
4076       \Hy@ocgcolorlinksfalse
4077     \fi
4078   \fi
4079   \ifHy@ocgcolorlinks
4080     \else

```

```

4081 \Hy@DisableOption{ocgcolorlinks}%
4082 \fi
4083 \ifHy@colorlinks
4084 \def\@pdfborder{0 0 0}%
4085 \let\@pdfborderstyle\@empty
4086 \ifHy@typexml
4087 \else
4088 \Hy@CatcodeWrapper{%
4089 \RequirePackage{color}%
4090 }%
4091 \fi
4092 \def\Hy@colorlink#1{%
4093 \begingroup
4094 \HyColor@UseColor#1%
4095 }%
4096 \def\Hy@endcolorlink{\endgroup}%
4097 \Hy@Info{Link coloring ON}%
4098 \else
4099 \ifHy@frenchlinks
4100 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4101 \def\Hy@endcolorlink{\endgroup}%
4102 \Hy@Info{French linking ON}%
4103 \else
for grouping consistency:
4104 \def\Hy@colorlink#1{\begingroup}%
4105 \def\Hy@endcolorlink{\endgroup}%
4106 \Hy@Info{Link coloring OFF}%
4107 \fi
4108 \fi
4109 \Hy@DisableOption{colorlinks}%
4110 \Hy@DisableOption{frenchlinks}%
4111 \ifHy@texht
4112 \long\def\@firstoffive#1#2#3#4#5{#1}%
4113 \long\def\@secondoffive#1#2#3#4#5{#2}%
4114 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4115 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4116 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4117 \providecommand*\@safe@activestruer{}%
4118 \providecommand*\@safe@activesfalse{}%
4119 \def\T@ref#1{%
4120 \Hy@safe@activestruer
4121 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4122 \Hy@safe@activesfalse
4123 }%
4124 \def\T@pageref#1{%
4125 \Hy@safe@activestruer
4126 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4127 \Hy@safe@activesfalse
4128 }%
4129 \else
4130 \ifHy@typexml
4131 \else
4132 \Hy@CatcodeWrapper{%
4133 \RequirePackage{nameref}%
4134 }%
4135 \fi
4136 \fi

```

```

4137 \DeclareRobustCommand\ref{%
4138   \@ifstar\@refstar\T@ref
4139 }%
4140 \DeclareRobustCommand\pageref{%
4141   \@ifstar\@pagerefstar\T@pageref
4142 }%
4143 % \@ifclassloaded{memoir}{%
4144 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4145 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4146 %   }%
4147 % } \ltx@secondoftwo
4148 % {%
4149 %   \DeclareRobustCommand*{\nameref}{%
4150 %     \@ifstar\@mem@titlerefno link\@mem@titleref
4151 %   }%
4152 % }{%
4153   \DeclareRobustCommand*{\nameref}{%
4154     \@ifstar\@namerefstar\T@nameref
4155   }%
4156 % }%
4157 }
4158 \Hy@AtBeginDocument{%
4159   \ifHy@texht
4160   \else
4161     \Hy@CatcodeWrapper{%
4162       \ReadBookmarks
4163     }%
4164   \fi
4165 }
4166 \ifHy@backref
4167   \RequirePackage{backref}%
4168 \else
4169   \let\Hy@backout\@gobble
4170 \fi
4171 \Hy@DisableOption{backref}
4172 \Hy@DisableOption{pagebackref}
4173 \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`.

```

4174 \begingroup
4175   \endlinechar=-1 %
4176   \catcode'\^^A=14 %
4177   \catcode'\^^M\active
4178   \catcode'\%\active
4179   \catcode'\#\active
4180   \catcode'\_\active
4181   \catcode'\$\active
4182   \catcode'\&\active
4183   \gdef\hyper@normalise{^^A

```

```

4184 \begingroup
4185 \catcode'\^^M\active
4186 \def^^M{ }^^A
4187 \catcode'\%\active
4188 \let%\@percentchar
4189 \let%\@percentchar
4190 \catcode'\#\active
4191 \def#{\hyper@hash}^^A
4192 \def\#{\hyper@hash}^^A
4193 \@makeoother\&^^A
4194 \edef&{\string&}^^A
4195 \edef&{\string&}^^A
4196 \edef\textunderscore{\string_}^^A
4197 \let\_ \textunderscore
4198 \catcode'\_ \active
4199 \let\_ \textunderscore
4200 \let~\hyper@tilde
4201 \let~\hyper@tilde
4202 \let\textasciitilde\hyper@tilde
4203 \let\\ \@backslashchar
4204 \edef${\string$}^^A
4205 \Hy@safe@activetrue
4206 \hyper@n@rmalise
4207 }^^A
4208 \catcode'\#=6 ^^A
4209 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4210 \gdef\hyper@n@rmalise#1#2{^^A
4211 \def\Hy@tempa{#2}^^A
4212 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4213 \Hy@ReturnAfterElseFi{^^A
4214 \hyper@@normalise{#1}^^A
4215 }^^A
4216 \else
4217 \Hy@ReturnAfterFi{^^A
4218 \hyper@@normalise{#1}{#2}^^A
4219 }^^A
4220 \fi
4221 }^^A
4222 \gdef\hyper@@normalise#1#2{^^A
4223 \edef\Hy@tempa{^^A
4224 \endgroup
4225 \noexpand#1{\Hy@RemovePercentCr#2%\nil}^^A
4226 }^^A
4227 \Hy@tempa
4228 }^^A
4229 \gdef\Hy@RemovePercentCr#1%\nil{^^A
4230 #1^^A
4231 \ifx\limits#2\limits
4232 \else
4233 \Hy@ReturnAfterFi{^^A
4234 \Hy@RemovePercentCr #2\@nil
4235 }^^A
4236 \fi
4237 }^^A
4238 \endgroup
4239 \providecommand*\hyper@chars{%
4240 \let\#\hyper@hash

```

```

4241 \let\%\@percentchar
4242 \Hy@safe@activetrue
4243 }

4244 \def\hyperlink#1#2{%
4245   \hyper@link{#1}{#2}%
4246 }

4247 \def\Hy@VerboseLinkStart#1#2{%
4248   \ifHy@verbose
4249     \begingroup
4250       \Hy@safe@activetrue
4251       \xdef\Hy@VerboseGlobalTemp{(#1 '#2')%
4252         \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4253         \xdef\Hy@VerboseGlobalTemp{%
4254           \Hy@VerboseGlobalTemp, %
4255           line \the\inputlineno
4256         }%
4257       \endgroup
4258       \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4259       \@onelevel@sanitize\Hy@VerboseLinkInfo
4260     \fi
4261 }

4262 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4263 \def\Hy@VerboseLinkStop{%
4264   \ifHy@verbose
4265     \begingroup
4266       \edef\x{\endgroup
4267         \write\m@ne{%
4268           Package 'hyperref' Info: %
4269           End of reference \Hy@VerboseLinkInfo.%
4270         }%
4271       }%
4272     \x
4273   \fi
4274 }

4275 \def\Hy@VerboseAnchor#1{%
4276   \ifHy@verbose
4277     \begingroup
4278       \Hy@safe@activetrue
4279       \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4280     \endgroup
4281   \fi
4282 }

4283 \def\Hy@AllowHyphens{%
4284   \relax
4285   \ifhmode
4286     \penalty\@M
4287     \hskip\z@skip
4288   \fi
4289 }

4290 \DeclareRobustCommand*\href{#1}{%
4291   \@ifnextchar\bgrouphyper@normalise\href@}%
4292 }
4293 \def\Hy@href#1{%
4294   \hyper@normalise\href@
4295 }

```



```

4296 \begingroup
4297   \catcode'\$=6 %
4298   \catcode'\#=12 %
4299   \gdef\href@#1{\expandafter\href@split$1##\}%
4300   \gdef\href@split$1#$2#$3\{\%
4301     \hyper@@link{#1}{#2}%
4302   }%
4303 \endgroup

```

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

```

4304 \RequirePackage{url}
4305 \let\HyOrg@url\url
4306 \def\Hurl{\begingroup \Url}
4307 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4308 \def\nolinkurl@#1{\Hurl{#1}}
4309 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4310 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4311 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4312 \providecommand\hyper@image[2]{#2}

4313 \def\hypertarget#1#2{%
4314   \ifHy@nesting
4315     \hyper@@anchor{#1}{#2}%
4316   \else
4317     \hyper@@anchor{#1}{\relax}#2%
4318   \fi
4319 }

```

\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.

```

4320 \DeclareRobustCommand*\hyperref{\%
4321   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4322 }
4323 \def\Hy@babelnormalise#1[#2]{%
4324   \begingroup
4325     \Hy@safe@activetrue
4326     \edef\Hy@tempa{%
4327       \endgroup
4328       \noexpand#1[#2]}%
4329   }%
4330   \Hy@tempa
4331 }
4332 \def\@hyperref{\hyper@normalise\@hyperref}
4333 \def\@hyperref#1#2#3{%
4334   \edef\ref@one{\ifx\#2\#2\else#2.\fi#3}%
4335   \expandafter\tryhyper@link\ref@one\{#1}%
4336 }
4337 \def\tryhyper@link#1\#2{%
4338   \hyper@@link{#2}{#1}%
4339 }

4340 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
4341 \def\@hyperdef#1#2#3{%, category, name, text
4342   \ifx\#1\%

```

```

4343 \def\Hy@AnchorName{#2}%
4344 \else
4345 \def\Hy@AnchorName{#1.#2}%
4346 \fi
4347 \ifHy@nesting
4348 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4349 \else
4350 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4351 \fi
4352 }

```

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.

```

4353 \def\label@hyperref[#1]{%
4354 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4355 }%
4356 \def\label@@hyperref#1#2#3{%
4357 \ifx#1\relax
4358 \protect\G@refundefinedtrue
4359 \@latex@warning{%
4360 Hyper reference ‘#2’ on page \thepage \space undefined%
4361 }%
4362 \hyper@@link{}{??}{#3}%
4363 \else
4364 \hyper@@link{\expandafter\@fifthoffive#1}%
4365 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4366 \fi
4367 }
4368 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4369 % anchor text
4370 \@bsphack
4371 \ifx\#2\%
4372 \def\Hy@AnchorName{#3}%
4373 \else
4374 \def\Hy@AnchorName{#2.#3}%
4375 \fi
4376 \if@filesw
4377 \protected@write\@auxout{}{%
4378 \string\newlabel{#1}{\{}{}\}\{\Hy@AnchorName\}}%
4379 }%
4380 \fi
4381 \@esphack
4382 \ifHy@nesting
4383 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4384 \else
4385 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4386 \fi
4387 }

```

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.

```

4388 \def\hyper@@link{\let\Hy@reserved@a\relax

```

```

4389 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
4390 }
4391 \def\hyper@link@{#1}#2#3#4{%
4392 \begingroup
4393 \protected@edef\Hy@tempa{#2}%
4394 \Hy@safe@activetrue
4395 \edef\x{#3}%
4396 \ifx\Hy@tempa\@empty
4397 \toks0{\hyper@link{#1}}%
4398 \else
4399 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4400 \fi
4401 \toks2{%
4402 \Hy@safe@activesfalse
4403 #4%
4404 }%
4405 \edef\Hy@tempa{\the\toks2}%
4406 \edef\x{\endgroup
4407 \ifx\Hy@tempa\@empty
4408 \noexpand\Hy@Warning{Suppressing empty link}%
4409 \else
4410 \the\toks0 {\x}{\the\toks2}}%%
4411 \fi
4412 }%
4413 \x
4414 }

```

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.

```

4415 \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.

```

4416 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4417 }

```

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

```

4418 \def\@pdftempwordfile{file}%
4419 \def\@pdftempwordrun{run}%
4420 \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:

```

4421 \ifx\\#6\\%
4422 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4423 \else
4424 \ifx\\#4\\%
4425 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4426 \else

```

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

```

4427 \def\@pdftempa{#4}%
4428 \ifx\@pdftempa\@pdftempwordfile
4429 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
4430 \else

```

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

```

4431 \ifx\@pdftempa\@pdftempwordrun
4432 \ifHy@pdfa
4433 \PackageError{hyperref}{%
4434 PDF/A: Launch action is prohibited%
4435 }\@ehc
4436 \begingroup
4437 \leavevmode
4438 #2%
4439 \endgroup
4440 \else
4441 \expandafter\@hyper@launch#7\\{#3}{#2}%
4442 \fi
4443 \else

```

otherwise its a URL

```

4444 \hyper@linkurl{#3}{#7\ifx\\#2\\%\\else\hyper@hash#2\fi}%
4445 \fi
4446 \fi
4447 \fi
4448 \fi
4449 }

```

By default, turn run: into file:

```

4450 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
4451 \hyper@linkurl{#2}{%
4452 \Hy@linkfileprefix
4453 #1%
4454 \ifx\\#3\\%
4455 \else
4456 \hyper@hash
4457 #3%
4458 \fi
4459 }%
4460 }

```

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

```

4461 \def\@hyper@linkfile file:#1\\#2#3{%
4462 %file url,link string, name
4463 \filename@parse{#1}%
4464 \ifx\filename@ext\relax
4465 \edef\filename@ext{\XR@ext}%
4466 \fi
4467 \def\use@file{\filename@area\filename@base.\filename@ext}%
4468 \Hy@IfStringEndsWith\filename@ext\XR@ext{%

```

```

4469 \hyper@linkfile{#2}{\use@file}{#3}%
4470 }{%
4471 \ifx\@baseurl\@empty
4472 \hyper@linkurl{#2}{%
4473 \Hy@linkfileprefix\use@file\ifx\\#3\\\else\hyper@hash#3\fi
4474 }%
4475 \else
4476 \hyper@linkurl{#2}{\use@file\ifx\\#3\\\else\hyper@hash#3\fi}%
4477 \fi
4478 }%
4479 }

4480 \def\Hy@IfStringEndsWith#1#2{%
4481 \begingroup
4482 \edef\x{#1}%
4483 \@onelevel@sanitize\x
4484 \edef\x{.\x}%
4485 \edef\y{#2}%
4486 \@onelevel@sanitize\y
4487 \edef\y{.\y}%
4488 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4489 \endgroup
4490 \ifx\relax##2\relax
4491 \expandafter\ltx@secondoftwo
4492 \else
4493 \expandafter\ltx@firstoftwo
4494 \fi
4495 }%
4496 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4497 }

```

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.

```

4498 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4499 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4500 \ifx\\#1\\%
4501 #2\Hy@Warning{Ignoring empty anchor}%
4502 \else
4503 \def\anchor@spot{#2#3}%
4504 \let\put@me@back\@empty
4505 \ifx\relax#2\relax
4506 \else
4507 \ifHy@nesting
4508 \else
4509 \ifcat a\noexpand#2\relax
4510 \else
4511 \ifcat 0\noexpand#2 \relax
4512 \else
4513 % \typeout{Anchor start is not alphanumeric %
4514 % on input line\the\inputlineno%
4515 % }%
4516 \let\anchor@spot\@empty
4517 \def\put@me@back{#2#3}%

```

```

4518     \fi
4519     \fi
4520     \fi
4521     \fi
4522     \ifHy@activeanchor
4523     \anchor@spot
4524     \else
4525     \hyper@anchor{#1}%
4526     \fi
4527     \expandafter\put@me@back
4528     \fi
4529     \let\anchor@spot\@empty
4530 }

```

18 Compatibility with the *LT_ΕX2html* 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.

```

4531 \let\htmladding\hyperimage
4532 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4533 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4534 \def\htmlref#1#2{% anchor text, label
4535   \label@hyperref[{#2}]{#1}%
4536 }

```

This is really too much. The *LT_ΕX2html* 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.

```

4537 \def\@latextohtmlX{%
4538   \let\hhyperref\hyperref
4539   \def\hyperref##1##2##3##4{% anchor text for HTML
4540     % text to print before label in print
4541     % label
4542     % post-label text in print
4543     ##2\ref{##4}##3%
4544   }%
4545 }

```

19 Forms creation

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

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

19.1 Field flags

The field flags are organized in a bit set.

```

4546 \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
 4547 \def\HyField@NewFlag#1#2{%
 4548 \lowercase{\HyField@NewOption{#2}}%
 4549 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
 4550 }

\HyField@NewFlagOnly
 4551 \def\HyField@NewFlagOnly#1#2{%
 4552 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
 4553 }

\HyField@NewOption #1: option name
 4554 \def\HyField@NewOption#1{%
 4555 \expandafter\newif\csname ifFld@#1\endcsname
 4556 \define@key{Field}{#1}[true]{%
 4557 \lowercase{\Field@boolkey{##1}}{#1}%
 4558 }%
 4559 }

\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
 4560 \def\HyField@NewBitsetFlag#1#2#3#4{%
 4561 \begingroup
 4562 \count@=#4\relax
 4563 \advance\count@\m@ne
 4564 \def\x##1{%
 4565 \endgroup
 4566 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
 4567 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
 4568 \expandafter\edef\csname HyField@#3@##1\endcsname{%
 4569 (\number#4) #2%
 4570 }%
 4571 \else
 4572 \expandafter\edef\csname HyField@#3@##1\endcsname{%
 4573 \csname HyField@#3@##1\endcsname
 4574 /#2%
 4575 }%
 4576 \fi
 4577 }%
 4578 \expandafter\x\expandafter{\the\count@}%
 4579 }

\HyField@UseFlag The bit set is HyField@#1
 4580 \def\HyField@UseFlag#1#2{%
 4581 \lowercase{\HyField@UseFlag{#2}}{#1}%
 4582 }

\HyField@@UseFlag

```
4583 \def\HyField@@UseFlag#1#2{%
4584   \bitsetSetValue{HyField@#2}{%
4585     \csname HyField@#2@#1\endcsname
4586   }{%
4587     \csname ifFld@#1\endcsname 1\else 0\fi
4588   }%
4589 }
```

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

```
4590 \def\HyField@SetFlag#1#2{%
4591   \lowercase{\HyField@@SetFlag{#2}}{#1}%
4592 }
```

\HyField@@SetFlag

```
4593 \def\HyField@@SetFlag#1#2{%
4594   \bitsetSetValue{HyField@#2}{%
4595     \csname HyField@#2@#1\endcsname
4596   }{1}%
4597 }
```

\HyField@PrintFlags

```
4598 \def\HyField@PrintFlags#1#2{%
4599   \ifHy@verbose
4600     \begingroup
4601       \let\Hy@temp\@empty
4602       \let\MessageBreak\relax
4603       \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4604       \bitsetGetSetBitList{HyField@#1}\do{%
4605         \edef\Hy@temp{%
4606           \Hy@temp
4607           \csname HyField@#1@\x\endcsname\MessageBreak
4608         }%
4609       }%
4610     \edef\x{\endgroup
4611       \noexpand\Hy@Info{%
4612         Field flags: %
4613         \expandafter\ifx\@car#1\@nil S\else/\fi
4614         #1 %
4615         \bitsetGetDec{HyField@#1} %
4616         (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4617         \Hy@temp
4618         for #2%
4619       }%
4620     }\x
4621   \fi
4622 }
```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
4623 \HyField@NewFlag{Ff}{ReadOnly}{1}
4624 \HyField@NewFlag{Ff}{Required}{2}
4625 \HyField@NewFlag{Ff}{NoExport}{3}
```


“Table 8.75 Field flags specific to button fields”

```
4626 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4627 \HyField@NewFlag{Ff}{Radio}{16}
4628 \HyField@NewFlag{Ff}{Pushbutton}{17}
4629 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
4630 \HyField@NewFlag{Ff}{Multiline}{13}
4631 \HyField@NewFlag{Ff}{Password}{14}
4632 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4633 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4634 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4635 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4636 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
4637 \HyField@NewFlag{Ff}{Combo}{18}
4638 \HyField@NewFlag{Ff}{Edit}{19}
4639 \HyField@NewFlag{Ff}{Sort}{20}
4640 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4641 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4642 \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.

```
4643 \newif\ifFld@popdown
4644 \define@key{Field}{popdown}[true]{%
4645   \lowercase{\Field@boolkey{#1}}{popdown}%
4646 }
```

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.

```
4647 \HyField@NewFlag{F}{Invisible}{1}
4648 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4649 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4650 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4651 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4652 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4653 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4654 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4655 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4656 \ifHy@pdfa
4657   \def\HyField@PDFAFldWarning#1#2{%
4658     \Hy@Warning{%
4659       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4660       be set to ‘#2’%
4661     }%
4662   }%
4663   \Fld@invisiblefalse
4664   \def\Fld@invisibletrue{%
4665     \HyField@PDFAFldWarning{invisible}{false}%
4666   }%
4667   \Fld@hiddenfalse
4668   \def\Fld@hiddentrue{%
```

```

4669 \HyField@PDFAFIWarning{hidden}{false}%
4670 }%
4671 \Fld@printrtrue
4672 \def\Fld@printfalse{%
4673 \HyField@PDFAFIWarning{print}{true}%
4674 }%
4675 \Fld@nozoomtrue
4676 \def\Fld@nozoomfalse{%
4677 \HyField@PDFAFIWarning{nozoom}{true}%
4678 }%
4679 \Fld@norotatetrue
4680 \def\Fld@norotatefalse{%
4681 \HyField@PDFAFIWarning{norotate}{true}%
4682 }%
4683 \Fld@noviewfalse
4684 \def\Fld@noviewtrue{%
4685 \HyField@PDFAFIWarning{noview}{false}%
4686 }%
4687 \fi

```

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

```

4688 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4689 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4690 \HyField@NewFlag{Submit}{GetMethod}{4}
4691 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4692 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4693 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4694 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4695 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4696 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4697 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4698 \HyField@NewFlag{Submit}{ExclFKey}{12}
4699 \HyField@NewFlag{Submit}{EmbedForm}{14}

4700 \define@key{Field}{export}{%
4701 \lowercase{\def\Hy@temp{#1}}%
4702 \@ifundefined{Fld@export@Hy@temp}{%
4703 \onelevel@sanitize\Hy@temp
4704 \PackageError{hyperref}{%
4705 Unknown export format '\Hy@temp'.\MessageBreak
4706 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4707 }\@ehc
4708 }{%
4709 \let\Fld@export\Hy@temp
4710 }%
4711 }
4712 \def\Fld@export{fdf}
4713 \@namedef{Fld@export@fdf}{0}%
4714 \@namedef{Fld@export@html}{1}%
4715 \@namedef{Fld@export@xfdf}{2}%
4716 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4717 \def\HyField@FlagsSubmit{%
4718 \bitsetReset{HyField@Submit}%
4719 \ifcase\@nameuse{Fld@export@Fld@export} %

```

```

4720 % FDF
4721 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4722 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4723 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4724 \HyField@UseFlag{Submit}{IncludeAnnotations}%
4725 \HyField@UseFlag{Submit}{CanonicalFormat}%
4726 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4727 \HyField@UseFlag{Submit}{ExclFKey}%
4728 \HyField@UseFlag{Submit}{EmbedForm}%
4729 \or % HTML
4730 \HyField@SetFlag{Submit}{ExportFormat}%
4731 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4732 \HyField@UseFlag{Submit}{GetMethod}%
4733 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4734 \HyField@UseFlag{Submit}{CanonicalFormat}%
4735 \or % XFDF
4736 \HyField@SetFlag{Submit}{XFDF}%
4737 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4738 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4739 \HyField@UseFlag{Submit}{CanonicalFormat}%
4740 \or % PDF
4741 \HyField@SetFlag{Submit}{SubmitPDF}%
4742 \HyField@UseFlag{Submit}{GetMethod}%
4743 \fi
4744 \HyField@PrintFlags{Submit}{submit button field}%
4745 \bitsetIsEmpty{HyField@Submit}{%
4746 \def\Fld@submitflags{%
4747 }{%
4748 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4749 }%
4750 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4751 \def\HyField@FlagsAnnot#1{%
4752 \bitsetReset{HyField@F}%
4753 \HyField@UseFlag{F}{Invisible}%
4754 \HyField@UseFlag{F}{Hidden}%
4755 \HyField@UseFlag{F}{Print}%
4756 \HyField@UseFlag{F}{NoZoom}%
4757 \HyField@UseFlag{F}{NoRotate}%
4758 \HyField@UseFlag{F}{NoView}%
4759 \HyField@UseFlag{F}{Locked}%
4760 \HyField@UseFlag{F}{ToggleNoView}%
4761 \HyField@UseFlag{F}{LockedContents}%
4762 \HyField@PrintFlags{F}{#1}%
4763 \bitsetIsEmpty{HyField@F}{%
4764 \def\Fld@annotflags{%
4765 }{%
4766 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4767 }%
4768 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```
4769 \def\HyField@FlagsPushButton{%
4770 \HyField@FlagsAnnot{push button field}%
4771 \bitsetReset{HyField@Ff}%
4772 \HyField@UseFlag{Ff}{ReadOnly}%
4773 \HyField@UseFlag{Ff}{Required}%
4774 \HyField@UseFlag{Ff}{NoExport}%
4775 \HyField@SetFlag{Ff}{Pushbutton}%
4776 \HyField@PrintFlags{Ff}{push button field}%
4777 \bitsetIsEmpty{HyField@Ff}{%
4778 \def\Fld@flags{%
4779 }{%
4780 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4781 }%
4782 }
```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
4783 \def\HyField@FlagsCheckBox{%
4784 \HyField@FlagsAnnot{check box field}%
4785 \bitsetReset{HyField@Ff}%
4786 \HyField@UseFlag{Ff}{ReadOnly}%
4787 \HyField@UseFlag{Ff}{Required}%
4788 \HyField@UseFlag{Ff}{NoExport}%
4789 \HyField@PrintFlags{Ff}{check box field}%
4790 \bitsetIsEmpty{HyField@Ff}{%
4791 \def\Fld@flags{%
4792 }{%
4793 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4794 }%
4795 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4796 \def\HyField@FlagsRadioButton{%
4797 \HyField@FlagsAnnot{radio button field}%
4798 \bitsetReset{HyField@Ff}%
4799 \HyField@UseFlag{Ff}{ReadOnly}%
4800 \HyField@UseFlag{Ff}{Required}%
4801 \HyField@UseFlag{Ff}{NoExport}%
4802 \HyField@UseFlag{Ff}{NoToggleToOff}%
4803 \HyField@SetFlag{Ff}{Radio}%
4804 \HyField@UseFlag{Ff}{RadiosInUnison}%
4805 \HyField@PrintFlags{Ff}{radio button field}%
4806 \bitsetIsEmpty{HyField@Ff}{%
4807 \def\Fld@flags{%
4808 }{%
4809 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4810 }%
4811 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4812 \def\HyField@FlagsText{%
4813   \HyField@FlagsAnnot{text field}%
4814   \bitsetReset{HyField@Ff}%
4815   \HyField@UseFlag{Ff}{ReadOnly}%
4816   \HyField@UseFlag{Ff}{Required}%
4817   \HyField@UseFlag{Ff}{NoExport}%
4818   \HyField@UseFlag{Ff}{Multiline}%
4819   \HyField@UseFlag{Ff}{Password}%
4820   \HyField@UseFlag{Ff}{FileSelect}%
4821   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4822   \HyField@UseFlag{Ff}{DoNotScroll}%
4823   \ifFld@comb
4824     \ifcase0\ifFld@multiline
4825       \else\ifFld@password
4826       \else\ifFld@fileselect
4827       \else 1\fi\fi\fi\relax
4828     \PackageError{hyperref}{%
4829       Field option 'comb' cannot used together with\MessageBreak
4830       'multiline', 'password', or 'fileselect'%
4831     }\@ehc
4832   \else
4833     \HyField@UseFlag{Ff}{Comb}%
4834   \fi
4835 \fi
4836 \HyField@UseFlag{Ff}{RichText}%
4837 \HyField@PrintFlags{Ff}{text field}%
4838 \bitsetIsEmpty{HyField@Ff}{%
4839   \def\Fld@flags{%
4840   }{%
4841   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4842 }%
4843 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
4844 \def\HyField@FlagsChoice{%
4845   \HyField@FlagsAnnot{choice field}%
4846   \bitsetReset{HyField@Ff}%
4847   \HyField@UseFlag{Ff}{ReadOnly}%
4848   \HyField@UseFlag{Ff}{Required}%
4849   \HyField@UseFlag{Ff}{NoExport}%
4850   \HyField@UseFlag{Ff}{Combo}%
4851   \ifFld@combo
4852     \HyField@UseFlag{Ff}{Edit}%
4853   \fi
4854   \HyField@UseFlag{Ff}{Sort}%
4855   \HyField@UseFlag{Ff}{MultiSelect}%
4856   \ifFld@combo
4857     \ifFld@edit
4858       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4859     \fi
4860   \fi
4861   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```

```

4862 \HyField@PrintFlags{Ff}{choice field}%
4863 \bitsetIsEmpty{HyField@Ff}{%
4864   \def\Fld@flags{%
4865   }{%
4866   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4867 }%
4868 }

```

19.2 Choice field

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

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

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

```

4869 \def\HyField@PDFChoices#1{%
4870   \begingroup
4871   \gdef\Fld@choices{%
4872   \def\HyTmp@optlist{%
4873   \let\HyTmp@optitem\relax
4874   \count@=0 %
4875   \kv@parse{#1}{%
4876     \Hy@pdfstringdef\kv@key\kv@key
4877     \ifx\kv@value\relax
4878       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4879       \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4880     \else
4881       \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4882     \fi
4883   \else
4884     \Hy@pdfstringdef\kv@value\kv@value
4885     \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4886   \fi
4887   \edef\HyTmp@optlist{%
4888     \HyTmp@optlist
4889     \HyTmp@optitem{\the\count@}{\kv@key}0%
4890   }%
4891   \advance\count@ by 1 %
4892   \@gobbletwo
4893 }%
4894 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4895 \ifFld@multiselect
4896   \HyField@@PDFChoices{DV}\Fld@default
4897   \HyField@@PDFChoices{V}\Fld@value
4898 \else
4899   \ifx\Fld@default\relax
4900   \else
4901     \pdfstringdef\Hy@gtemp\Fld@default
4902     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4903   \fi
4904   \ifx\Fld@value\relax
4905   \else
4906     \pdfstringdef\Hy@gtemp\Fld@value
4907     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4908   \fi
4909   \fi
4910 \endgroup
4911 }

```

\HyField@@PDFChoices

```
4912 \def\HyField@@PDFChoices#1#2{%
4913   \ifx#2\relax
4914   \else
4915     \count@=0 %
4916     \def\HyTmp@optitem##1##2##3{%
4917       \def\HyTmp@key{##2}%
4918       \ifx\HyTmp@key\Hy@gtemp
4919         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4920           \HyTmp@optlist
4921           \HyTmp@optitem{##1}{##2}1%
4922         }%
4923         \let\HyTmp@found=Y%
4924       \else
4925         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4926           \HyTmp@optlist
4927           \HyTmp@optitem{##1}{##2}##3%
4928         }%
4929       \fi
4930     }%
4931     \expandafter\comma@parse\expandafter{#2}{%
4932       \pdfstringdef\Hy@gtemp\comma@entry
4933       \let\HyTmp@found=N %
4934       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4935       \HyTmp@optlist
4936       \ifx\HyTmp@found Y%
4937         \advance\count@ by 1 %
4938       \else
4939         \@onelevel@sanitize\comma@entry
4940         \PackageWarning{hyperref}{%
4941           \string\ChoiceBox: Ignoring value '\comma@entry',%
4942           \MessageBreak
4943           it cannot be found in the choices%
4944         }%
4945       \fi
4946       \@gobble
4947     }%
4948     \def\HyTmp@optitem##1##2##3{%
4949       \ifnum##3=1 %
4950         (##2)%
4951       \fi
4952     }%
4953     \ifcase\count@
4954     \or
4955       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4956     \else
4957       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4958       \ifx#1V%
4959         \def\HyTmp@optitem##1##2##3{%
4960           \ifnum##3=1 %
4961             \@firstofone{ ##1}%
4962           \fi
4963         }%
4964         \edef\HyTmp@optlist{\HyTmp@optlist}%
4965         \xdef\Fld@choices{%
4966           \Fld@choices
4967           /I[\expandafter\@firstofone\HyTmp@optlist]%

```

```

4968     }%
4969     \fi
4970     \fi
4971     \fi
4972 }

```

19.3 Forms

\HyField@SetKeys

```

4973 \def\HyField@SetKeys{%
4974   \setkeys{Field}%
4975 }

4976 \newif\ifFld@checked
4977 \newif\ifFld@disabled
4978 \Fld@checkedfalse
4979 \Fld@disabledfalse
4980 \newcount\Fld@menulength
4981 \newdimen\Fld@Width
4982 \newdimen\Fld@charsize
4983 \Fld@charsize=10\p@
4984 \def\Fld@maxlen{0}
4985 \def\Fld@align{0}
4986 \def\Fld@color{0 0 0 rg}
4987 \def\Fld@bcolor{1 1 1}
4988 \def\Fld@bordercolor{1 0 0}
4989 \def\Fld@bordersep{1\p@}
4990 \def\Fld@borderwidth{1}
4991 \def\Fld@borderstyle{S}
4992 \def\Fld@cbsymbol{4}
4993 \def\Fld@radiosymbol{H}
4994 \def\Fld@rotation{0}
4995 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4996 \def\endForm{\@endForm}
4997 \newif\ifForm@html
4998 \Form@htmlfalse
4999 \def\Form@boolkey#1#2{%
5000   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5001 }
5002 \define@key{Form}{action}{%
5003   \hyper@normalise\Hy@DefFormAction{#1}%
5004 }
5005 \def\Hy@DefFormAction{\def\Form@action}
5006 \def\enc@html{html}
5007 \define@key{Form}{encoding}{%
5008   \def\Hy@tempa{#1}%
5009   \ifx\Hy@tempa\enc@html
5010     \Form@htmltrue
5011     \def\Fld@export{html}%
5012   \else
5013     \Hy@Warning{%
5014       Form 'encoding' key with \MessageBreak
5015       unknown value '#1'%
5016     }%
5017     \Form@htmlfalse
5018   \fi
5019 }

```



```

5020 \define@key{Form}{method}{%
5021   \lowercase{\def\Hy@temp{#1}}}%
5022   \@ifundefined{Form@method@\Hy@temp}{%
5023     \@onelevel@sanitize\Hy@temp
5024     \PackageError{hyperref}{%
5025       Unknown method '\Hy@temp'.\MessageBreak
5026       Known values are 'post' and 'get'%
5027     }\@ehc
5028   }{%
5029     \let\Form@method\Hy@temp
5030     \ifcase\@nameuse{Form@method@\Hy@temp} %
5031       \Fld@getmethodfalse
5032     \else
5033       \Fld@getmethodtrue
5034     \fi
5035   }%
5036 }
5037 \def\Form@method{}
5038 \@namedef{Form@method@post}{0}
5039 \@namedef{Form@method@get}{1}
5040 \def\Fld@boolkey#1#2{%
5041   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5042 }
5043 \newtoks\Fld@toks
5044 \Fld@toks={ }%
5045 \def\Fld@addtoks#1#2{%
5046   \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5047   \@processme
5048 }
5049 \def\Fld@checkequals#1=#2=#3\{%
5050   \def\@currDisplay{#1}%
5051   \ifx\#2\%
5052     \def\@currValue{#1}%
5053   \else
5054     \def\@currValue{#2}%
5055   \fi
5056 }
5057 \define@key{Field}{loc}{%
5058   \def\Fld@loc{#1}%
5059 }
5060 \define@key{Field}{checked}[true]{%
5061   \lowercase{\Field@boolkey{#1}}{checked}%
5062 }
5063 \define@key{Field}{disabled}[true]{%
5064   \lowercase{\Field@boolkey{#1}}{disabled}%
5065 }
5066 \define@key{Field}{accesskey}{%
5067   \Field@addtoks{accesskey}{#1}%
5068 }
5069 \define@key{Field}{tabkey}{%
5070   \Field@addtoks{tabkey}{#1}%
5071 }
5072 \define@key{Field}{name}{%
5073   \def\Fld@name{#1}%
5074 }
5075 \define@key{Field}{width}{%
5076   \def\Fld@width{#1}%

```

```

5077 \Field@Width#1\setbox0=\hbox{m}%
5078 }
5079 \define@key{Field}{maxlen}{%
5080 \def\Fld@maxlen{#1}%
5081 }
5082 \define@key{Field}{menulength}{%
5083 \Fld@menulength=#1\relax
5084 }
5085 \define@key{Field}{height}{%
5086 \def\Fld@height{#1}%
5087 }
5088 \define@key{Field}{charsize}{%
5089 \Fld@charsize#1%
5090 }
5091 \define@key{Field}{borderwidth}{%
5092 \def\Fld@borderwidth{#1}%
5093 }
5094 \define@key{Field}{borderstyle}{%
5095 \def\Fld@borderstyle{#1}%
5096 }
5097 \define@key{Field}{bordersep}{%
5098 \def\Fld@bordersep{#1}%
5099 }
5100 \define@key{Field}{default}{%
5101 \def\Fld@default{#1}%
5102 }
5103 \define@key{Field}{align}{%
5104 \def\Fld@align{#1}%
5105 }
5106 \define@key{Field}{value}{%
5107 \def\Fld@value{#1}%
5108 }
5109 \define@key{Field}{checkboxsymbol}{%
5110 \Fld@DingDef\Fld@cbsymbol{#1}%
5111 }
5112 \define@key{Field}{radiosymbol}{%
5113 \Fld@DingDef\Fld@radiosymbol{#1}%
5114 }
5115 \def\Fld@DingDef#1#2{%
5116 \def\Fld@temp{}%
5117 \Fld@@DingDef#2\ding{ }\@nil
5118 \let#1\Fld@temp
5119 }
5120 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5121 \expandafter\def\expandafter\Fld@temp\expandafter{%
5122 \Fld@temp
5123 #1%
5124 }%
5125 \ifx\\#3\\%
5126 \expandafter\@gobble
5127 \else
5128 \begingroup
5129 \lcode'0=#2\relax
5130 \lowercase{\endgroup
5131 \expandafter\def\expandafter\Fld@temp\expandafter{%
5132 \Fld@temp
5133 0%

```

```

5134 }%
5135 }%
5136 \expandafter\@firstofone
5137 \fi
5138 {%
5139 \Fld@@DingDef#3\@nil
5140 }%
5141 }

5142 \define@key{Field}{rotation}{%
5143 \def\Fld@rotation{#1}%
5144 }

5145 \define@key{Field}{backgroundcolor}{%
5146 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5147 }
5148 \define@key{Field}{bordercolor}{%
5149 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5150 }
5151 \define@key{Field}{color}{%
5152 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5153 }

5154 \def\Fld@onclick@code{}
5155 \def\Fld@format@code{}
5156 \def\Fld@validate@code{}
5157 \def\Fld@calculate@code{}
5158 \def\Fld@keystroke@code{}
5159 \def\Fld@onfocus@code{}
5160 \def\Fld@onblur@code{}
5161 \def\Fld@onmousedown@code{}
5162 \def\Fld@onmouseup@code{}
5163 \def\Fld@onenter@code{}
5164 \def\Fld@onexit@code{}
5165 \def\Hy@temp#1{%
5166 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5167 }
5168 \def\Hy@@temp#1#2{%
5169 \ifHy@pdfa
5170 \define@key{Field}{#2}{%
5171 \PackageError{hyperref}{%
5172 PDF/A: Additional action ‘#2’ is prohibited%
5173 }\@ehc
5174 }%
5175 \else
5176 \define@key{Field}{#2}{%
5177 \def#1{##1}%
5178 }%
5179 \fi
5180 }
5181 \Hy@temp{keystroke}
5182 \Hy@temp{format}
5183 \Hy@temp{validate}
5184 \Hy@temp{calculate}
5185 \Hy@temp{onfocus}
5186 \Hy@temp{onblur}
5187 \Hy@temp{onenter}
5188 \Hy@temp{onexit}
5189 \def\Hy@temp#1{%

```

```

5190 \define@key{Field}{#1}{%
5191   \Field@addtoks{#1}{##1}%
5192 }%
5193 }
5194 \Hy@temp{onselect}
5195 \Hy@temp{onchange}
5196 \Hy@temp{ondblclick}
5197 \Hy@temp{onmousedown}
5198 \Hy@temp{onmouseup}
5199 \Hy@temp{onmouseover}
5200 \Hy@temp{onmousemove}
5201 \Hy@temp{onmouseout}
5202 \Hy@temp{onkeypress}
5203 \Hy@temp{onkeydown}
5204 \Hy@temp{onkeyup}
5205 \ifHy@pdfa
5206 \define@key{Field}{onclick}{%
5207   \PackageError{hyperref}{%
5208     PDF/A: Action 'onclick' is prohibited%
5209   }\@ehc
5210 }%
5211 \else
5212 \define@key{Field}{onclick}{%
5213   \def\Fld@onclick@code{#1}%
5214   \Field@addtoks{onclick}{#1}%
5215 }%
5216 \fi

5217 \DeclareRobustCommand\TextField{%
5218   \@ifnextchar[{\@TextField}{\@TextField[]}%
5219 }
5220 \DeclareRobustCommand\ChoiceMenu{%
5221   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5222 }
5223 \DeclareRobustCommand\CheckBox{%
5224   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5225 }
5226 \DeclareRobustCommand\PushButton{%
5227   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5228 }
5229 \DeclareRobustCommand\Gauge{%
5230   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5231 }
5232 \DeclareRobustCommand\Submit{%
5233   \@ifnextchar[{\@Submit}{\@Submit[]}%
5234 }
5235 \DeclareRobustCommand\Reset{%
5236   \@ifnextchar[{\@Reset}{\@Reset[]}%
5237 }
5238 \def\LayoutTextField#1#2{% label, field
5239   #1 #2%
5240 }
5241 \def\LayoutChoiceField#1#2{% label, field
5242   #1 #2%
5243 }
5244 \def\LayoutCheckField#1#2{% label, field
5245   #1 #2%
5246 }

```

```

5247 \def\LayoutPushButtonField#1{% button
5248   #1%
5249 }
5250 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5251 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5252 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5253 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5254 \def\MakeButtonField#1{%
5255   \sbox0{%
5256     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5257   }%
5258   \@tempdima\ht0 %
5259   \advance\@tempdima by \Fld@borderwidth bp %
5260   \advance\@tempdima by \Fld@borderwidth bp %
5261   \ht0\@tempdima
5262   \@tempdima\dp0 %
5263   \advance\@tempdima by \Fld@borderwidth bp %
5264   \advance\@tempdima by \Fld@borderwidth bp %
5265   \dp0\@tempdima
5266   \box0\relax
5267 }
5268 \def\DefaultHeightofSubmit{14pt}
5269 \def\DefaultWidthofSubmit{2cm}
5270 \def\DefaultHeightofReset{14pt}
5271 \def\DefaultWidthofReset{2cm}
5272 \def\DefaultHeightofCheckBox{\baselineskip}
5273 \def\DefaultWidthofCheckBox{\baselineskip}
5274 \def\DefaultHeightofChoiceMenu{\baselineskip}
5275 \def\DefaultWidthofChoiceMenu{\baselineskip}
5276 \def\DefaultHeightofText{\baselineskip}
5277 \def\DefaultHeightofTextMultiline{4\baselineskip}
5278 \def\DefaultWidthofText{3cm}
5279 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5280 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5281 \def\DefaultOptionsofPushButton{print}
5282 \def\DefaultOptionsofCheckBox{print}
5283 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5284 \def\DefaultOptionsofListBox{print}
5285 \def\DefaultOptionsofComboBox{print,edit,sort}
5286 \def\DefaultOptionsofPopdownBox{print}
5287 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5288 \ifHy@figures
5289   \Hy@Info{Hyper figures ON}%
5290 \else
5291   \Hy@Info{Hyper figures OFF}%
5292 \fi
5293 \ifHy@nesting
5294   \Hy@Info{Link nesting ON}%
5295 \else
5296   \Hy@Info{Link nesting OFF}%
5297 \fi
5298 \ifHy@hyperindex

```

```

5299 \Hy@Info{Hyper index ON}%
5300 \else
5301 \Hy@Info{Hyper index OFF}%
5302 \fi
5303 \ifHy@backref
5304 \Hy@Info{backreferencing ON}%
5305 \else
5306 \Hy@Info{backreferencing OFF}%
5307 \fi
5308 \ifHy@colorlinks
5309 \Hy@Info{Link coloring ON}%
5310 \else
5311 \Hy@Info{Link coloring OFF}%
5312 \fi
5313 \ifHy@ocgcolorlinks
5314 \Hy@Info{Link coloring with OCG ON}%
5315 \else
5316 \Hy@Info{Link coloring with OCG OFF}%
5317 \fi
5318 \ifHy@pdfa
5319 \Hy@Info{PDF/A mode ON}%
5320 \else
5321 \Hy@Info{PDF/A mode OFF}%
5322 \fi

```

21 Low-level utility macros

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

```

5323 \edef\hyper@hash{\string#}
5324 \edef\hyper@tilde{\string~}
5325 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5326 \def\@currentHref{Doc-Start}
5327 \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.

```

5328 \Hy@AtBeginDocument{%
5329 \Hy@pdfstringtrue
5330 \PDF@SetupDoc
5331 \let\PDF@SetupDoc\@empty
5332 \Hy@DisableOption{pdfpagescrop}%
5333 \Hy@DisableOption{pdfpagemode}%
5334 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5335 \Hy@DisableOption{pdfdirection}%
5336 \Hy@DisableOption{pdfviewarea}%
5337 \Hy@DisableOption{pdfviewclip}%
5338 \Hy@DisableOption{pdfprintarea}%
5339 \Hy@DisableOption{pdfprintclip}%
5340 \Hy@DisableOption{pdfprintscaling}%
5341 \Hy@DisableOption{pdfduplex}%
5342 \Hy@DisableOption{pdfpicktraybypdfsize}%
5343 \Hy@DisableOption{pdfprintpagerange}%
5344 \Hy@DisableOption{pdfnumcopies}%
5345 \Hy@DisableOption{pdfstartview}%
5346 \Hy@DisableOption{pdfstartpage}%
5347 \Hy@DisableOption{pdftoolbar}%

```

```

5348 \Hy@DisableOption{pdfmenubar}%
5349 \Hy@DisableOption{pdfwindowui}%
5350 \Hy@DisableOption{pdffitwindow}%
5351 \Hy@DisableOption{pdfcenterwindow}%
5352 \Hy@DisableOption{pdfdisplaydoctitle}%
5353 \Hy@DisableOption{pdfpagelayout}%
5354 \Hy@DisableOption{pdflang}%
5355 \Hy@DisableOption{baseurl}%
5356 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5357 \Hy@pdfstringfalse
5358 }

```

Ignore star from referencing macros:

```

5359 \LetLtxMacro\NoHy@OrgRef\ref
5360 \DeclareRobustCommand*{\ref}{%
5361 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5362 }
5363 \LetLtxMacro\NoHy@OrgPageRef\pageref
5364 \DeclareRobustCommand*{\pageref}{%
5365 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5366 }

```

22 Localized nullifying of package

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

```

5367 \def\NoHyper{%
5368 \def\hyper@link@{##1}##2##3##4{##4}%
5369 \def\hyper@@anchor##1{}%
5370 \global\let\hyper@livelink\hyper@link
5371 \gdef\hyper@link##1##2##3{##3}%
5372 \def\hyper@anchor##1{}%
5373 \def\hyper@anchorstart##1{}%
5374 \let\hyper@anchorend\@empty
5375 \def\hyper@linkstart##1##2{}%
5376 \let\hyper@linkend\@empty
5377 \def\hyper@linkurl##1##2{##1}%
5378 \def\hyper@linkfile##1##2##3{##1}%
5379 \def\hyper@link@{##1}##2##3{}%
5380 \let\Hy@backout\@gobble
5381 }
5382 \def@stop@hyper{%
5383 \def\hyper@link@{##1}##2##3##4{##4}%
5384 \let\Hy@backout\@gobble
5385 \def\hyper@@anchor##1{}%
5386 \def\hyper@link##1##2##3{##3}%
5387 \def\hyper@anchor##1{}%
5388 \def\hyper@anchorstart##1{}%
5389 \let\hyper@anchorend\@empty
5390 \def\hyper@linkstart##1##2{}%
5391 \let\hyper@linkend\@empty
5392 \def\hyper@linkurl##1##2{##1}%
5393 \def\hyper@linkfile##1##2##3{##1}%
5394 \def\hyper@link@{##1}##2##3{}%

```

```

5395 }
5396 \def\endNoHyper{%
5397   \global\let\hyper@link\hyper@livelink
5398 }
5399 \</package>

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

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

Some low-level commands:

```

5400 \*nohyperref
5401 \RequirePackage{letltxmacro}[2008/06/13]
5402 \let\hyper@@anchor\@gobble
5403 \def\hyper@link#1#2#3{#3}%
5404 \let\hyper@anchorstart\@gobble
5405 \let\hyper@anchorend\@empty
5406 \let\hyper@linkstart\@gobbletwo
5407 \let\hyper@linkend\@empty
5408 \def\hyper@linkurl#1#2{#1}%
5409 \def\hyper@linkfile#1#2#3{#1}%
5410 \def\hyper@link@{#1}#2#3{#1}%
5411 \let\PDF@SetupDoc\@empty
5412 \let\PDF@FinishDoc\@empty
5413 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5414 \def\Acrobatmenu#1#2{\leavevmode#2}
5415 \let\pdfstringdefDisableCommands\@gobbletwo
5416 \let\texorpdfstring\@firstoftwo
5417 \let\pdfbookmark\@undefined
5418 \newcommand\pdfbookmark[3]{}
5419 \let\phantomsection\@empty
5420 \let\hypersetup\@gobble
5421 \let\hyperbaseurl\@gobble
5422 \let\href\@gobble
5423 \let\hyperdef\@gobbletwo
5424 \let\hyperlink\@gobble
5425 \let\hypertarget\@gobble
5426 \def\hyperref{%
5427   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5428 }
5429 \long\def\@gobbleopt[#1]{#1}
5430 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5431 \LetLtxMacro\NoHy@OrgRef\ref
5432 \DeclareRobustCommand*\ref{#1}{%
5433   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5434 }
5435 \LetLtxMacro\NoHy@OrgPageRef\pageref
5436 \DeclareRobustCommand*\pageref{#1}{%
5437   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef

```



```

5438 }
5439 </nohyperref>

```

24 The Mangling Of Aux and Toc Files

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

```

5440 <*package>
5441 \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.

```

5442 \if@filesw
5443 \ifHy@typexml
5444 \immediate\closeout\@mainaux
5445 \immediate\openout\@mainaux\jobname.aux\relax
5446 \immediate\write\@auxout{<relaxxml>\relax}%
5447 \fi
5448 \immediate\write\@auxout{%
5449 \string\providecommand\string\HyperFirstAtBeginDocument{%
5450 \string\AtBeginDocument}^^J%
5451 \string\HyperFirstAtBeginDocument{%
5452 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5453 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5454 \string\gdef\string\contentsline%
5455 \string#1\string#2\string#3\string#4{%
5456 \string\oldcontentsline%
5457 {\string#1}{\string#2}{\string#3}^^J%
5458 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5459 \string\gdef\string\newlabel\string#1\string#2{%
5460 \string\newlabelxx{\string#1}\string#2}^^J%
5461 \string\gdef\string\newlabelxx%
5462 \string#1\string#2\string#3\string#4\string#5\string#6{%
5463 \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

5464 \string\AtEndDocument{%
5465 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5466 \string\let\string\contentsline\string\oldcontentsline^^J%
5467 \string\let\string\newlabel\string\oldnewlabel^^J%
5468 \string\fi%
5469 }^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

5470 \string\fi%
5471 }^^J%
5472 \string\global\string\let\string\hyper@last\relax^^J%
5473 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5474 }%
5475 \fi
5476 \def\HyperFirstAtBeginDocument#1{#1}%

```

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

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

5477 \ifx\hyper@last\@undefined
5478 \def\@starttoc#1{%
5479 \begingroup
5480 \makeatletter
5481 \IfFileExists{\jobname.#1}{%
5482 \Hy@WarningNoLine{%
5483 old #1 file detected, not used; run LaTeX again%
5484 }%
5485 }{}%
5486 \if@files
5487 \expandafter\newwrite\csname tf@#1\endcsname
5488 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5489 \fi
5490 \@nobreakfalse
5491 \endgroup
5492 }%
5493 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5494 \fi
5495 }

```

25 Title strings

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

```

5496 \ifHy@usetitle
5497 \let\HyOrg@title\title
5498 \let\HyOrg@author\author
5499 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5500 \def\Hy@scanopttitle[#1]{%
5501 \gdef\Hy@title{#1}%
5502 \HyOrg@title{#1}%
5503 }%
5504 \def\Hy@scantitle#1{%
5505 \gdef\Hy@title{#1}%
5506 \HyOrg@title{#1}%
5507 }%
5508 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5509 \def\Hy@scanoptauthor[#1]{%
5510 \gdef\Hy@author{#1}%
5511 \HyOrg@author{#1}%
5512 }%
5513 \def\Hy@scanauthor#1{%
5514 \gdef\Hy@author{#1}%
5515 \HyOrg@author{#1}%
5516 }%

```

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

```

5517 \begingroup
5518 \def\process@me#1\@nil#2{%
5519 \expandafter\let\expandafter\x\csname @#2\endcsname
5520 \edef\y{\expandafter\strip@prefix\meaning\x}%
5521 \def\c##1#1##2\@nil{%

```

```

5522 \ifx\##1\%
5523 \else
5524 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5525 \expandafter{\x}%
5526 \fi
5527 }%
5528 \expandafter\c\y\relax#1\@nil
5529 }%
5530 \expandafter\process@me\string\@latex@\@nil{title}%
5531 \expandafter\process@me\string\@latex@\@nil{author}%
5532 \endgroup
5533 \fi
5534 \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.

```

5535 \def\Hy@UseMaketitleString#1{%
5536 \ltx@ifundefined{Hy@#1}{-}{%
5537 \begingroup
5538 \let\Hy@saved@hook\pdfstringdefPreHook
5539 \pdfstringdefDisableCommands{%
5540 \expandafter\let\expandafter\\csname Hy@newline@#1\endcsname
5541 \let\newline\\%
5542 }%
5543 \expandafter\ifx\csname @pdf#1\endcsname\@empty
5544 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5545 \csname Hy@#1\endcsname\@empty
5546 }%
5547 \fi
5548 \global\let\pdfstringdefPreHook\Hy@saved@hook
5549 \endgroup
5550 }%
5551 }
5552 \def\Hy@newline@title#1{ #1}
5553 \def\Hy@newline@author#1{, #1}
5554 \def\Hy@UseMaketitleInfos{%
5555 \Hy@UseMaketitleString{title}%
5556 \Hy@UseMaketitleString{author}%
5557 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5558 \RequirePackage{atbegshi}[2007/09/09]
5559 \def\Hy@EveryPageHook{}

```

```

5560 \def\Hy@EveryPageBoxHook{}
5561 \def\Hy@FirstPageHook{}
5562 \AtBeginShipout{%
5563   \Hy@EveryPageHook
5564   \ifx\Hy@EveryPageBoxHook\empty
5565   \else
5566     \setbox\AtBeginShipoutBox=\vbox{%
5567       \offinterlineskip
5568       \Hy@EveryPageBoxHook
5569       \box\AtBeginShipoutBox
5570     }%
5571   \fi
5572 }
5573 \AtBeginShipoutFirst{%
5574   \Hy@FirstPageHook
5575 }
5576 \g@addto@macro\Hy@FirstPageHook{%
5577   \PDF@FinishDoc
5578   \gdef\PDF@FinishDoc{}%
5579 }

```

27.1 PDF /PageLabels

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

```

5580 \ifHy@pagelabels
5581   \begingroup\expandafter\expandafter\expandafter\endgroup
5582   \expandafter\ifx\csname thepage\endcsname\relax
5583     \Hy@pagelabelsfalse
5584     \Hy@WarningNoLine{%
5585       Option 'pdfpagelabels' is turned off\MessageBreak
5586       because \string\thepage\space is undefined%
5587     }%
5588     \csname fi\endcsname
5589     \csname iffalse\expandafter\endcsname
5590   \fi

```

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

```

5591 \def\thispdfpagelabel#1{%
5592   \gdef\HyPL@thisLabel{#1}%
5593 }%
5594 \global\let\HyPL@thisLabel\relax

```

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

```

5595 \def\HyPL@Labels{}%

```

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

```

5596 \newcount\Hy@abspage
5597 \Hy@abspage=0 %

```

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

```

5598 \def\HyPL@LastType{init}%
5599 \def\HyPL@LastNumber{0}%
5600 \def\HyPL@LastPrefix{}%

```

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

```

5601 \def\HyPL@arabic{D}%

```

```

5602 \def\HyPL@Roman{R}%
5603 \def\HyPL@roman{r}%
5604 \def\HyPL@Alph{A}%
5605 \def\HyPL@alph{a}%

```

\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.

```

5606 \def\HyPL@EveryPage{%
5607   \begingroup
5608   \ifx\HyPL@thisLabel\relax
5609     \let\HyPL@page\thepage
5610   \else
5611     \let\HyPL@page\HyPL@thisLabel
5612     \global\let\HyPL@thisLabel\relax
5613   \fi
5614   \let\HyPL@Type\relax
5615   \ifnum\the\c@page>0 %
5616     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5617   \fi
5618   \let\Hy@temp Y%
5619   \ifx\HyPL@Type\HyPL@LastType
5620   \else
5621     \let\Hy@temp N%
5622   \fi
5623   \ifx\HyPL@Type\relax
5624     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5625   \else
5626     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5627   \fi
5628   \ifx\HyPL@Prefix\HyPL@LastPrefix
5629   \else
5630     \let\Hy@temp N%
5631   \fi
5632   \if Y\Hy@temp
5633     \advance\c@page by -1 %
5634     \ifnum\HyPL@LastNumber=\the\c@page\relax
5635     \else
5636       \let\Hy@temp N%
5637     \fi
5638     \Hy@StepCount\c@page
5639   \fi
5640   \if N\Hy@temp
5641     \ifx\HyPL@Type\relax
5642       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5643     \else
5644       \HyPL@StorePageLabel{%
5645         \ifx\HyPL@Prefix\@empty
5646         \else
5647           /P(\HyPL@Prefix)%
5648         \fi
5649         /S/\csname HyPL\HyPL@Type\endcsname
5650         \ifnum\the\c@page=1 %
5651         \else
5652           \space/St \the\c@page
5653         \fi
5654       }%
5655     \fi

```

```

5656 \fi
5657 \xdef\HyPL@LastNumber{\the\c@page}%
5658 \global\let\HyPL@LastType\HyPL@Type
5659 \global\let\HyPL@LastPrefix\HyPL@Prefix
5660 \endgroup
5661 \Hy@GlobalStepCount\Hy@abspage
5662 }%

```

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

```

5663 \def\HyPL@CheckThePage#1\@nil{%
5664 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5665 }%

```

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

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

```

5666 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5667 \def\Hy@tempa{#4}%
5668 \def\Hy@tempb{\csname\endcsname\c@page}%
5669 \ifx\Hy@tempa\Hy@tempb
5670 \expandafter\ifx\csname HyPL#3\endcsname\relax
5671 \else
5672 \def\HyPL@Type{#3}%
5673 \def\HyPL@Prefix{#2}%
5674 \fi
5675 \else
5676 \begingroup
5677 \let\Hy@next\endgroup
5678 \let\HyPL@found\@undefined
5679 \def\arabic{\HyPL@Format{arabic}}%
5680 \def\Roman{\HyPL@Format{Roman}}%
5681 \def\roman{\HyPL@Format{roman}}%
5682 \def\Alph{\HyPL@Format{Alph}}%
5683 \def\alph{\HyPL@Format{alph}}%
5684 \protected@edef\Hy@temp{#1}%
5685 \ifx\HyPL@found\relax
5686 \toks@\expandafter{\Hy@temp}%
5687 \edef\Hy@next{\endgroup
5688 \noexpand\HyPL@@CheckThePage\the\toks@
5689 \noexpand\HyPL@found\relax\noexpand\@nil
5690 }%
5691 \fi
5692 \Hy@next
5693 \fi
5694 }%

```

`\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`.

```

5695 \def\HyPL@Format#1#2{%
5696 \ifx\HyPL@found\@undefined
5697 \expandafter\ifx\csname c@#2\endcsname\c@page
5698 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5699 \else

```

```

5700     \expandafter\noexpand\csname#1\endcsname{#2}%
5701     \fi
5702     \else
5703     \expandafter\noexpand\csname#1\endcsname{#2}%
5704     \fi
5705 }%

```

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

```

5706 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5707   \def\Hy@tempa{#3}%
5708   \def\Hy@tempb{\HyPL@found\relax}%
5709   \ifx\Hy@tempa\Hy@tempb
5710     \def\HyPL@Type{#2}%
5711     \def\HyPL@Prefix{#1}%
5712   \fi
5713 }%

```

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

```

5714 \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`.

```

5715 \def\HyPL@Useless{0<</S/D>>}%
5716 \@onelevel@sanitize\HyPL@Useless

```

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

```

5717 \def\HyPL@SetPageLabels{%
5718   \@onelevel@sanitize\HyPL@Labels
5719   \ifx\HyPL@Labels\@empty
5720   \else
5721     \ifx\HyPL@Labels\HyPL@Useless
5722     \else
5723       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5724     \fi
5725   \fi
5726 }%

```

```

5727 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5728 \fi

```

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

```

5729 \Hy@DisableOption{pdfpagelabels}
5730 \</package>

```

27.1.1 pdfTeX and VTeX

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

`\Hy@PutCatalog`

```

5731 \<pdfTeX>\let\Hy@PutCatalog\pdfcatalog

```

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.

```

5732 < *vtex>
5733 \providecommand*{\XR@ext}{pdf}
5734 \edef\Hy@VTeXversion{%
5735   \ifx\VTeXversion\@undefined
5736     \z@
5737   \else
5738     \ifx\VTeXversion\relax
5739       \z@
5740     \else
5741       \VTeXversion
5742     \fi
5743   \fi
5744 }
5745 \begingroup
5746   \ifnum\Hy@VTeXversion<660 %
5747     \gdef\Hy@PutCatalog#1{%
5748       \Hy@WarningNoLine{%
5749         VTeX 6.59g or above required for pdfpagelabels%
5750       }%
5751     }%
5752   \else
5753     \gdef\Hy@PutCatalog#1{%
5754       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5755     }%
5756     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5757       \ifx\#2\%
5758         \else
5759           \immediate\special{!pdfpagelabels #2}%
5760         \fi
5761       }%
5762     \fi
5763 \endgroup
5764 < /vtex>

5765 < *pdfTeX | vtex>

```

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

```

5766 \ifHy@pagelabels
5767   \def\HyPL@StorePageLabel#1{%
5768     \toks@\expandafter{\HyPL@Labels}%
5769     \xdef\HyPL@Labels{%
5770       \the\toks@
5771       \the\Hy@abspage<<#1>>%
5772     }%
5773   }%

```

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.

```

5774 \RequirePackage{atveryend}[2009/12/07]%
5775 \AtVeryEndDocument{%
5776   \HyPL@SetPageLabels
5777 }%

```



```

5778 \fi
5779 </pdfTEX | vTeX>

```

27.1.2 xetex

```

5780 <*xetex>
5781 \HyPsd@LoadUnicode
5782 \Hy@unicodetrue
5783 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5784 \else
5785 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5786 \fi
5787 \HyPsd@LoadStringEncoding
5788 \define@key{Hyp}{unicode}[true]{%
5789 \Hy@boolkey{unicode}{#1}%
5790 \ifHy@unicode
5791 \else
5792 \Hy@Warning{%
5793 XeTeX driver only supports 'unicode=true'.\MessageBreak
5794 Ignoring option setting 'unicode=false'%
5795 }%
5796 \Hy@unicodetrue
5797 \fi
5798 }
5799 \define@key{Hyp}{pdfencoding}{%
5800 \edef\HyPsd@temp{#1}%
5801 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5802 \let\HyPsd@pdfencoding\HyPsd@temp
5803 \else
5804 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5805 \let\HyPsd@pdfencoding\HyPsd@temp
5806 \else
5807 \Hy@Warning{%
5808 XeTeX driver only supports\MessageBreak
5809 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5810 setting 'pdfencoding=\HyPsd@temp'%
5811 }%
5812 \fi
5813 \fi
5814 }
5815 \let\HyXeTeX@CheckUnicode\relax
5816 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5817 <*pdfmarkbase>
5818 \beginngroup
5819 \@ifundefined{headerps@out}{%
5820 \toks@{\expandafter{\Hy@FirstPageHook}%
5821 \xdef\Hy@FirstPageHook{%
5822 \noexpand\headerps@out{%
5823 systemdict /pdfmark known%
5824 {%
5825 userdict /?pdfmark systemdict /exec get put%
5826 }{%
5827 userdict /?pdfmark systemdict /pop get put %
5828 userdict /pdfmark systemdict /cleartomark get put%
5829 }%

```

```

5830     ifelse%
5831     }%
5832     \the\toks@
5833     }%
5834     }%
5835 \endgroup
5836 \pdfmarkbase>

```

\Hy@PutCatalog

```

5837 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\pdfmark{docview << #1 >>}}
5838 <*pdfmarkbase>
5839 \def\Hy@PutCatalog#1{%
5840   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5841 }
5842 \pdfmarkbase>

5843 <*pdfmarkbase | dvipdfm | xetex>
5844 \ifHy@pagelabels

```

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

```

5845 \def\HyPL@StorePageLabel#1{%
5846   \if@filesw
5847     \begingroup
5848     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5849     \immediate\write\@mainaux{%
5850       \string\HyPL@Entry{\Hy@tempa}%
5851     }%
5852     \endgroup
5853   \fi
5854 }%

```

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.

```

5855 \Hy@AtBeginDocument{%
5856   \if@filesw
5857     \immediate\write\@mainaux{%
5858       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5859     }%
5860   \fi
5861   \ifx\HyPL@Labels\@empty
5862     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5863   \else
5864     \HyPL@SetPageLabels
5865   \fi
5866   \let\HyPL@Entry\@gobble
5867 }%

```

\HyPL@Entry

```

5868 \def\HyPL@Entry#1{%
5869   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5870     \HyPL@Labels
5871     #1%
5872   }%
5873 }%

5874 \fi
5875 \pdfmarkbase | dvipdfm | xetex>

```

```

5876 <*package>
5877 \MaybeStopEarly

```

28 Automated L^AT_EX hypertext cross-references

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

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

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

Start with a fallback for equations

```

5878 \def\Hy@CounterExists#1{%
5879   \begingroup\expandafter\expandafter\expandafter\endgroup
5880   \expandafter\ifx\csname c@#1\endcsname\relax
5881     \expandafter\@gobble
5882   \else
5883     \begingroup\expandafter\expandafter\expandafter\endgroup
5884     \expandafter\ifx\csname the#1\endcsname\relax
5885       \expandafter\expandafter\expandafter\@gobble
5886     \else
5887       \expandafter\expandafter\expandafter\@firstofone
5888     \fi
5889   \fi
5890 }
5891 \Hy@CounterExists{section}{%
5892   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5893 }
5894 \Hy@CounterExists{part}{%
5895   \newcommand\theHpart{\arabic{part}}}%
5896 }
5897 \ltx@ifundefined{thechapter}{%
5898   \newcommand\theHsection   {\arabic{section}}}%
5899   \newcommand\theHfigure    {\arabic{figure}}}%
5900   \newcommand\theHtable     {\arabic{table}}}%
5901 }{%
5902   \newcommand\theHchapter   {\arabic{chapter}}}%
5903   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
5904   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
5905   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
5906 }
5907 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5908 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5909 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5910 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}

```

```

5911 \newcommand\theHtheorem    {\theHsection.\arabic{theorem}}
5912 \newcommand\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.

```

5913 \let\H@item\item
5914 \newcounter{Item}
5915 \def\theHItem{\arabic{Item}}
5916 \def\item{%
5917   \@hyper@itemfalse
5918   \if@nmbrlist\@hyper@itemtrue\fi
5919   \H@item
5920 }

5921 \newcommand\theHenumi    {\theHItem}
5922 \newcommand\theHenumii   {\theHItem}
5923 \newcommand\theHenumiii  {\theHItem}
5924 \newcommand\theHenumiv   {\theHItem}
5925 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5926 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5927 \let\theHHmpfootnote\theHHfootnote

```

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.

```

5928 \let\H@refstepcounter\refstepcounter
5929 \edef\name@of@eq{equation}%
5930 \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.

```

5931 \newif\if@hyper@item
5932 \newif\if@skiphyperref
5933 \@hyper@itemfalse
5934 \@skiphyperreffalse
5935 \def\refstepcounter#1{%
5936   \ifHy@pdfstring
5937   \else
5938     \H@refstepcounter{#1}%
5939     \edef\This@name{#1}%
5940     \ifx\This@name\name@of@slide
5941     \else
5942       \if@skiphyperref
5943       \else
5944         \if@hyper@item
5945           \stepcounter{Item}%
5946           \hyper@refstepcounter{Item}%
5947           \@hyper@itemfalse
5948         \else
5949           \hyper@refstepcounter{#1}%
5950         \fi
5951       \fi
5952     \fi
5953   \fi
5954 }

```

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

```
5955 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
5956 \def\hyper@refstepcounter#1{%
5957   \edef\This@name{#1}%
5958   \ifx\This@name\name@of@eq
5959     \ifundefined{theHequation}{%
5960       \make@stripped@name{theequation}%
5961       \let\theHequation\newname
5962     }{}%
5963   \fi
5964   \ifundefined{theH#1}{%
5965     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5966   }{}%
5967   \hyper@makecurrent{#1}%
5968   \ifmeasuring@
5969   \else
5970     \Hy@raisedlink{%
5971       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5972     }%
5973   \fi
5974 }
```

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`.

```
5975 \begingroup\expandafter\expandafter\expandafter\endgroup
5976 \expandafter\ifx\csname chapter\endcsname\relax
5977   \def\Hy@chapterstring{section}%
5978 \else
5979   \def\Hy@chapterstring{chapter}%
5980 \fi
5981 \def\Hy@appendixstring{appendix}
5982 \def\Hy@chapapp{\Hy@chapterstring}
5983 \let\HyOrg@appendix\appendix
5984 \def\appendix{%
5985   \ltx@ifundefined{chapter}%
5986     {\gdef\theHsection{\Alph{section}}}%
5987     {\gdef\theHchapter{\Alph{chapter}}}%
5988   \xdef\Hy@chapapp{\Hy@appendixstring}%
5989   \HyOrg@appendix
5990 }
```

`\Hy@Test@alph`

```
5991 \def\Hy@Test@alph#1{%
5992   \ifcase#1\or
5993     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
5994     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
5995     u\or v\or w\or x\or y\or z%
5996   \else
5997     \@ctrerr
```

```

5998 \fi
5999 }

```

\Hy@Test@Alph

```

6000 \def\Hy@Test@Alph#1{%
6001 \ifcase#1\or
6002   A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6003   K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6004   U\or V\or W\or X\or Y\or Z%
6005 \else
6006   \@ctrerr
6007 \fi
6008 }

```

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

```

6009 \def\hyper@makecurrent#1{%
6010 \begingroup
6011 \edef\Hy@param{#1}%
6012 \ifx\Hy@param\Hy@chapterstring
6013   \let\Hy@param\Hy@chapapp
6014 \fi
6015 \ifHy@hypertextnames
6016   \let\@number\@firstofone
6017   \def\@fnsymbol##1{fnsymbol\number##1}%
6018   \ifx\@alph\Hy@Test@alph
6019     \else
6020       \def\@alph{alph\number}%
6021     \fi
6022   \ifx\@Alph\Hy@Test@Alph
6023     \else
6024       \def\@Alph{Alph\number}%
6025     \fi
6026   \ifHy@naturalnames
6027     \let\textlatin\@firstofone
6028     \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6029   \else
6030     \xdef\HyperGlobalCurrentHref{%
6031       \csname
6032         the%
6033         \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6034         #1%
6035       \endcsname
6036     }%
6037   \fi
6038   \xdef\HyperGlobalCurrentHref{%
6039     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6040   }%
6041   \else
6042     \Hy@GlobalStepCount\Hy@linkcounter
6043     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6044   \fi
6045 \endgroup
6046 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6047 \ifHy@localanchaname
6048   \let\@currentHref\HyperLocalCurrentHref
6049 \else

```

```

6050 \global\let\@currentHref\HyperGlobalCurrentHref
6051 \fi
6052 }

```

\Hy@MakeCurrentHref

```

6053 \def\Hy@MakeCurrentHref#1{%
6054 \edef\HyperLocalCurrentHref{#1}%
6055 \@onelevel@sanitize\HyperLocalCurrentHref
6056 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6057 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6058 \ifHy@localanchorname
6059 \let\@currentHref\HyperLocalCurrentHref
6060 \else
6061 \global\let\@currentHref\HyperGlobalCurrentHref
6062 \fi
6063 }

```

\Hy@MakeCurrentHrefAuto

```

6064 \def\Hy@MakeCurrentHrefAuto#1{%
6065 \Hy@GlobalStepCount\Hy@linkcounter
6066 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6067 }

```

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

```

6068 \def\@currentHlabel{\@currentHref}

6069 \@ifpackageloaded{fancyvrb}{%
6070 \ifpackagelater{fancyvrb}{1998/05/20}{%
6071 \def\FV@StepLineNo{%
6072 \FV@SetLineNo
6073 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6074 \FV@StepLineNo
6075 }%
6076 }%
6077 }{}

```

29 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. 38). The link will not work if option pageanchor is set to false.

\lastpage@putlabel

```

6078 \Hy@AtBeginDocument{%
6079 \@ifclassloaded{revtex4}{%
6080 \@namedef{ver@lastpage.sty}{1994/06/25}%
6081 }{}%
6082 \@ifpackageloaded{lastpage}{%
6083 \ifHy@pageanchor
6084 \else
6085 \Hy@WarningNoLine{%

```

```

6086     The \string\pageref{LastPage} link doesn't work\MessageBreak
6087     with disabled option 'pageanchor'%
6088   }%
6089 \fi
6090 \def\lastpage@putlabel{%
6091   \addtocounter{page}{-1}%
6092   \if@filesw
6093     \begingroup
6094       \let\@number\@firstofone
6095       \ifHy@pageanchor
6096         \ifHy@hypertextnames
6097           \ifHy@plainpages
6098             \def\Hy@temp{\arabic{page}}%
6099           \else
6100             \Hy@unicodedefalse
6101             \pdfstringdef\Hy@temp{\thepage}%
6102           \fi
6103         \else
6104           \def\Hy@temp{\the\Hy@pagecounter}%
6105         \fi
6106       \fi
6107       \immediate\write\@auxout{%
6108         \string\newlabel
6109         {LastPage}{\the\Hy@temp}{\thepage}{\thepage}%
6110         \ifHy@pageanchor page.\Hy@temp\fi}{\thepage}%
6111     }%
6112   \endgroup
6113 \fi
6114 \addtocounter{page}{1}%
6115 }%
6116 \@ifclassloaded{revtex4}{%
6117   \begingroup
6118     \toks@\expandafter{\lastpage@putlabel}%
6119     \edef\x{\endgroup
6120       \def\noexpand\lastpage@putlabel{%
6121         \noexpand\stepcounter{page}%
6122         \the\toks@
6123         \noexpand\addtocounter{page}\noexpand\m@ne
6124       }%
6125     }%
6126     \x
6127   }{}%
6128 }{}%
6129 }
6130 \end{package}
6131 \check
6132 \checkpackage{lastpage}[1994/06/25]
6133 \checkcommand\def\lastpage@putlabel{%
6134   \addtocounter{page}{-1}%
6135   \immediate\write\@auxout{%
6136     \string\newlabel{LastPage}{\the\Hy@temp}{\thepage}%
6137   }%
6138   \addtocounter{page}{1}%
6139 }
6140 \end{check}
6141 \end{package}

```


30 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.

```
6142 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
6143 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}
```

31 Package titlesec and titletoc support

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

Package titlesec support:

```
6144 \@ifpackageloaded{titlesec}{%
6145   \def\ttl@Hy@steplink#1{%
6146     \Hy@MakeCurrentHrefAuto{#1*}%
6147     \edef\ttl@Hy@saveanchor{%
6148       \noexpand\Hy@raisedlink{%
6149         \noexpand\hyper@anchorstart{\@currentHref}%
6150         \noexpand\hyper@anchorend
6151       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6152       \noexpand\ttl@Hy@PatchSaveWrite
6153     }%
6154   }%
6155 }%
6156 \def\ttl@Hy@PatchSaveWrite{%
6157   \begingroup
6158   \toks@\expandafter{\ttl@savewrite}%
6159   \edef\x{\endgroup
6160     \def\noexpand\ttl@savewrite{%
6161       \let\noexpand\@currentHref
6162       \noexpand\ttl@Hy@SavedCurrentHref
6163     \the\toks@
6164     }%
6165   }%
6166   \x
6167 }%
6168 \def\ttl@Hy@refstepcounter#1{%
6169   \let\ttl@b\Hy@raisedlink
6170   \def\Hy@raisedlink##1{%
6171     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6172   }%
6173   \refstepcounter{#1}%
6174   \let\Hy@raisedlink\ttl@b
6175 }%
6176 }{}
```

Package titletoc support:

```
6177 \@ifpackageloaded{titletoc}{%
6178   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6179 }{}
```

32 Package varioref support

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

```

6180 \def\Hy@varioref@undefined{{??}{??}}{}{}
6181 \@ifpackageloaded{varioref}{%
6182   \def\vref@pagenum#1#2{%
6183     \@ifundefined{r@#2}{%
6184       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6185     }{}%
6186     \edef#1{\getpagerefnumber{#2}}%
6187   }%
6188 }{}

```

33 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

```

6189 \@ifpackageloaded{longtable}{%
6190   \begingroup
6191   \def\y{\LT@array}%
6192   \@ifundefined{scr@LT@array}{%
6193     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
6194   }{\def\y{\scr@LT@array}}%
6195   \long\def\x\refstepcounter#1#2\sharp#3#4\@nil{%
6196     \expandafter\endgroup
6197     \expandafter\def\y[##1]##2{%
6198       \H@refstepcounter{#1}%
6199       \hyper@makecurrent{table}%
6200       \let\Hy@LT@currentHref\@currentHref
6201       #2\sharp###4%
6202     }%
6203   }%
6204   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6205   \begingroup
6206   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6207     \endgroup
6208     \def\LT@start{%
6209       #1%
6210       \ifvoid\LT@foot#2\fi
6211       \let\@currentHref\Hy@LT@currentHref
6212       \Hy@raisedlink{%
6213         \hyper@anchorstart{\@currentHref}\hyper@anchorend
6214       }%
6215       #3%
6216     }%
6217   }%
6218   \expandafter\x\LT@start\@nil
6219 }{}

```

34 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 41). 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.

```

6220 \let\new@refstepcounter\refstepcounter
6221 \let\H@equation\equation
6222 \let\H@endequation\endequation

6223 \ifpackageloaded{amsmath}{%
6224   \long\def\Hy@temp{%
6225     \incr@eqnum
6226     \mathdisplay@push
6227     \st@rredfalse \global\@eqnswtrue
6228     \mathdisplay{equation}%
6229   }%
6230   \ifx\Hy@temp\equation
6231     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6232       \csname iftrue\endcsname
6233   \else
6234     \long\def\equation{%
6235       \mathdisplay@push
6236       \st@rredfalse \global\@eqnswtrue
6237       \mathdisplay{equation}%
6238       \incr@eqnum
6239     }%
6240   \fi
6241 \fi
6242 }{%
6243 \def\equation{%
6244   \let\refstepcounter\H@refstepcounter
6245   \H@equation
6246   \ifundefined{theHequation}{%
6247     \make@stripped@name{\theequation}%
6248     \let\theHequation\newname
6249   }{%
6250     \hyper@makecurrent{equation}%
6251     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6252     \let\refstepcounter\new@refstepcounter
6253   }%
6254 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6255 }

```

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.

```

6256 \newif\if@eqnstar
6257 \@eqnstarfalse
6258 \let\H@eqnarray\eqnarray
6259 \let\H@endeqnarray\endeqnarray
6260 \def\eqnarray{%
6261   \let\Hy@reserved@a\relax
6262   \def\@currentHref{}%
6263   \H@eqnarray
6264   \if@eqnstar
6265   \else
6266     \ifx\\ \@currentHref\\%
6267   \else

```

```

6268 \ifundefined{theHequation}{%
6269 \make@stripped@name{\theequation}%
6270 \let\theHequation\newname
6271 }{}%
6272 \hyper@makecurrent{equation}%
6273 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6274 \fi
6275 \fi
6276 }
6277 \def\endeqnarray{%
6278 \H@endeqnarray
6279 }

```

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.

```

6280 \@namedef{eqnarray*}{%
6281 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6282 }
6283 \@namedef{endeqnarray*}{%
6284 \nonumber\endeqnarray\@eqnstarfalse
6285 }

```

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

```

6286 \ltx@ifundefined{subeqnarray}{%}{%
6287 \let\H@subeqnarray\subeqnarray
6288 \let\H@endsubeqnarray\endsubeqnarray
6289 \def\subeqnarray{%
6290 \let\Hy@reserved@a\relax
6291 \H@subeqnarray
6292 \ifundefined{theHequation}{%
6293 \make@stripped@name{\theequation}%
6294 \let\theHequation\newname
6295 }{}%
6296 \hyper@makecurrent{equation}%
6297 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6298 }%
6299 \def\endsubeqnarray{%
6300 \H@endsubeqnarray
6301 }%
6302 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6303 }

```

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

```

6304 \def\make@stripped@name#1{%
6305 \begingroup
6306 \escapechar\m@ne
6307 \global\let\newname\@empty
6308 \protected@edef\Hy@tempa{#1}%
6309 \edef\@tempb{%
6310 \noexpand\@tfor\noexpand\Hy@tempa:=%
6311 \expandafter\strip@prefix\meaning\Hy@tempa
6312 }%
6313 \@tempb\do{%
6314 \if{\Hy@tempa\else
6315 \if}\Hy@tempa\else
6316 \xdef\newname{\newname\Hy@tempa}%
6317 \fi
6318 \fi

```

```

6319 }%
6320 \endgroup
6321 }

```

Support for amsmath's subequations:

```

6322 \begingroup\expandafter\expandafter\expandafter\endgroup
6323 \expandafter\ifx\csname subequations\endcsname\relax
6324 \else
6325 \let\HyOrg@subequations\subequations
6326 \def\subequations{%
6327 \stepcounter{equation}%
6328 \protected@edef\theHparentequation{%
6329 \ifundefined{theHequation}\theequation\theHequation
6330 }%
6331 \addtocounter{equation}{-1}%
6332 \HyOrg@subequations
6333 \def\theHequation{\theHparentequation\alph{equation}}%
6334 \ignorespaces
6335 }%
6336 \fi

```

Support for package amsthm (Daniel Müllner):

```

6337 \ifpackageloaded{amsthm}{%
6338 \def\@thm#1#2#3{%
6339 \ifhmode
6340 \unskip\unskip\par
6341 \fi
6342 \normalfont
6343 \trivlist
6344 \let\thmheadn\relax
6345 \let\thm@swap\@gobble
6346 \thm@notefont{\fontseries\mddefault\upshape}%
6347 \thm@headpunct{.}% add period after heading
6348 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6349 \thm@space@setup
6350 #1% style overrides
6351 \@topsep \thm@preskip % used by thm head
6352 \@topsepadd \thm@postskip % used by \endparentv
6353 \def\dth@counter{#2}%
6354 \ifx\@empty\dth@counter
6355 \def\@tempa{%
6356 \@oparg{\@begintheorem{#3}{}}[]%
6357 }%
6358 \else
6359 \H@refstepcounter{#2}%
6360 \hyper@makecurrent{#2}%
6361 \let\Hy@dth@currentHref\@currentHref
6362 \def\@tempa{%
6363 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
6364 }%
6365 \fi
6366 \@tempa
6367 }%
6368 \dth@everypar={%
6369 \@minipagefalse
6370 \global\@newlistfalse
6371 \@noparitemfalse
6372 \if@inlabel

```

```

6373 \global\@inlabelfalse
6374 \begingroup
6375 \setbox\z@\lastbox
6376 \ifvoid\z@
6377 \kern-\itemindent
6378 \fi
6379 \endgroup
6380 \ifx\@empty\dth@counter
6381 \else
6382 \Hy@raisedlink{%
6383 \hyper@anchorstart{%
6384 \ltx@ifundefined{Hy@dth@currentHref}%
6385 \@currentHref\Hy@dth@currentHref
6386 }\hyper@anchorend
6387 }%
6388 \fi
6389 \unhbox\@labels
6390 \fi
6391 \if@nobreak
6392 \@nobreakfalse \clubpenalty\@M
6393 \else
6394 \clubpenalty\@clubpenalty \everypar{}%
6395 \fi
6396 }%
6397 }{}

```

35 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.

`Tabularx` causes footnote problems, disable the linking if that is loaded.

```

6398 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6399 \ifHy@hyperfootnotes
6400 \newcounter{Hfootnote}%
6401 \let\H@@footnotetext\@footnotetext
6402 \let\H@@footnotemark\@footnotemark
6403 \def\xfootnotenext[#1]{%
6404 \begingroup
6405 \cname c@\@mpfn\endcsname #1\relax
6406 \unrestored@protected\xdef\@thefnmark{\thempfn}%
6407 \endgroup
6408 \ifx\@footnotetext\@mpfootnotetext
6409 \expandafter\H@@mpfootnotetext
6410 \else
6411 \expandafter\H@@footnotetext
6412 \fi
6413 }%
6414 \def\xfootnotemark[#1]{%
6415 \begingroup
6416 \c@footnote #1\relax
6417 \unrestored@protected\xdef\@thefnmark{\thefootnote}%
6418 \endgroup
6419 \H@@footnotemark
6420 }%

```

```

6421 \let\H@@mpfootnotetext\@mpfootnotetext
6422 \long\def\@mpfootnotetext#1{%
6423   \H@@mpfootnotetext{%
6424     \ifHy@nesting
6425       \expandafter\hyper@@anchor\expandafter{%
6426         \Hy@footnote@currentHref
6427       }{#1}%
6428     \else
6429       \Hy@raisedlink{%
6430         \expandafter\hyper@@anchor\expandafter{%
6431           \Hy@footnote@currentHref
6432         }{\relax}%
6433       }#1%
6434     \fi
6435   }%
6436 }%
6437 \long\def\@footnotetext#1{%
6438   \H@@footnotetext{%
6439     \ifHy@nesting
6440       \expandafter\hyper@@anchor\expandafter{%
6441         \Hy@footnote@currentHref
6442       }{#1}%
6443     \else
6444       \Hy@raisedlink{%
6445         \expandafter\hyper@@anchor\expandafter{%
6446           \Hy@footnote@currentHref
6447         }{\relax}%
6448       }%
6449       \let\@currentHref\Hy@footnote@currentHref
6450       \let\@currentlabelname\@empty
6451       #1%
6452     \fi
6453   }%
6454 }%

```

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.

```

6455 \def\@footnotemark{%
6456   \leavevmode
6457   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6458   \stepcounter{Hfootnote}%
6459   \global\let\Hy@saved@currentHref\@currentHref
6460   \hyper@makecurrent{Hfootnote}%
6461   \global\let\Hy@footnote@currentHref\@currentHref
6462   \global\let\@currentHref\Hy@saved@currentHref
6463   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6464   \@makefnmark
6465   \hyper@linkend
6466   \ifhmode\spacefactor\@x@sf\fi
6467   \relax
6468 }%

```

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

```

6469 \ifpackageloaded{longtable}{%
6470 \CheckCommand*{\LT@p@ftntext}[1]{%
6471 \edef\@tempa{%
6472 \the\LT@p@ftn
6473 \noexpand\footnotetext[\the\c@footnote]%
6474 }%
6475 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6476 }%
6477 \long\def\LT@p@ftntext#1{%
6478 \edef\@tempa{%
6479 \the\LT@p@ftn
6480 \begingroup
6481 \noexpand\c@footnote=\the\c@footnote\relax
6482 \noexpand\protected@xdef
6483 \noexpand\@thefnmark{\noexpand\thempfn}%
6484 \noexpand\protected@xdef\noexpand\@thefnmark{%
6485 \noexpand\thempfn
6486 }%
6487 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6488 \expandafter{%
6489 \Hy@footnote@currentHref
6490 }%
6491 }%
6492 \global\LT@p@ftn\expandafter{%
6493 \@tempa{#1}%
6494 \endgroup
6495 }%
6496 }%
6497 \long\def\Hy@LT@footnotetext#1#2{%
6498 \H@@@footnotetext{%
6499 \ifHy@nesting
6500 \hyper@@anchor{#1}{#2}%
6501 \else
6502 \Hy@raisedlink{%
6503 \hyper@@anchor{#1}{\relax}%
6504 }%
6505 \def\@currentHref{#1}%
6506 \let\@currentlabelname\@empty
6507 #2%
6508 \fi
6509 }%
6510 }%
6511 }{}%

```

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

```

6512 \@ifpackageloaded{fancyvrb}{%
6513 \def\V@@@footnotetext{%
6514 \insert\footins\bgroup
6515 \csname reset@font\endcsname
6516 \footnotesize
6517 \interlinepenalty\interfootnotelinepenalty
6518 \splittopskip\footnotesep
6519 \splitmaxdepth\dp\strutbox
6520 \floatingpenalty \@MM
6521 \hsize\columnwidth
6522 \@parboxrestore
6523 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6524 \@makefntext{}%

```



```

6525 \rule{\z@}{\footnotesep}%
6526 \bgroup
6527 \aftergroup\V@@@footnotetext
6528 \Hy@raisedlink{%
6529 \expandafter\hyper@@anchor\expandafter{%
6530 \Hy@footnote@currentHref
6531 }{\relax}%
6532 }%
6533 \let\@currentHref\Hy@footnote@currentHref
6534 \let\@currentlabelname\@empty
6535 \ignorespaces
6536 }%
6537 }{}%

```

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

```

6538 \def\Hy@temp#1{%
6539 \begingroup
6540 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6541 \endgroup
6542 \@footnotemark
6543 }%
6544 \ifx\Hy@temp\footref
6545 \def\footref#1{%
6546 \begingroup
6547 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6548 \endgroup
6549 \H@@@footnotemark
6550 }%
6551 \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.

```

6552 \let\HyOrg@maketitle\maketitle
6553 \def\maketitle{%
6554 \let\Hy@saved@footnotemark\@footnotemark
6555 \let\Hy@saved@footnotetext\@footnotetext
6556 \let\@footnotemark\H@@@footnotemark
6557 \let\@footnotetext\H@@@footnotetext
6558 \@ifnextchar[\Hy@maketitle@optarg{% ]
6559 \HyOrg@maketitle
6560 \Hy@maketitle@end
6561 }%
6562 }%
6563 \def\Hy@maketitle@optarg[#1]{%
6564 \HyOrg@maketitle[{#1}]%
6565 \Hy@maketitle@end
6566 }%
6567 \def\Hy@maketitle@end{%
6568 \ifx\@footnotemark\H@@@footnotemark
6569 \let\@footnotemark\Hy@saved@footnotemark
6570 \fi
6571 \ifx\@footnotetext\H@@@footnotetext
6572 \let\@footnotetext\Hy@saved@footnotetext
6573 \fi
6574 }%

```

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

```

6575 \def\realfootnote{%
6576   \@ifnextchar[\@xfootnote{%
6577     \stepcounter{\@mpfn}%
6578     \protected@xdef\@thefnmark{\thempfn}%
6579     \H@@footnotemark\H@@footnotetext
6580   }%
6581 }%

6582 \fi
6583 \Hy@DisableOption{hyperfootnotes}

6584 \</package>
6585 \<*check>
6586 \checklatex
6587 \checkcommand\def\@xfootnotenext[#1]{%
6588   \begingroup
6589   \csname c@\@mpfn\endcsname #1\relax
6590   \unrestored@protected@xdef\@thefnmark{\thempfn}%
6591 \endgroup
6592 \@footnotetext
6593 }
6594 \checkcommand\def\@xfootnotemark[#1]{%
6595   \begingroup
6596   \c@footnote #1\relax
6597   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6598 \endgroup
6599 \@footnotemark
6600 }
6601 \checkcommand\def\@footnotemark{%
6602   \leavevmode
6603   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6604   \@makefnmark
6605   \ifhmode\spacefactor\@x@sf\fi
6606   \relax
6607 }
6608 \</check>
6609 \<*package>

```

36 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.

```

6610 \def\caption{%
6611   \ifx\@capttype\@undefined
6612     \@latex@error{\noexpand\caption outside float}\@ehd
6613     \expandafter\@gobble
6614   \else
6615     \H@refstepcounter\@capttype
6616     \let\Hy@tempa\@caption
6617     \ifundefined{float@caption}{%
6618       }{%
6619         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6620           \float@caption
6621           \let\Hy@tempa\Hy@float@caption
6622         \fi
6623       }%
6624     \expandafter\@firstofone

```

```

6625 \fi
6626 {\@dblarg{\Hy@tempa\@capttype}}%
6627 }
6628 \long\def\@caption#1[#2]#3{%
6629 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6630 \csname iftrue\endcsname
6631 \global\let\@currentHref\hc@currentHref
6632 \else
6633 \hyper@makecurrent{\@capttype}%
6634 \fi
6635 \@ifundefined{NR@gettitle}{%
6636 \def\@currentlabelname{#2}%
6637 }{%
6638 \NR@gettitle{#2}%
6639 }%
6640 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6641 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6642 }%
6643 \begingroup
6644 \@parboxrestore
6645 \if@minipage
6646 \@setminipage
6647 \fi
6648 \normalsize
6649 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6650 \csname iftrue\endcsname
6651 \global\@capstartfalse
6652 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6653 \else
6654 \@makecaption{\csname fnum@#1\endcsname}{%
6655 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6656 \ifHy@nesting
6657 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6658 \else
6659 \Hy@raisedlink{%
6660 \expandafter\hyper@@anchor\expandafter{%
6661 \@currentHref
6662 }{\relax}%
6663 }%
6664 #3%
6665 \fi
6666 }%
6667 \fi
6668 \par
6669 \endgroup
6670 }

```

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.

```

6671 \let\Hy@float@caption\@caption
6672 \@ifpackageloaded{float}{%
6673 \def\Hy@float@caption{%
6674 \ifx\Hy@float@currentHref\@undefined
6675 \hyper@makecurrent{\@capttype}%
6676 \global\let\Hy@float@currentHref\@currentHref
6677 \else

```

```

6678 \let\@currentHref\Hy@float@currentHref
6679 \fi
6680 \float@caption
6681 }%
6682 \let\HyOrg@float@makebox\float@makebox
6683 \renewcommand{\float@makebox}[1]{%
6684 \HyOrg@float@makebox{%
6685 #1\relax
6686 \ifx\Hy@float@currentHref\@undefined
6687 \else
6688 \expandafter\hyper@@anchor\expandafter{%
6689 \Hy@float@currentHref
6690 }{\relax}%
6691 \global\let\Hy@float@currentHref\@undefined
6692 \fi
6693 }%
6694 }%
6695 }{}

6696 \</package>
6697 \<*check>
6698 \checklatex[1999/06/01 - 2000/06/01]
6699 \checkcommand\def\caption{%
6700 \ifx\@capttype\@undefined
6701 \@latex@error{\noexpand\caption outside float}\@ehd
6702 \expandafter\@gobble
6703 \else
6704 \refstepcounter\@capttype
6705 \expandafter\@firstofone
6706 \fi
6707 {\@dblarg{\@caption\@capttype}}%
6708 }
6709 \checkcommand\long\def\@caption#1[#2]#3{%
6710 \par
6711 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6712 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6713 }%
6714 \begingroup
6715 \@parboxrestore
6716 \if@minipage
6717 \@setminipage
6718 \fi
6719 \normalsize
6720 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6721 \endgroup
6722 }
6723 \</check>
6724 \<*package>

```

37 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 *drficite* may break.

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

```

6725 \def\hyper@natlinkstart#1{%
6726   \Hy@backout{#1}%
6727   \hyper@linkstart{cite}{cite.#1}%
6728   \def\hyper@nat@current{#1}%
6729 }
6730 \def\hyper@natlinkend{%
6731   \hyper@linkend
6732 }
6733 \def\hyper@natlinkbreak#1#2{%
6734   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6735 }
6736 \def\hyper@natanchorstart#1{%
6737   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6738 }
6739 \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.

```

6740 \ltx@ifundefined{NAT@parse}{%
6741   \providecommand*\@extra@binfo{}%
6742   \providecommand*\@extra@b@citeb{}%
6743   \def\bibcite#1#2{%
6744     \@newlabel{b}{#1\@extra@binfo}{%
6745       \hyper@@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6746     }%
6747   }%
6748   \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.”.

```

6749 \let\Hy@bibcite\bibcite
6750 \begingroup
6751   \@ifundefined{bbl@cite@choice}{}{%
6752     \g@addto@macro\bbl@cite@choice{%
6753       \let\bibcite\Hy@bibcite
6754     }%
6755   }%
6756 \endgroup

```

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

```

6757 \providecommand*\@BIBLABEL{\@biblabel}%
6758 \def\@lbibitem[#1]#2{%
6759   \@skiphyperreftrue
6760   \H@item[%
6761     \ifx\Hy@raisedlink\@empty
6762       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6763       \@BIBLABEL{#1}%
6764     \hyper@anchorend
6765   \else
6766     \Hy@raisedlink{%
6767       \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6768     }%
6769   \@BIBLABEL{#1}%

```

```

6770 \fi
6771 \hfill
6772 ]%
6773 \@skiphyperreffalse
6774 \if@filesw
6775 \begingroup
6776 \let\protect\noexpand
6777 \immediate\write\@auxout{%
6778 \string\bibcite{#2}{#1}%
6779 }%
6780 \endgroup
6781 \fi
6782 \ignorespaces
6783 }%

```

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

```

6784 \def\@bibitem#1{%
6785 \@skiphyperrefftrue\H@item\@skiphyperreffalse
6786 \Hy@raisedlink{%
6787 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6788 }%
6789 \if@filesw
6790 \begingroup
6791 \let\protect\noexpand
6792 \immediate\write\@auxout{%
6793 \string\bibcite{#1}{\the\value{\@listctr}}%
6794 }%
6795 \endgroup
6796 \fi
6797 \ignorespaces
6798 }%
6799 }{}

6800 </package>
6801 <*check>
6802 \checklatex
6803 \checkcommand\def\@lbibitem[#1]#2{%
6804 \item[\@biblabel{#1}\hfill]%
6805 \if@filesw
6806 {%
6807 \let\protect\noexpand
6808 \immediate\write\@auxout{%
6809 \string\bibcite{#2}{#1}%
6810 }%
6811 }%
6812 \fi
6813 \ignorespaces
6814 }
6815 \checkcommand\def\@bibitem#1{%
6816 \item
6817 \if@filesw
6818 \immediate\write\@auxout{%
6819 \string\bibcite{#1}{\the\value{\@listctr}}%
6820 }%
6821 \fi
6822 \ignorespaces
6823 }

```

```

6824 </check>
6825 <*package>

```

Revtex (bless its little heart) takes over \bibtex 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.

```

6826 \@ifclassloaded{revtex}{%
6827   \Hy@Info{*** compatibility with revtex **** }%
6828   \def\revtex@checking#1#2{%
6829     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6830     \expandafter\def\csname b@#1\endcsname{#2}%
6831     \@SetMaxRnhefLabel{#1}%
6832     \expandafter\let\csname b@#1\endcsname\T@temp
6833   }%

```

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

```

6834   \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
6835   \providecommand*{\@extra@b@citeb}{}%
6836   \def\CITEX[#1]#2{%
6837     \let\@citea\@empty
6838     \leavevmode
6839     \unskip
6840     $\sim$%
6841     \scriptstyle
6842     \@CITE{%
6843       \@for\@citeb:=#2\do{%
6844         \@citea
6845         \def\@citea{,\penalty\@m\ }%
6846         \edef\@citeb{\expandafter\@firstofone\@citeb}%
6847         \if@filesw
6848           \immediate\write\@auxout{\string\citation{\@citeb}}%
6849         \fi
6850         \@ifundefined{b@\@citeb\extra@b@citeb}{%
6851           \mbox{\reset@font\bfseries ?}%
6852           \G@refundefinedtrue
6853           \@latex@warning{%
6854             Citation ‘\@citeb’ on page \thepage \space undefined%
6855           }%
6856         }{%
6857           {\csname b@\@citeb\extra@b@citeb\endcsname}%
6858         }%
6859       }%
6860     }{#1}%
6861   }$%
6862 }%

```

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

```

6863   \def\CITEX[#1]#2{%
6864     \let\@citea\@empty
6865     \@cite{%
6866       \@for\@citeb:=#2\do{%
6867         \@citea
6868         \def\@citea{,\penalty\@m\ }%
6869         \edef\@citeb{\expandafter\@firstofone\@citeb}%
6870         \if@filesw
6871           \immediate\write\@auxout{\string\citation{\@citeb}}%

```

```

6872 \fi
6873 \ifundefined{b@\@citeb\@extra@b@citeb}{%
6874 \mbox{\reset@font\bfseries ?}%
6875 \G@refundefinedtrue
6876 \@latex@warning{%
6877 Citation '\@citeb' on page \thepage \space undefined%
6878 }%
6879 }{%
6880 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6881 }%
6882 }%
6883 }{#1}%
6884 }%
6885 }{}

```

37.1 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.

```

6886 \@ifpackageloaded{harvard}{%
6887 \Hy@AtBeginDocument{%
6888 \Hy@Info{*** compatibility with harvard **** }%
6889 \Hy@raiselinksfalse
6890 \def\harvardcite#1#2#3#4{%
6891 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
6892 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
6893 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
6894 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6895 }%
6896 \def\HAR@citetoaux#1{%
6897 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6898 \ifHy@backref
6899 \ifx\@empty\@currentlabel
6900 \else
6901 \@bsphack
6902 \if@filesw
6903 \protected@write\@auxout{}{%
6904 \string\@writefile{brf}{%
6905 \string\backcite{#1}{%
6906 {\thepage}{\@currentlabel}{\@currentHref}%
6907 }%
6908 }%
6909 }%
6910 \fi
6911 \@esphack
6912 \fi
6913 \fi
6914 }%
6915 \def\harvarditem{%
6916 \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6917 }%
6918 \def\@harvarditem[#1]#2#3#4#5\par{%

```



```

6919 \item[]%
6920 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6921 \if@filesw
6922 \begingroup
6923 \def\protect##1{\string ##1\space}%
6924 \ifthenelse{\equal{#1}{\null}}{%
6925 {\def\next{{#4}{#2}{#2}{#3}}}%
6926 {\def\next{{#4}{#2}{#1}{#3}}}%
6927 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6928 \endgroup
6929 \fi
6930 \protect\hspace*{-\labelwidth}%
6931 \protect\hspace*{-\labelsep}%
6932 \ignorespaces
6933 #5%
6934 \ifHy@backref
6935 \newblock
6936 \backref{\csname br@#4\endcsname}%
6937 \fi
6938 \par
6939 }%

```

`\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`:

```

6940 \long\def\HAR@checkcitations#1#2#3#4{%
6941 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6942 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6943 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6944 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6945 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6946 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6947 \else
6948 \@tempswatrue
6949 \fi
6950 \else
6951 \@tempswatrue
6952 \fi
6953 \else
6954 \@tempswatrue
6955 \fi
6956 }%
6957 }%
6958 }{}

```

37.2 Package chicago

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

```

6959 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

6960 \def\citeN{%
6961 \def\@citesep{--1000}%
6962 \def\@cite##1##2{##1}%
6963 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%

```

```

6964 \citedata@opt
6965 }%

\shortciteN
6966 \def\shortciteN{%
6967 \def\cite#1#2#3{-1000}%
6968 \def\cite##1##2{##1}%
6969 \def\citeauthoryear##1##2##3{##2 (##3\cite@opt)}%
6970 \citedata@opt
6971 }%

\citedata@opt
6972 \def\citedata@opt{%
6973 \let\cite@opt\empty
6974 \ifnextchar [{%
6975 \@tempwattrue
6976 \citedatax@opt
6977 }{%
6978 \@tempwafalse
6979 \citedatax[]%
6980 }%
6981 }%

\citedatax@opt
6982 \def\citedatax@opt[#1]{%
6983 \def\cite@opt{, #1}%
6984 \citedatax[{#1}]%
6985 }%

6986 }{}

```

38 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{pdfpageduration={}}`. 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.

```

6987 \def\Hy@EveryPageAnchor{%
6988 \Hy@DistillerDestFix
6989 \ifHy@pageanchor
6990 \ifHy@hypertextnames
6991 \ifHy@plainpages
6992 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6993 \else
6994 \begingroup
6995 \let\@number\@firstofone
6996 \Hy@unicodedefalse
6997 \pdfstringdef\@the@H@page{\thepage}%
6998 \endgroup
6999 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7000 \fi
7001 \else
7002 \Hy@GlobalStepCount\Hy@pagecounter

```

```

7003 \def\Hy@TempPageAnchor{%
7004 \hyper@@anchor{page.\the\Hy@pagecounter}%
7005 }%
7006 \fi
7007 \vbox to 0pt{%
7008 \kern\voffset
7009 \kern\topmargin
7010 \kern-1bp\relax
7011 \hbox to 0pt{%
7012 \kern\hoffset
7013 \kern\ifodd\value{page}%
7014 \oddsidemargin
7015 \else
7016 \evensidemargin
7017 \fi
7018 \kern-1bp\relax
7019 \Hy@TempPageAnchor
7020 \hss
7021 }%
7022 \vss
7023 }%
7024 \fi
7025 }
7026 \g@addto@macro\Hy@EveryPageBoxHook{%
7027 \Hy@EveryPageAnchor
7028 }

```

39 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.

```

7029 \def\addcontentsline#1#2#3{% toc extension, type, tag
7030 \begingroup
7031 \let\label\@gobble
7032 \ifx\@currentHref\@empty
7033 \Hy@Warning{%
7034 No destination for bookmark of \string\addcontentsline,%
7035 \MessageBreak destination is added%
7036 }%
7037 \phantomsection
7038 \fi
7039 \expandafter\ifx\csname toplevel@#2\endcsname\relax
7040 \begingroup
7041 \def\Hy@tempa{#1}%
7042 \ifx\Hy@tempa\Hy@bookmarkstype
7043 \Hy@WarningNoLine{%
7044 bookmark level for unknown #2 defaults to 0%
7045 }%
7046 \else
7047 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7048 \fi
7049 \endgroup
7050 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7051 \fi
7052 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%

```

```

7053 \Hy@writebookmark{\csname the#2\endcsname}%
7054 {#3}%
7055 {\@currentHref}%
7056 {\Hy@toclevel}%
7057 {#1}%
7058 \ifHy@verbose
7059 \begingroup
7060 \def\Hy@tempa{#3}%
7061 \@onelevel@sanitize\Hy@tempa
7062 \let\temp@online\on@line
7063 \let\on@line\@empty
7064 \Hy@Info{%
7065   bookmark\temp@online:\MessageBreak
7066   thecounter {\csname the#2\endcsname}\MessageBreak
7067   text {\Hy@tempa}\MessageBreak
7068   reference {\@currentHref}\MessageBreak
7069   toclevel {\Hy@toclevel}\MessageBreak
7070   type {#1}%
7071 }%
7072 \endgroup
7073 \fi
7074 \addtocontents{#1}{%
7075   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7076 }%
7077 \endgroup
7078 }
7079 \def\contentsline#1#2#3#4{%
7080   \ifx\\#4\\%
7081     \csname l@#1\endcsname{#2}{#3}%
7082   \else
7083     \ifcase\Hy@linktoc % none
7084       \csname l@#1\endcsname{#2}{#3}%
7085     \or % section
7086       \csname l@#1\endcsname{%
7087         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7088       }{#3}%
7089     \or % page
7090       \csname l@#1\endcsname{{#2}}{%
7091         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7092       }%
7093     \else % all
7094       \csname l@#1\endcsname{%
7095         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7096       }{%
7097         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7098       }%
7099     \fi
7100   \fi
7101 }
7102 \</package>
7103 \<*check>
7104 \checklatex
7105 \checkcommand\def\addcontentsline#1#2#3{%
7106   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7107 }
7108 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7109 \</check>

```

```
7110 <*package>
```

40 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.

```
7111 \let\H@definecounter\@definecounter
7112 \def\@definecounter#1{%
7113   \H@definecounter{#1}%
7114   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7115 }
```

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.

```
7116 \let\H@newctr\@newctr
7117 \def\@newctr#1[#2]{%
7118   \H@newctr#1[#2]%
7119   \expandafter\def\csname theH#1\endcsname{%
7120     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7121   }%
7122 }
```

41 AMSL^AT_EX 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.

```
7123 \ifpackageloaded{amsmath}{%
7124   \def\Hy@make@anchor{%
7125     \Hy@MakeCurrentHrefAuto{AMS}%
7126     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7127   }%
7128   \def\Hy@make@df@tag@@#1{%
7129     \gdef\df@tag{%
7130       \maketag@@@{\Hy@make@anchor#1}%
7131       \def\@currentlabel{#1}%
7132     }%
7133   }%
7134   \def\Hy@make@df@tag@@@#1{%
7135     \gdef\df@tag{%
7136       \tagform@{\Hy@make@anchor#1}%
7137       \toks@{\exp{\p@equation{#1}}}%
7138       \edef\@currentlabel{\the\toks@}%
7139     }%
7140   }%
7141   \let\HyOrg@make@df@tag@@\make@df@tag@@
7142   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7143   \let\make@df@tag@@\Hy@make@df@tag@@
7144   \let\make@df@tag@@@\Hy@make@df@tag@@@
7145 }{}
```

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

```

7146 \ifpackagewith{hyperref}{pdfTeX}{%
7147   \let\H@seteqlabel\@seteqlabel
7148   \def\@seteqlabel#1{%
7149     \H@seteqlabel{#1}%
7150     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7151     \Hy@raisedlink{%
7152       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7153     }%
7154   }%
7155 }{}

```

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}}}

```

41.1 `\@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.

```

7156 \let\HyOrg@addtoreset\@addtoreset
7157 \def\@addtoreset#1#2{%
7158   \HyOrg@addtoreset{#1}{#2}%
7159   \expandafter\xdef\csname theH#1\endcsname{%
7160     \expandafter\noexpand
7161     \csname the\@ifundefined{theH#2}{H#2}\endcsname
7162     .\noexpand\the\noexpand\value{#1}%
7163   }%
7164 }

```

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

```

7165 \</package>
7166 \<*check>
7167 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7168 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7169   \ifundefined{c@#2}{\@nocounterr{#2}}{%
7170     \ifundefined{c@#3}{\@nocnterr{#3}}{%
7171       \@addtoreset{#2}{#3}%
7172       \exp\xdef\csname the#2\endcsname{%
7173         \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7174       }%
7175     }%
7176   }%
7177 }%
7178 \</check>
7179 \<*package>
7180 \ifpackageloaded{amsmath}{%
7181   \ifpackagelater{amsmath}{1999/12/14}{%

```

```

7182 \renewcommand*{\numberwithin}[3][\arabic]{%
7183 \ifundefined{c@#2}{\nocounterr{#2}}{%
7184 \ifundefined{c@#3}{\nocnterr{#3}}{%
7185 \HyOrg@addtoreset{#2}{#3}%
7186 \xp\xdef\csname the#2\endcsname{%
7187 \xp\xnx\csname the#3\endcsname .\nx#1{#2}%
7188 }%
7189 \xp\xdef\csname theH#2\endcsname{%
7190 \xp\xnx
7191 \csname the@\ifundefined{theH#3}{H#3\endcsname
7192 .\nx#1{#2}%
7193 }%
7194 }%
7195 }%
7196 }%
7197 }{%
7198 \Hy@WarningNoLine{%
7199 \string\numberwithin\space of package ‘amsmath’ %
7200 only fixed\MessageBreak
7201 for version 2000/06/06 v2.12 or newer%
7202 }%
7203 }%
7204 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7205 \ifHy@figures
7206 \let\Hy@Gin@setfile\Gin@setfile
7207 \def\Gin@setfile#1#2#3{%
7208 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7209 }%
7210 \fi
7211 \Hy@DisableOption{hyperfigures}

```

43 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.

```

7212 \ifHy@hyperindex
7213 \def\HyInd@ParenLeft{({}%
7214 \def\HyInd@ParenRight{)}}%
7215 \def\hyperindexformat#1#2{%
7216 \let\HyOrg@hyperpage\hyperpage
7217 \let\hyperpage\@firstofone
7218 #1{\HyOrg@hyperpage{#2}}%
7219 \let\hyperpage\HyOrg@hyperpage

```

```

7220 }%
7221 \Hy@nextfalse
7222 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7223 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7224 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7225 \begingroup
7226 \lccode'\|=\expandafter\HyInd@EncapChar\relax
7227 \lccode'\|/'\|'\relax
7228 \lowercase{\endgroup
7229 \ifHy@next
7230 \let\HyInd@org@wrindex\@wrindex
7231 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
7232 \def\HyInd@@wrindex#1#2|#3|#4\{\%
7233 \ifx\|#3\%
7234 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7235 \else
7236 \HyInd@@@wrindex{#1}{#2}#3\%
7237 \fi
7238 }%
7239 \def\HyInd@@@wrindex#1#2#3#4\{\%
7240 \def\Hy@temp@A{#3}%
7241 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7242 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7243 \relax
7244 \HyInd@org@wrindex{#1}{%
7245 #2|hyperindexformat{/#3#4}%
7246 }%
7247 \else
7248 \ifx\|#4\%
7249 \ifx\Hy@temp@A\HyInd@ParenRight
7250 \HyInd@org@wrindex{#1}{#2|#3}%
7251 \else
7252 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7253 \fi
7254 \else
7255 \HyInd@org@wrindex{#1}{%
7256 #2|#3hyperindexformat{/#4}%
7257 }%
7258 \fi
7259 \fi
7260 }%
7261 \else
7262 \def\@wrindex#1{\@@wrindex#1||\}%
7263 \def\@@wrindex#1|#2|#3\{\%
7264 \if@filesw
7265 \ifx\|#2\%
7266 \protected@write\@indexfile{}\%
7267 \string\indexentry{#1|hyperpage}{\thepage}%
7268 }%
7269 \else
7270 \HyInd@@@wrindex{#1}#2\%
7271 \fi
7272 \fi
7273 \endgroup
7274 \@esphack
7275 }%
7276 \def\HyInd@@@wrindex#1#2#3\{\%

```



```

7277 \def\Hy@temp@A{#2}%
7278 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7279 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7280 \relax
7281 \protected@write\@indexfile{}\{%
7282 \string\indexentry{%
7283 #1|hyperindexformat{/#2#3}%
7284 }\the page}%
7285 }%
7286 \else
7287 \ifx\#3\%
7288 \ifx\Hy@temp@A\HyInd@ParenRight
7289 \protected@write\@indexfile{}\{%
7290 \string\indexentry{#1|#2}\the page}%
7291 }%
7292 \else
7293 \protected@write\@indexfile{}\{%
7294 \string\indexentry{#1|#2hyperpage}\the page}%
7295 }%
7296 \fi
7297 \else
7298 \protected@write\@indexfile{}\{%
7299 \string\indexentry{%
7300 #1|#2hyperindexformat{/#3}%
7301 }\the page}%
7302 }%
7303 \fi
7304 \fi
7305 }%
7306 \fi
7307 }%
7308 \fi
7309 \Hy@DisableOption{hyperindex}
7310 \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.

```

7311 \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.

```

7312 \def\hyperpage#1{%
7313 \HyInd@hyperpage#1\nohyperpage{}\@nil
7314 }
7315 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7316 \HyInd@@hyperpage{#1}%
7317 #2%
7318 \def\Hy@temp{#3}%
7319 \ifx\Hy@temp\@empty
7320 \else
7321 \Hy@ReturnAfterFi{%
7322 \HyInd@hyperpage#3\@nil
7323 }%
7324 \fi
7325 }
7326 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7327 \def\@hyperpage#1--#2--#3\{\%

```

```

7328 \ifx\#2\%
7329 \commahyperpage{#1}%
7330 \else
7331 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7332 \fi
7333 }
7334 \def\commahyperpage#1{\commahyperpage#1, ,\}
7335 \def\commahyperpage#1, #2,#3\{%
7336 \ifx\#2\%
7337 \HyInd@pagelink{#1}%
7338 \else
7339 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7340 \fi
7341 }

```

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

```

7342 \def\HyInd@pagelink#1{%
7343 \begingroup
7344 \toks@={}%
7345 \HyInd@removespaces#1 \@nil
7346 \endgroup
7347 }
7348 \def\HyInd@removespaces#1 #2\@nil{%
7349 \toks@=\expandafter{\the\toks@#1}%
7350 \ifx\#2\%
7351 \edef\x{\the\toks@}%
7352 \ifx\x\@empty
7353 \else
7354 \hyperlink{page.\the\toks@}{\the\toks@}%
7355 \fi
7356 \else
7357 \Hy@ReturnAfterFi{%
7358 \HyInd@removespaces#2\@nil
7359 }%
7360 \fi
7361 }

```

44 Compatibility with foiltex

```

7362 \@ifclassloaded{foils}{%
7363 \providecommand*\ext@table{lot}%
7364 \providecommand*\ext@figure{lof}%
7365 }{}

```

45 Compatibility with seminar slide package

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

```

7366 \@ifclassloaded{seminar}{%
7367 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7368 }{%
7369 \Hy@seminarslidesfalse
7370 }
7371 \@ifpackageloaded{slidesec}{%
7372 \newcommand\theHslidesection {\arabic{slidesection}}}%

```

```

7373 \newcommand\theHslidesubsection{%
7374 \theHslidesection.\arabic{slidesubsection}%
7375 }%
7376 \def\slide@heading[#1]#2{%
7377 \H@refstepcounter{slidesection}%
7378 \@addtoreset{slidesubsection}{slidesection}%
7379 \addtocontents{los}{%
7380 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7381 {\@SCTR}{slideheading.\theslidesection}%
7382 }%
7383 \def\Hy@tempa{#2}%
7384 \ifx\Hy@tempa@empty
7385 \else
7386 {%
7387 \edef\@currentlabel{%
7388 \csname p@slidesection\endcsname\theslidesection
7389 }%
7390 \makeslideheading{#2}%
7391 }%
7392 \fi
7393 \gdef\theslideheading{#1}%
7394 \gdef\theslidesubheading{}%
7395 \ifHy@bookmarksnumbered
7396 \def\Hy@slidetitle{\theslidesection\space #1}%
7397 \else
7398 \def\Hy@slidetitle{#1}%
7399 \fi
7400 \ifHy@hypertexnames
7401 \ifHy@naturalnames
7402 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7403 \Hy@writebookmark
7404 {\theslidesection}%
7405 {\Hy@slidetitle}%
7406 {slideheading.\theslidesection}%
7407 {1}%
7408 {toc}%
7409 \else
7410 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7411 \Hy@writebookmark
7412 {\theslidesection}%
7413 {\Hy@slidetitle}%
7414 {slideheading.\theHslidesection}%
7415 {1}%
7416 {toc}%
7417 \fi
7418 \else
7419 \Hy@GlobalStepCount\Hy@linkcounter
7420 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7421 \Hy@writebookmark
7422 {\theslidesection}%
7423 {\Hy@slidetitle}%
7424 {slideheading.\the\Hy@linkcounter}%
7425 {1}%
7426 {toc}%
7427 \fi
7428 }%
7429 \def\slide@subheading[#1]#2{%

```

```

7430 \H@refstepcounter{slidesubsection}%
7431 \addtocontents{los}{%
7432   \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7433   {\@SCTR}{slideheading.\theslidesubsection}%
7434 }%
7435 \def\Hy@tempa{#2}%
7436 \ifx\Hy@tempa\@empty
7437 \else
7438   {%
7439     \edef\@currentlabel{%
7440       \csname p@slidesubsection\endcsname\theslidesubsection
7441     }%
7442     \makeslidesubheading{#2}%
7443   }%
7444 \fi
7445 \gdef\theslidesubheading{#1}%
7446 \ifHy@bookmarksnumbered
7447   \def\Hy@slidetitle{\theslidesubsection\space #1}%
7448 \else
7449   \def\Hy@slidetitle{#1}%
7450 \fi
7451 \ifHy@hypertextnames
7452   \ifHy@naturalnames
7453     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7454     \Hy@writebookmark
7455       {\theslidesubsection}%
7456       {\Hy@slidetitle}%
7457       {slideheading.\theslidesubsection}%
7458       {2}%
7459       {toc}%
7460   \else
7461     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7462     \Hy@writebookmark
7463       {\theslidesubsection}%
7464       {\Hy@slidetitle}%
7465       {slideheading.\theHslidesubsection}%
7466       {2}%
7467       {toc}%
7468   \fi
7469 \else
7470   \Hy@GlobalStepCount\Hy@linkcounter
7471   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7472   \Hy@writebookmark
7473     {\theslidesubsection}%
7474     {\Hy@slidetitle}%
7475     {slideheading.\the\Hy@linkcounter}%
7476     {1}%
7477     {toc}%
7478 \fi
7479 }%
7480 \providecommand*{\listslidenam}{List of Slides}%
7481 \def\listofslides{%
7482   \section*{%
7483     \listslidenam
7484     \@mkboth{%
7485       \expandafter\MakeUppercase\listslidenam
7486     }{%

```

```

7487     \expandafter\MakeUppercase\listslidenam
7488     }%
7489 }%
7490 \def\l@slide##1##2##3##4{%
7491     \slide@undottedcline{%
7492         \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7493     }{}%
7494 }%
7495 \let\l@subslide\l@slide
7496 \@startlos
7497 }%
7498 \def\slide@contents{%
7499     \def\l@slide##1##2##3##4{%
7500         \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7501     }%
7502     \let\l@subslide\@gobblefour
7503     \@startlos
7504 }%
7505 \def\Slide@contents{%
7506     \def\l@slide##1##2##3##4{%
7507         \ifcase\lslide@flag
7508             \message{##1 ** \the\c@slidesection}%
7509             \ifnum##1>\c@slidesection
7510                 \def\lslide@flag{1}%
7511                 {%
7512                     \large
7513                     \slide@cline{%
7514                         \slidenumberline{$\Rightarrow\bullet$}%
7515                         {\hyperlink{##4}{##2}}%
7516                     }{##3}%
7517                 }%
7518             \else
7519                 {%
7520                     \large
7521                     \slide@cline{%
7522                         \slidenumberline{$\surd\bullet$}%
7523                         {\hyperlink{##4}{##2}}%
7524                     }{##3}%
7525                 }%
7526             \fi
7527         \or
7528             \def\lslide@flag{2}%
7529             {%
7530                 \large
7531                 \slide@cline{%
7532                     \slidenumberline{$\bullet$}%
7533                     {\hyperlink{##4}{##2}}%
7534                 }{##3}%
7535             }%
7536         \or
7537             {%
7538                 \large
7539                 \slide@cline{%
7540                     \slidenumberline{$\bullet$}%
7541                     {\hyperlink{##4}{##2}}%
7542                 }{##3}%
7543             }%

```

```

7544 \fi
7545 }%
7546 \def\l@subslide##1##2##3##4{%
7547 \ifnum\lslide@flag=1 %
7548 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
7549 \fi
7550 }%
7551 \def\lslide@flag{0}%
7552 \@startlos
7553 }%
7554 }{}

```

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.)

```

7555 \ifHy@texht
7556 \expandafter\endinput
7557 \fi
7558 \let\real@setref\@setref
7559 \def\@setref#1#2#3{% csname, extract group, refname
7560 \ifx#1\relax
7561 \protect\G@refundefinedtrue
7562 \nfss@text{\reset@font\bfseries ??}%
7563 \@latex@warning{%
7564 Reference ‘#3’ on page \thepage \space undefined%
7565 }%
7566 \else
7567 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7568 \fi
7569 }

```

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

```

7570 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7571 \begingroup
7572 \toks0={\hyper@@link{#5}{#4}}%
7573 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7574 \edef\x{\endgroup
7575 \the\toks0 {\the\toks1 }%
7576 }%
7577 \x
7578 }
7579 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7580 \ifx#1\relax
7581 \protect\G@refundefinedtrue
7582 \nfss@text{\reset@font\bfseries ??}%
7583 \@latex@warning{%
7584 Reference ‘#3’ on page \thepage \space undefined%
7585 }%
7586 \else
7587 \protect\hyper@@link
7588 {\expandafter\@fifthoffive#1}%
7589 {page.\expandafter\@secondoffive#1}%
7590 {\expandafter\@secondoffive#1}%
7591 \fi
7592 }
7593 \</package>
7594 \<check>

```

```

7595 \checklatex
7596 \checkcommand\def\@setref#1#2#3{%
7597   \ifx#1\relax
7598     \protect\G@refundefinedtrue
7599     \nfss@text{\reset@font\bfseries ??}%
7600     \@latex@warning{%
7601       Reference '#3' on page \thepage\space undefined%
7602     }%
7603   \else
7604     \expandafter#2#1\null
7605   \fi
7606 }
7607 \</check>
7608 \<*package>

```

Now some extended referencing. \ref* and \pageref* are not linked, and \autoref prefixes with a tag based on the type.

```

7609 \def\HyRef@StarSetRef#1{%
7610   \begingroup
7611   \Hy@safe@activetrue
7612   \edef\x{#1}%
7613   \@onelevel@sanitize\x
7614   \edef\x{\endgroup
7615     \noexpand\HyRef@@StarSetRef
7616     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7617   }%
7618   \x
7619 }
7620 \def\HyRef@@StarSetRef#1#2#3{%
7621   \ifx#1\@undefined
7622     \let#1\relax
7623   \fi
7624   \real@setref#1#3{#2}%
7625 }
7626 \def\@refstar#1{%
7627   \HyRef@StarSetRef{#1}\@firstoffive
7628 }
7629 \def\@pagerefstar#1{%
7630   \HyRef@StarSetRef{#1}\@secondoffive
7631 }
7632 \def\@namerefstar#1{%
7633   \HyRef@StarSetRef{#1}\@thirdoffive
7634 }
7635 \Hy@AtBeginDocument{%
7636   \@ifpackageloaded{varioref}{%
7637     \def\@Refstar#1{%
7638       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7639     }%
7640     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7641       \MakeUppercase#1%
7642     }%
7643     \DeclareRobustCommand*\{ \Ref }{%
7644       \@ifstar\@Refstar\HyRef@Ref
7645     }%
7646     \def\HyRef@Ref#1{%
7647       \hyperref[#{1}]{\Ref*{#1}}%
7648     }%
7649     \def\Vr@f#1{%

```

```

7650 \leavevmode\unskip\vref@space
7651 \hyperref[#1]{%
7652 \Ref*{#1}%
7653 \let\vref@space\nobreakspace
7654 \@vpageref[\unskip]{#1}%
7655 }%
7656 }%
7657 \def\vr@f#1{%
7658 \leavevmode\unskip\vref@space
7659 \begingroup
7660 \let\T@pageref\@pagerefstar
7661 \hyperref[#1]{%
7662 \ref*{#1}%
7663 \vpageref[\unskip]{#1}%
7664 }%
7665 \endgroup
7666 }%
7667 }{}%
7668 }
7669 \DeclareRobustCommand*\autopageref{%
7670 \@ifstar{%
7671 \HyRef@autopagerefname\pageref*%
7672 }\HyRef@autopageref
7673 }
7674 \def\HyRef@autopageref#1{%
7675 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
7676 }
7677 \def\HyRef@autopagerefname{%
7678 \ltx@ifundefined{pageautorefname}{%
7679 \ltx@ifundefined{pagename}{%
7680 \Hy@Warning{No autoref name for ‘page’}%
7681 }{%
7682 \pagename\nobreakspace
7683 }%
7684 }{}%
7685 \pageautorefname\nobreakspace
7686 }%
7687 }
7688 \DeclareRobustCommand*\autoref{%
7689 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7690 }
7691 \def\HyRef@autoref#1#2{%
7692 \begingroup
7693 \Hy@safe@activetrue
7694 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7695 \endgroup
7696 }
7697 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7698 \HyRef@ShowKeysRef{#2}%
7699 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7700 \edef\HyRef@thisref{%
7701 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7702 }%
7703 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7704 \Hy@safe@activesfalse
7705 #3{%
7706 \expandafter\@fifthoffive#1\@empty\@empty\@empty

```



```

7707 }{%
7708   \expandafter\@fourthoffive#1\@empty\@empty\@empty
7709 }{%
7710   \HyRef@currentHtag
7711   \expandafter\@firstoffive#1\@empty\@empty\@empty
7712   \null
7713 }%
7714 \else
7715   \protect\G@refundefinedtrue
7716   \nfss@text{\reset@font\bfseries ??}%
7717   \@latex@warning{%
7718     Reference '#2' on page \thepage\space undefined%
7719   }%
7720 \fi
7721 }
7722 \def\HyRef@testreftype#1.#2\{%
7723   \ltx@ifundefined{#1autorefname}{%
7724     \ltx@ifundefined{#1name}{%
7725       \HyRef@StripStar#1\*\@nil{#1}%
7726       \ltx@ifundefined{\HyRef@name autorefname}{%
7727         \ltx@ifundefined{\HyRef@name name}{%
7728           \def\HyRef@currentHtag{%
7729             \Hy@Warning{No autoref name for '#1'}%
7730           }{%
7731             \edef\HyRef@currentHtag{%
7732               \expandafter\noexpand\csname\HyRef@name name\endcsname
7733               \noexpand~%
7734             }%
7735           }%
7736         }{%
7737           \edef\HyRef@currentHtag{%
7738             \expandafter\noexpand
7739             \csname\HyRef@name autorefname\endcsname
7740             \noexpand~%
7741           }%
7742         }%
7743       }{%
7744         \edef\HyRef@currentHtag{%
7745           \expandafter\noexpand\csname#1name\endcsname
7746           \noexpand~%
7747         }%
7748       }%
7749     }{%
7750       \edef\HyRef@currentHtag{%
7751         \expandafter\noexpand\csname#1autorefname\endcsname
7752         \noexpand~%
7753       }%
7754     }%
7755   }
7756 \def\HyRef@StripStar#1*\@nil#3{%
7757   \def\HyRef@name{#2}%
7758   \ifx\HyRef@name\HyRef@CaseStar
7759     \def\HyRef@name{#1}%
7760   \else
7761     \def\HyRef@name{#3}%
7762   \fi
7763 }

```

```

7764 \def\HyRef@CaseStar{*\\}
7765 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7766 \let\HyRef@ShowKeysRef\@gobble
7767 \def\HyRef@ShowKeysInit{%
7768   \begingroup\expandafter\expandafter\expandafter\endgroup
7769   \expandafter\ifx\csname SK@@label\endcsname\relax
7770   \else
7771     \ifx\SK@ref\@empty
7772     \else
7773       \def\HyRef@ShowKeysRef{%
7774         \SK@\SK@@ref
7775       }%
7776     \fi
7777   \fi
7778 }
7779 \@ifpackageloaded{showkeys}{%
7780   \HyRef@ShowKeysInit
7781 }{%
7782   \Hy@AtBeginDocument{%
7783     \@ifpackageloaded{showkeys}{%
7784       \HyRef@ShowKeysInit
7785     }{}%
7786   }%
7787 }

```

Defaults for the names that \autoref uses.

```

7788 \providecommand*\AMSautorefname{\equationautorefname}
7789 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7790 \providecommand*\Itemautorefname{\itemautorefname}
7791 \providecommand*\itemautorefname{item}
7792 \providecommand*\equationautorefname{Equation}
7793 \providecommand*\footnoteautorefname{footnote}
7794 \providecommand*\itemautorefname{item}
7795 \providecommand*\figureautorefname{Figure}
7796 \providecommand*\tableautorefname{Table}
7797 \providecommand*\partautorefname{Part}
7798 \providecommand*\appendixautorefname{Appendix}
7799 \providecommand*\chapterautorefname{chapter}
7800 \providecommand*\sectionautorefname{section}
7801 \providecommand*\subsectionautorefname{subsection}
7802 \providecommand*\subsubsectionautorefname{subsubsection}
7803 \providecommand*\paragraphautorefname{paragraph}
7804 \providecommand*\subparagraphautorefname{subparagraph}
7805 \providecommand*\FancyVerbLineautorefname{line}
7806 \providecommand*\theoremautorefname{Theorem}
7807 \providecommand*\pageautorefname{page}
7808 </package>

```

46 Configuration files

46.1 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_T_EX offers `\pdfescapestring`.

```
7809 <*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7810 \RequirePackage{pdfTEXcmds}[2009/04/10]
7811 \begingroup\expandafter\expandafter\expandafter\endgroup
7812 \expandafter\ifx\csname pdfTEXescapestring\endcsname\relax
7813 \begingroup
7814 \catcode'\|=0 %
7815 \@makeother\| %
7816 |@firstofone{ |endgroup
7817 |def|Hy@pstringdef#1#2{%
7818 |begingroup
7819 |edef~{|string~}%
7820 |xdef|Hy@gtemp{#2}%
7821 |endgroup
7822 |let#1|Hy@gtemp
7823 |@onelevel@sanitize#1%
7824 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7825 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7826 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7827 }%
7828 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7829 #1%
7830 |ifx|\#2\| %
7831 |else
7832 \| %
7833 |Hy@ReturnAfterFi{%
7834 |Hy@ExchangeBackslash#2|@nil
7835 }%
7836 |fi
7837 }%
7838 }%
7839 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7840 #1%
7841 \ifx\#2\| %
7842 \else
7843 \@backslashchar(%
7844 \Hy@ReturnAfterFi{%
7845 \Hy@ExchangeLeftParenthesis#2\@nil
7846 }%
7847 \fi
7848 }%
7849 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7850 #1%
7851 \ifx\#2\| %
7852 \else
7853 \@backslashchar)%
7854 \Hy@ReturnAfterFi{%
```

```

7855     \Hy@ExchangeRightParenthesis#2\@nil
7856   }%
7857   \fi
7858 }%
7859 \else
7860 \def\Hy@pstringdef#1#2{%
7861   \begingroup
7862     \edef~{\string~}%
7863     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7864   \endgroup
7865   \let#1\Hy@gtemp
7866 }%
7867 \fi
7868 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7869 <*pdfTeX>
7870 \providecommand*{\XR@ext}{pdf}
7871 \Hy@setbreaklinks{true}

```

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`

```

7872 \let\Hy@pdfminorversion\relax
7873 \begingroup\expandafter\expandafter\expandafter\endgroup
7874 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7875   \begingroup\expandafter\expandafter\expandafter\endgroup
7876   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7877     \else
7878       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7879     \fi
7880   \else
7881     \def\Hy@pdfminorversion{\pdfminorversion}%
7882   \fi
7883 \@@ifundefined{Hy@pdfminorversion}{%
7884   \PackageInfo{hyperref}{%
7885     PDF version is not set, because pdfTeX is too old (<1.10a)%
7886   }%
7887 }{%
7888   \ifHy@ocgcolorlinks
7889     \ifnum\Hy@pdfminorversion<5 %
7890       \setkeys{Hyp}{pdfversion=1.5}%
7891     \fi
7892   \fi
7893   \ifHy@setpdfversion
7894     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7895   \else
7896     \Hy@pdfminorversion=\Hy@pdfversion\relax
7897   \fi
7898   \PackageInfo{hyperref}{%
7899     \expandafter\string\Hy@pdfminorversion
7900     :=\number\Hy@pdfversion\space

```

```

7901 }%
7902 \fi
7903 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7904 }
7905 \Hy@DisableOption{pdfversion}%
7906 \ifHy@ocgcolorlinks
7907 \immediate\pdfobj{%
7908 <<%
7909 /Type/OCG%
7910 /Name(View)%
7911 /Usage<<%
7912 /Print<<%
7913 /PrintState/OFF%
7914 >>%
7915 /View<<%
7916 /ViewState/ON%
7917 >>%
7918 >>%
7919 >>%
7920 }%
7921 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7922 \immediate\pdfobj{%
7923 <<%
7924 /Type/OCG%
7925 /Name(Print)%
7926 /Usage<<%
7927 /Print<<%
7928 /PrintState/ON%
7929 >>%
7930 /View<<%
7931 /ViewState/OFF%
7932 >>%
7933 >>%
7934 >>%
7935 }%
7936 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7937 \immediate\pdfobj{%
7938 [%
7939 \OBJ@OCG@view\space\OBJ@OCG@print
7940 ]%
7941 }%
7942 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7943 \pdfcatalog{%
7944 /OCProperties<<%
7945 /OCGs \OBJ@OCGs
7946 /D<<%
7947 /OFF[\OBJ@OCG@print]%
7948 /AS[%
7949 <<%
7950 /Event/View%
7951 /OCGs \OBJ@OCGs
7952 /Category[/View]%
7953 >>%
7954 <<%
7955 /Event/Print%
7956 /OCGs \OBJ@OCGs
7957 /Category[/Print]%

```

```

7958     >>%
7959     <<%
7960     /Event/Export%
7961     /OCGs \OBJ@OCGs
7962     /Category[/Print]%
7963     >>%
7964     ]%
7965     >>%
7966     >>%
7967     }%
7968     \beginpgroup
7969     \edef\x{\endpgroup
7970     \pdfpageresources{%
7971     /Properties<<%
7972     /OCView \OBJ@OCG@view
7973     /OCPrint \OBJ@OCG@print
7974     >>%
7975     }%
7976     }%
7977     \x
7978     \Hy@AtBeginDocument{%
7979     \def\Hy@colorlink#1{%
7980     \beginpgroup
7981     \ifHy@ocgcolorlinks
7982     \def\Hy@ocgcolor{#1}%
7983     \setbox0=\color@hbox
7984     \else
7985     \HyColor@UseColor#1%
7986     \fi
7987     }%
7988     \def\Hy@endcolorlink{%
7989     \ifHy@ocgcolorlinks
7990     \color@endbox
7991     \mbox{%
7992     \pdfliteral page{/OC/OCPrint BDC}%
7993     \rlap{\copy0}%
7994     \pdfliteral page{EMC/OC/OCView BDC}%
7995     \beginpgroup
7996     \expandafter\HyColor@UseColor\Hy@ocgcolor
7997     \box0 %
7998     \endpgroup
7999     \pdfliteral page{EMC}%
8000     }%
8001     \fi
8002     \endpgroup
8003     }%
8004     }%
8005     \else
8006     \Hy@DisableOption{ocgcolorlinks}%
8007     \fi

```

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

```

8008 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8009 \ifx\pdfstartlink\@undefined% less than version 14
8010 \let\pdfstartlink\pdfannotlink
8011 \let\pdfinkmargin\@tempdima
8012 \let\pdfxform\pdfform
8013 \let\pdflastxform\pdflastform

```

```

8014 \let\pdfrefxform\pdfrefform
8015 \else
8016 \pdflinkmargin1pt %
8017 \fi

```

First set up the default linking

```
8018 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8019 \def\new@pdfink#1{%
8020 \Hy@SaveLastskip
8021 \Hy@VerboseAnchor{#1}%
8022 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8023 \Hy@DestName\Hy@pstringDest\@pdfview
8024 \Hy@RestoreLastskip
8025 }
8026 \let\pdf@endanchor\@empty

```

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

```

8027 \def\Hy@DestName#1#2{%
8028 \pdfdest name{#1}#2\relax
8029 }

```

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.

```

8030 \providecommand*\@pdfborder{0 0 1}
8031 \providecommand*\@pdfborderstyle{}
8032 \def\Hy@undefinedname{UNDEFINED}
8033 \def\find@pdfink#1#2{%
8034 \leavevmode
8035 \protected@edef\Hy@testname{#2}%
8036 \ifx\Hy@testname\@empty
8037 \Hy@Warning{%
8038 Empty destination name,\MessageBreak
8039 using '\Hy@undefinedname'%
8040 }%
8041 \let\Hy@testname\Hy@undefinedname
8042 \else
8043 \Hy@pstringdef\Hy@testname{%
8044 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8045 }%
8046 \fi
8047 \Hy@StartlinkName{%
8048 \ifHy@pdfa /F 4\fi
8049 \Hy@setpdfborder
8050 \ifx\@pdfhighlight\@empty
8051 \else
8052 /H\@pdfhighlight
8053 \fi
8054 \ifx\CurrentBorderColor\relax
8055 \else
8056 /C[\CurrentBorderColor]%
8057 \fi
8058 }\Hy@testname
8059 \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

8060 }
8061 \def\Hy@StartlinkName#1#2{%
8062   \pdfstartlink attr{#1}goto name{#2}\relax
8063 }
8064 \def\close@pdfink{%
8065   \Hy@endcolorlink
8066   \Hy@VerboseLinkStop
8067   \pdfendlink
8068 }
8069 \def\hyper@anchor#1{%
8070   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8071 }
8072 \def\hyper@anchorstart#1{%
8073   \new@pdfink{#1}%
8074   \Hy@activeanchortrue
8075 }
8076 \def\hyper@anchorend{%
8077   \pdf@endanchor
8078   \Hy@activeanchorfalse
8079 }
8080 \def\hyper@linkstart#1#2{%
8081   \Hy@VerboseLinkStart{#1}{#2}%
8082   \ltx@ifundefined{@#1bordercolor}{%
8083     \let\CurrentBorderColor\relax
8084   }{%
8085     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8086   }%
8087   \find@pdfink{#1}{#2}%
8088 }
8089 \def\hyper@linkend{\close@pdfink}
8090 \def\hyper@link#1#2#3{%
8091   \Hy@VerboseLinkStart{#1}{#2}%
8092   \ltx@ifundefined{@#1bordercolor}{%
8093     \let\CurrentBorderColor\relax
8094   }{%
8095     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8096   }%
8097   \find@pdfink{#1}{#2}#3%
8098   \close@pdfink
8099 }
8100 \let\CurrentBorderColor\@linkbordercolor
8101 \def\hyper@linkurl#1#2{%
8102   \begingroup
8103     \Hy@pstringdef\Hy@pstringURI{#2}%
8104     \hyper@chars
8105     \leavevmode
8106     \pdfstartlink
8107       attr{%
8108         \Hy@setpdfborder
8109         \ifx\@pdfhighlight\@empty
8110           \else
8111             /H\@pdfhighlight
8112           \fi
8113         \ifx\@urlbordercolor\relax
8114           \else
8115             /C[\@urlbordercolor]%
8116         \fi

```



```

8117     }%
8118     user{%
8119         /Subtype/Link%
8120         \ifHy@pdfa /F 4\fi
8121         /A<<%
8122         /Type/Action%
8123         /S/URI%
8124         /URI(\Hy@pstringURI)%
8125         >>%
8126     }%
8127     \relax
8128     \Hy@colorlink\@urlcolor#1%
8129     \close@pdflink
8130 \endgroup
8131 }
8132 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8133 \begingroup
8134   \Hy@pstringdef\Hy@pstringF{#2}%
8135   \Hy@pstringdef\Hy@pstringD{#3}%
8136   \leavevmode
8137   \pdfstartlink
8138   attr{%
8139     \Hy@setpdfborder
8140     \ifx\@pdfhighlight\@empty
8141     \else
8142       /H\@pdfhighlight
8143     \fi
8144     \ifx\@filebordercolor\relax
8145     \else
8146       /C[\@filebordercolor]%
8147     \fi
8148   }%
8149   user {%
8150     /Subtype/Link%
8151     \ifHy@pdfa /F 4\fi
8152     /A<<%
8153     /F(\Hy@pstringF)%
8154     /S/GoToR%
8155     \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}

```

```

8156     \ifx\#3\%
8157     /D[0 \@pdfstartview]%
8158     \else
8159     /D(\Hy@pstringD)%
8160     \fi
8161     >>%
8162   }%

```

```

8163 \relax
8164 \Hy@colorlink\@filecolor#1%
8165 \close@pdflink
8166 \endgroup
8167 }
8168 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
8169 \begingroup
8170 \Hy@pstringdef\Hy@pstringF{#1}%
8171 \Hy@pstringdef\Hy@pstringP{#3}%
8172 \leavevmode
8173 \pdfstartlink
8174 attr{%
8175 \Hy@setpdfborder
8176 \ifx\@pdfhighlight\@empty
8177 \else
8178 /H\@pdfhighlight
8179 \fi
8180 \ifx\@runbordercolor\relax
8181 \else
8182 /C[\@runbordercolor]%
8183 \fi
8184 }%
8185 user {%
8186 /Subtype/Link%
8187 \ifHy@pdfa /F 4\fi
8188 /A<<%
8189 /F(\Hy@pstringF)%
8190 /S/Launch%
8191 \Hy@SetNewWindow
8192 \ifx\|#3\| %
8193 \else
8194 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8195 \fi
8196 >>%
8197 }%
8198 \relax
8199 \Hy@colorlink\@runcolor#2%
8200 \close@pdflink
8201 \endgroup
8202 }

```

\@pdfproducer

```

8203 \ifx\@pdfproducer\relax
8204 \begingroup\expandafter\expandafter\expandafter\endgroup
8205 \expandafter\ifx\csname luatexversion\endcsname\relax
8206 \def\@pdfproducer{pdfTeX}%
8207 \ifx\eTeXversion\@undefined
8208 \else
8209 \ifx\eTeXversion\relax
8210 \else
8211 \ifnum\eTeXversion>0 %
8212 \def\@pdfproducer{pdfTeX}%
8213 \fi
8214 \fi
8215 \fi
8216 \ifx\pdfTeXversion\@undefined
8217 \else

```

```

8218 \ifnum\pdfTeXversion<100 %
8219 \edef\@pdfproducer{%
8220 \@pdfproducer
8221 \the\pdfTeXversion.\pdfTeXrevision
8222 }%
8223 \else
8224 \ifnum\pdfTeXversion<130 %
8225 \edef\@pdfproducer{%
8226 \@pdfproducer-%
8227 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8228 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8229 \pdfTeXrevision
8230 }%
8231 \else
8232 \ifnum\pdfTeXversion<140 %
8233 \else
8234 \def\@pdfproducer{pdfTeX}%
8235 \fi
8236 \edef\@pdfproducer{%
8237 \@pdfproducer-%
8238 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8239 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8240 \pdfTeXrevision
8241 }%
8242 \fi
8243 \fi
8244 \fi
8245 \else
8246 \begingroup
8247 \count@=\luaTeXversion
8248 \divide\count@ by 100 %
8249 \edef\x{\the\count@}%
8250 \count@=-\x\relax
8251 \multiply\count@ by 100 %
8252 \advance\count@ by \luaTeXversion
8253 \edef\x{\endgroup
8254 \def\noexpand\@pdfproducer{%
8255 LuaTeX-\x.\the\count@.\luaTeXrevision
8256 }%
8257 }%
8258 \x
8259 \fi
8260 \fi

```

\PDF@SetupDox

```

8261 \def\PDF@SetupDoc{%
8262 \ifx\@pdfpagescrop\@empty
8263 \else
8264 \edef\process@me{%
8265 \pdfpagesattr={%
8266 /CropBox[\@pdfpagescrop]%
8267 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8268 \else
8269 ^^J\the\pdfpagesattr
8270 \fi
8271 }%
8272 }%

```

```

8273 \process@me
8274 \fi
8275 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8276 \pdfcatalog{%
8277 /PageMode/\@pdfpagemode
8278 \ifx\@baseurl\@empty
8279 \else
8280 /URI<</Base(\Hy@pstringB)>>%
8281 \fi
8282 }%
8283 \ifx\@pdfstartpage\@empty
8284 \else
8285 \ifx\@pdfstartview\@empty
8286 \else
8287 openaction goto page\@pdfstartpage{\@pdfstartview}%
8288 \fi
8289 \fi
8290 \edef\Hy@temp{%
8291 \ifHy@toolbar\else /HideToolbar true\fi
8292 \ifHy@menubar\else /HideMenubar true\fi
8293 \ifHy>windowui\else /HideWindowUI true\fi
8294 \ifHy@fitwindow /FitWindow true\fi
8295 \ifHy@centerwindow /CenterWindow true\fi
8296 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8297 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8298 \Hy@UseNameKey{Direction}\@pdfdirection
8299 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8300 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8301 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8302 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8303 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8304 \Hy@UseNameKey{Duplex}\@pdfduplex
8305 \ifx\@pdfpicktraybypdfsize\@empty
8306 \else
8307 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8308 \fi
8309 \ifx\@pdfprintpagerange\@empty
8310 \else
8311 /PrintPageRange[\@pdfprintpagerange]%
8312 \fi
8313 \ifx\@pdfnumcopies\@empty
8314 \else
8315 /NumCopies \@pdfnumcopies
8316 \fi
8317 }%
8318 \pdfcatalog{%
8319 \ifx\Hy@temp\@empty
8320 \else
8321 /ViewerPreferences<<\Hy@temp>>%
8322 \fi
8323 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8324 \ifx\@pdflang\@empty
8325 \else
8326 /Lang(\@pdflang)%
8327 \fi
8328 }%
8329 }

```

\PDF@FinishDoc

```
8330 \def\PDF@FinishDoc{%
8331   \Hy@UseMaketitleInfos
8332   \HyInfo@GenerateAddons
8333   \pdfinfo{%
8334     /Author(\@pdfauthor)%
8335     /Title(\@pdftitle)%
8336     /Subject(\@pdfsubject)%
8337     /Creator(\@pdfcreator)%
8338     \ifx\@pdfcreationdate\@empty
8339     \else
8340       /CreationDate(\@pdfcreationdate)%
8341     \fi
8342     \ifx\@pdfmoddate\@empty
8343     \else
8344       /ModDate(\@pdfmoddate)%
8345     \fi
8346     \ifx\@pdfproducer\relax
8347     \else
8348       /Producer(\@pdfproducer)%
8349     \fi
8350     /Keywords(\@pdfkeywords)%
8351     \ifx\@pdftrapped\@empty
8352     \else
8353       /Trapped/\@pdftrapped
8354     \fi
8355     \HyInfo@Addons
8356   }%
8357   \Hy@DisableOption{pdfauthor}%
8358   \Hy@DisableOption{pdftitle}%
8359   \Hy@DisableOption{pdfsubject}%
8360   \Hy@DisableOption{pdfcreator}%
8361   \Hy@DisableOption{pdfcreationdate}%
8362   \Hy@DisableOption{pdfmoddate}%
8363   \Hy@DisableOption{pdfproducer}%
8364   \Hy@DisableOption{pdfkeywords}%
8365   \Hy@DisableOption{pdftrapped}%
8366   \Hy@DisableOption{pdfinfo}%
8367 }
```

\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.

```
8368 \def\hyper@pagetransition{%
8369   \ifx\@pdfpagetransition\relax
8370   \else
8371     \expandafter\Hy@RemoveTransPageAttr
8372     \the\pdfpageattr^^J/Trans{}}>>\END
8373   \ifx\@pdfpagetransition\@empty
8374   \else
8375     \edef\@processme{%
8376       \global\pdfpageattr{%
8377         \the\pdfpageattr
8378         ^^J/Trans << /S /\@pdfpagetransition\space >>%
8379       }%
8380     }%
8381     \@processme
```

```

8382   \fi
8383   \fi
8384 }

```

`\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.

```

8385 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8386   \ifx\#2\%
8387     \global\pdfpageattr{#1}%
8388   \else
8389     \Hy@RemoveTransPageAttr#1#4\END
8390   \fi
8391 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

8392 \def\hyper@pageduration{%
8393   \ifx\@pdfpageduration\relax
8394   \else
8395     \expandafter
8396     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8397     \ifx\@pdfpageduration\@empty
8398     \else
8399       \edef\@processme{%
8400         \global\pdfpageattr{%
8401           \the\pdfpageattr
8402           ^^J/Dur \@pdfpageduration\space
8403         }%
8404       }%
8405       \@processme
8406     \fi
8407   \fi
8408 }

```

`\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.

```

8409 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8410   \ifx\#2\%
8411     \global\pdfpageattr{#1}%
8412   \else
8413     \Hy@RemoveDurPageAttr#1#4\END
8414   \fi
8415 }

```

`\hyper@pagehidden` The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First previous `/Hid` entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

8416 \def\hyper@pagehidden{%
8417   \ifHy@useHidKey
8418   \expandafter
8419   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{ } \END

```

```

8420 \ifHy@pdfpagehidden
8421 \edef\@processme{%
8422 \global\pdfpageattr{%
8423 \the\pdfpageattr
8424 ^^J/Hid true % SPACE
8425 }%
8426 }%
8427 \@processme
8428 \fi
8429 \fi
8430 }

```

`\Hy@RemoveHidPageAttr` Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

8431 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8432 \ifx\#2\%
8433 \global\pdfpageattr{#1}%
8434 \else
8435 \Hy@RemoveHidPageAttr#1#4\END
8436 \fi
8437 }

8438 \g@addto@macro\Hy@EveryPageHook{%
8439 \hyper@pagetransition
8440 \hyper@pageduration
8441 \hyper@pagehidden
8442 }

```

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

```

8443 </pdfTeX>
8444 <*pdfTeX | xetex>
8445 \Hy@AtBeginDocument{%
8446 \ifHy@setpagesize
8447 \expandafter\@firstofone
8448 \else
8449 \expandafter\@gobble
8450 \fi
8451 {%
8452 \@ifclassloaded{seminar}{%
8453 <*pdfTeX>
8454 \setlength{\pdfhorigin}{1truein}%
8455 \setlength{\pdfvorigin}{1truein}%
8456 </pdfTeX>
8457 \ifportrait
8458 \ifdim\paperwidth=\z@
8459 \else
8460 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8461 \fi
8462 \ifdim\paperheight=\z@
8463 \else
8464 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8465 \fi
8466 \else
8467 \ifdim\paperheight=\z@
8468 \else

```

```

8469     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8470     \fi
8471     \ifdim\paperwidth=\z@
8472     \else
8473     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8474     \fi
8475     \fi
8476   }{%
8477     \ltx@ifundefined{stockwidth}{%
8478     \ifdim\paperwidth>\z@
8479     \setlength{\pdfpagewidth}{\paperwidth}%
8480     \fi
8481     \ifdim\paperheight>\z@
8482     \setlength{\pdfpageheight}{\paperheight}%
8483     \fi
8484   }{%
8485     \ifdim\stockwidth>\z@
8486     \setlength{\pdfpagewidth}{\stockwidth}%
8487     \fi
8488     \ifdim\stockheight>\z@
8489     \setlength{\pdfpageheight}{\stockheight}%
8490     \fi
8491   }%
8492 }%
8493 }%
8494 \Hy@DisableOption{setpagesize}%
8495 }
8496 </pdfTeX | xetex>
8497 <*pdfTeX>
8498 \def\Acrobatmenu#1#2{%
8499   \Hy@Acrobatmenu{#1}{#2}{%
8500     \pdfstartlink
8501     attr{%
8502       \Hy@setpdfborder
8503       \ifx\@pdfhighlight\@empty
8504       \else
8505       /H\@pdfhighlight
8506       \fi
8507       \ifx\@menubordercolor\relax
8508       \else
8509       /C[\@menubordercolor]%
8510       \fi
8511     }%
8512     user{%
8513       /Subtype/Link%
8514       \ifHy@pdfa /F 4\fi
8515       /A<<%
8516       /S/Named/N/#1%
8517       >>%
8518     }%
8519     \relax
8520     \Hy@colorlink\@menucolor#2%
8521     \close@pdfink
8522   }%
8523 }

```


46.2.1 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`.

```
8524 \def\Hy@FixNotFirstPage{%
8525   \gdef\Hy@FixNotFirstPage{%
8526     \setbox\AtBeginShipoutBox=\hbox{%
8527       \copy\AtBeginShipoutBox
8528     }%
8529   }%
8530 }
8531 \AtBeginShipout{\Hy@FixNotFirstPage}
8532 \</pdfTeX>
```

46.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (`\`), and if it looks like a URL name it may cause problems.

```
8533 \<*hypertex>
8534 \providecommand*{\XR@ext}{dvi}
8535 \def\PDF@FinishDoc{}
8536 \def\PDF@SetupDoc{%
```

```

8537 \ifx\@baseurl\@empty
8538 \else
8539 \special{html:<base href="\@baseurl">}%
8540 \fi
8541 }
8542 \def\hyper@anchor#1{%
8543 \Hy@SaveLastskip
8544 \Hy@VerboseAnchor{#1}%
8545 \begingroup
8546 \let\protect=\string
8547 \hyper@chars
8548 \special{html:<a name=%
8549 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8550 \endgroup
8551 \Hy@activeanchortrue
8552 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8553 \special{html:</a>}%
8554 \Hy@activeanchorfalse
8555 \Hy@RestoreLastskip
8556 }
8557 \def\hyper@anchorstart#1{%
8558 \Hy@SaveLastskip
8559 \Hy@VerboseAnchor{#1}%
8560 \begingroup
8561 \hyper@chars
8562 \special{html:<a name=%
8563 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8564 \endgroup
8565 \Hy@activeanchortrue
8566 }
8567 \def\hyper@anchorend{%
8568 \special{html:</a>}%
8569 \Hy@activeanchorfalse
8570 \Hy@RestoreLastskip
8571 }
8572 \def\@urltype{url}
8573 \def\hyper@linkstart#1#2{%
8574 \Hy@VerboseLinkStart{#1}{#2}%
8575 \expandafter\Hy@colorlink\csname @#1color\endcsname
8576 \def\Hy@tempa{#1}%
8577 \ifx\Hy@tempa\@urltype
8578 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8579 \else
8580 \begingroup
8581 \hyper@chars
8582 \special{html:<a href=%
8583 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
8584 \endgroup
8585 \fi
8586 }
8587 \def\hyper@linkend{%
8588 \special{html:</a>}%
8589 \Hy@endcolorlink
8590 }
8591 \def\hyper@linkfile#1#2#3{%
8592 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8593 }

```

```
8594 \def\hyper@linkurl#1#2{%
```

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

```
8595 \leavevmode
8596 \ifHy@raiselinks
8597 \setbox\@tempboxa=\color@hbox #1\color@endbox
8598 \@linkdim\dp\@tempboxa
8599 \lower\@linkdim\hbox{%
8600 \hyper@chars
8601 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8602 }%
8603 \Hy@colorlink\@urlcolor#1%
8604 \@linkdim\ht\@tempboxa
```

Because of the interaction with the `dvi` processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new `dvi`s (Jan 1997).

```
8605 \advance\@linkdim by -6.5\p@
8606 \raise\@linkdim\hbox{\special{html:</a>}}%
8607 \Hy@endcolorlink
8608 \else
8609 \begingroup
8610 \hyper@chars
8611 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8612 \Hy@colorlink\@urlcolor#1%
8613 \special{html:</a>}%
8614 \Hy@endcolorlink
8615 \endgroup
8616 \fi
8617 }
```

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

```
8618 \def\hyper@link#1#2#3{%
8619 \Hy@VerboseLinkStart{#1}{#2}%
8620 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
8621 }

8622 \def\hyper@image#1#2{%
8623 \begingroup
8624 \hyper@chars
8625 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8626 \endgroup
8627 }
8628 </hypertex>
8629 <*dviwindo>
```

46.4 dviwindo

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

This was more or less blindly copied from the `hypertex` `cfg`. For `dviwindo`, \LaTeX must specify the size of the active area for links. For some hooks this information is available

but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

8630 \providecommand*{\XR@ext}{dvi}
8631 \providecommand*{\wwwbrowser{c:\string\netscape\string\netscape}
8632 \def\hyper@anchor#1{%
8633   \Hy@SaveLastskip
8634   \Hy@VerboseAnchor{#1}%
8635   \begingroup
8636     \let\protect=\string
8637     \special{mark: #1}%
8638   \endgroup
8639   \Hy@activeanchortrue
8640   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8641   \Hy@activeanchorfalse
8642   \Hy@RestoreLastskip
8643 }
8644 \def\hyper@anchorstart#1{%
8645   \Hy@SaveLastskip
8646   \Hy@VerboseAnchor{#1}%
8647   \special{mark: #1}%
8648   \Hy@activeanchortrue
8649 }
8650 \def\hyper@anchorend{%
8651   \Hy@activeanchorfalse
8652   \Hy@RestoreLastskip
8653 }
8654 \def\hyper@linkstart#1#2{%
8655   \Hy@VerboseLinkStart{#1}{#2}%
8656   \expandafter\Hy@colorlink\csname @#1color\endcsname
8657   \special{button: %
8658     10000000 %
8659     \number\baselineskip\space
8660     #2%
8661   }%
8662 }
8663 \def\hyper@linkend{%
8664   \Hy@endcolorlink
8665 }
8666 \def\hyper@link#1#2#3{%
8667   \Hy@VerboseLinkStart{#1}{#2}%
8668   \setbox\@tempboxa=\color@hbox #3\color@endbox
8669   \leavevmode
8670   \ifHy@raiselinks
8671     \@linkdim\dp\@tempboxa
8672     \lower\@linkdim\hbox{%
8673       \special{button: %
8674         \number\wd\@tempboxa\space
8675         \number\ht\@tempboxa\space
8676         #2%
8677       }%
8678       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8679       \Hy@endcolorlink
8680     }%
8681     \@linkdim\ht\@tempboxa
8682     \advance\@linkdim by -6.5\p@
8683     \raise\@linkdim\hbox{}%
8684   \else

```

```

8685 \special{button: %
8686 \number\wd\@tempboxa\space
8687 \number\ht\@tempboxa\space
8688 #2%
8689 }%
8690 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8691 \Hy@endcolorlink
8692 \fi
8693 }
8694 \def\hyper@linkurl#1#2{%
8695 \begingroup
8696 \hyper@chars
8697 \leavevmode
8698 \setbox\@tempboxa=\color@hbox #1\color@endbox
8699 \ifHy@raiselinks
8700 \@linkdim\dp\@tempboxa
8701 \lower\@linkdim\hbox{%
8702 \special{button: %
8703 \number\wd\@tempboxa\space
8704 \number\ht\@tempboxa\space
8705 launch: \wwwbrowser\space
8706 #2%
8707 }%
8708 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8709 }%
8710 \@linkdim\ht\@tempboxa
8711 \advance\@linkdim by -6.5\p@
8712 \raise\@linkdim\hbox{}}%
8713 \else
8714 \special{button: %
8715 \number\wd\@tempboxa\space
8716 \number\ht\@tempboxa\space
8717 launch: \wwwbrowser\space
8718 #2%
8719 }%
8720 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8721 \fi
8722 \endgroup
8723 }
8724 \def\hyper@linkfile#1#2#3{%
8725 \begingroup
8726 \hyper@chars
8727 \leavevmode
8728 \setbox\@tempboxa=\color@hbox #1\color@endbox
8729 \ifHy@raiselinks
8730 \@linkdim\dp\@tempboxa
8731 \lower\@linkdim\hbox{%
8732 \special{button: %
8733 \number\wd\@tempboxa\space
8734 \number\ht\@tempboxa\space
8735 #3,%
8736 file: #2%
8737 }%
8738 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8739 }%
8740 \@linkdim\ht\@tempboxa
8741 \advance\@linkdim by -6.5\p@

```

```

8742     \raise\@linkdim\hbox{}%
8743   \else
8744     \special{button: %
8745       \number\wd\@tempboxa\space
8746       \number\ht\@tempboxa\space
8747       #3,%
8748       file: #2%
8749     }%
8750     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8751   \fi
8752 \endgroup
8753 }
8754 \ifx\@pdfproducer\relax
8755   \def\@pdfproducer{dviwindo + Distiller}%
8756 \fi
8757 \HyInfo@AddonUnsupportedtrue
8758 \def\PDF@FinishDoc{%
8759   \Hy@UseMaketitleInfos
8760   \HyInfo@TrappedUnsupported
8761   \special{PDF: Keywords \@pdfkeywords}%
8762   \special{PDF: Title \@pdftitle}%
8763   \special{PDF: Creator \@pdfcreator}%
8764   \ifx\@pdfcreationdate\@empty
8765   \else
8766     \special{PDF: CreationDate \@pdfcreationdate}%
8767   \fi
8768   \ifx\@pdfmoddate\@empty
8769   \else
8770     \special{PDF: ModDate \@pdfmoddate}%
8771   \fi
8772   \special{PDF: Author \@pdfauthor}%
8773   \ifx\@pdfproducer\relax
8774   \else
8775     \special{PDF: Producer \@pdfproducer}%
8776   \fi
8777   \special{PDF: Subject \@pdfsubject}%
8778   \Hy@DisableOption{pdfauthor}%
8779   \Hy@DisableOption{pdftitle}%
8780   \Hy@DisableOption{pdfsubject}%
8781   \Hy@DisableOption{pdfcreator}%
8782   \Hy@DisableOption{pdfcreationdate}%
8783   \Hy@DisableOption{pdfmoddate}%
8784   \Hy@DisableOption{pdfproducer}%
8785   \Hy@DisableOption{pdfkeywords}%
8786   \Hy@DisableOption{pdftrapped}%
8787   \Hy@DisableOption{pdfinfo}%
8788 }
8789 \def\PDF@SetupDoc{%
8790   \ifx\@baseurl\@empty
8791   \else
8792     \special{PDF: Base \@baseurl}%
8793   \fi
8794   \ifx\@pdfpagescrop\@empty\else
8795     \special{PDF: BBox \@pdfpagescrop}%
8796   \fi
8797   \def\Hy@temp{}%
8798   \ifx\@pdfstartpage\@empty

```

```

8799 \else
8800 \ifx\@pdfstartview\@empty
8801 \else
8802 \edef\Hy@temp{%
8803 ,Page=\@pdfstartpage
8804 ,View=\@pdfstartview
8805 }%
8806 \fi
8807 \fi
8808 \edef\Hy@temp{%
8809 \noexpand\pdfmark{%
8810 pdfmark=/DOCVIEW,%
8811 PageMode=/\@pdfpagemode
8812 \Hy@temp
8813 }%
8814 }%
8815 \Hy@temp
8816 \ifx\@pdfpagescrop\@empty
8817 \else
8818 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8819 \fi
8820 \edef\Hy@temp{%
8821 \ifHy@toolbar\else /HideToolbar true\fi
8822 \ifHy@menubar\else /HideMenubar true\fi
8823 \ifHy>windowui\else /HideWindowUI true\fi
8824 \ifHy@fitwindow /FitWindow true\fi
8825 \ifHy@centerwindow /CenterWindow true\fi
8826 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8827 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
8828 \Hy@UseNameKey{Direction}\@pdfdirection
8829 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8830 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8831 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8832 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8833 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8834 \Hy@UseNameKey{Duplex}\@pdfduplex
8835 \ifx\@pdfpicktraybypdfsize\@empty
8836 \else
8837 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8838 \fi
8839 \ifx\@pdfprintpagerange\@empty
8840 \else
8841 /PrintPageRange[\@pdfprintpagerange]%
8842 \fi
8843 \ifx\@pdfnumcopies\@empty
8844 \else
8845 /NumCopies \@pdfnumcopies
8846 \fi
8847 }%
8848 \pdfmark{pdfmark=/PUT,%
8849 Raw={%
8850 \string{Catalog\string}<<%
8851 \ifx\Hy@temp\@empty
8852 \else
8853 /ViewerPreferences<<\Hy@temp>>%
8854 \fi
8855 \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```

```

8856      \ifx\@pdflang\@empty
8857      \else
8858      /Lang(\@pdflang)%
8859      \fi
8860      >>%
8861      }%
8862      }%
8863      }
8864      \</dviwindo>
8865      \<*dvi*pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8866 \providecommand*{\XR@ext}{pdf}
8867 \Hy@setbreaklinks{true}
8868 \newsavebox{\pdfm@box}
8869 \def\@pdfm@mark#1{\special{pdf:#1}}
8870 \def\@pdfm@dest#1{%
8871   \Hy@SaveLastskip
8872   \Hy@VerboseAnchor{#1}%
8873   \begingroup
8874     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8875     \def\x{XYZ}%
8876     \ifx\x\@pdfview
8877       \def\x{XYZ @xpos @ypos null}%
8878     \else
8879       \def\x{FitH}%
8880       \ifx\x\@pdfview
8881         \def\x{FitH @ypos}%
8882       \else
8883         \def\x{FitBH}%
8884         \ifx\x\@pdfview
8885           \def\x{FitBH @ypos}%
8886         \else
8887           \def\x{FitV}%
8888           \ifx\x\@pdfview
8889             \def\x{FitV @xpos}%
8890           \else
8891             \def\x{FitBV}%
8892             \ifx\x\@pdfview
8893               \def\x{FitBV @xpos}%
8894             \else
8895               \def\x{Fit}%
8896               \ifx\x\@pdfview
8897                 \let\x\@pdfview
8898               \else
8899                 \def\x{FitB}%
8900                 \ifx\x\@pdfview
8901                   \let\x\@pdfview
8902                 \else
8903                   \def\x{FitR}%
8904                   \ifx\x\@pdfview
8905                     \Hy@Warning{'pdfview=FitR' is not supported}%
8906                     \def\x{XYZ @xpos @ypos null}%
8907                   \else
8908                     \@onelevel@sanitize\@pdfview

```



```

8909         \Hy@Warning{%
8910             Unknown value '\@pdfview' for pdfview%
8911         }%
8912         \def\x{XYZ @xpos @ypos null}%
8913     \fi
8914 \fi
8915 \fi
8916 \fi
8917 \fi
8918 \fi
8919 \fi
8920 \fi
8921 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8922 \endgroup
8923 \Hy@RestoreLastskip
8924 }
8925 \providecommand*\@pdfview{XYZ}
8926 \providecommand*\@pdfborder{0 0 1}
8927 \providecommand*\@pdfborderstyle{}
8928 \def\hyper@anchor#1{%
8929     \@pdfm@dest{#1}%
8930 }
8931 \def\hyper@anchorstart#1{%
8932     \Hy@activeanchortrue
8933     \@pdfm@dest{#1}%
8934 }
8935 \def\hyper@anchorend{%
8936     \Hy@activeanchorfalse
8937 }
8938 \newcounter{Hy@AnnotLevel}
8939 \ifHy@ocgcolorlinks
8940     \def\OBJ@OCG@view{@OCG@view}%
8941     \@pdfm@mark{%
8942         obj \OBJ@OCG@view <<%
8943         /Type/OCG%
8944         /Name(View)%
8945         /Usage<<%
8946         /Print<<%
8947         /PrintState/OFF%
8948         >>%
8949         /View<<%
8950         /ViewState/ON%
8951         >>%
8952         >>%
8953     }%
8954 }%
8955 \@pdfm@mark{close \OBJ@OCG@view}%
8956 \def\OBJ@OCG@print{@OCG@print}%
8957 \@pdfm@mark{%
8958     obj \OBJ@OCG@print <<%
8959     /Type/OCG%
8960     /Name(Print)%
8961     /Usage<<%
8962     /Print<<%
8963     /PrintState/ON%
8964     >>%
8965     /View<<%

```

```

8966      /ViewState/OFF%
8967      >>%
8968      >>%
8969      >>%
8970 }%
8971  \@pdfm@mark{close \OBJ@OCG@print}%
8972  \def\OBJ@OCGs{\@OCGs}%
8973  \@pdfm@mark{%
8974    obj \OBJ@OCGs [%
8975      \OBJ@OCG@view\space\OBJ@OCG@print
8976    ]%
8977  }%
8978  \@pdfm@mark{close \OBJ@OCGs}%
8979  \@pdfm@mark{%
8980    put @catalog <<%
8981      /OCProperties<<%
8982      /OCGs \OBJ@OCGs
8983      /D<<%
8984      /OFF[\OBJ@OCG@print]%
8985      /AS[%
8986        <<%
8987          /Event/View%
8988          /OCGs \OBJ@OCGs
8989          /Category[/View]%
8990        >>%
8991        <<%
8992          /Event/Print%
8993          /OCGs \OBJ@OCGs
8994          /Category[/Print]%
8995        >>%
8996        <<%
8997          /Event/Export%
8998          /OCGs \OBJ@OCGs
8999          /Category[/Print]%
9000        >>%
9001      ]%
9002    >>%
9003    >>%
9004    >>%
9005  }%
9006  \AtBeginShipout{%
9007    \setbox\AtBeginShipoutBox=\hbox{%
9008      \copy\AtBeginShipoutBox
9009      \@pdfm@mark{%
9010        put @resources <<%
9011          /Properties<<%
9012          /OCView \OBJ@OCG@view
9013          /OCPrint \OBJ@OCG@print
9014        >>%
9015        >>%
9016      }%
9017    }%
9018  }%
9019  \Hy@AtBeginDocument{%
9020    \def\Hy@colorlink#1{%
9021      \begingroup
9022      \ifHy@ocgcolorlinks

```

```

9023     \def\Hy@ocgcolor{#1}%
9024     \setbox0=\color@hbox
9025     \else
9026     \HyColor@UseColor#1%
9027     \fi
9028 }%
9029 \def\Hy@endcolorlink{%
9030 \ifHy@ocgcolorlinks
9031     \color@endbox
9032     \mbox{%
9033     \@pdfm@mark{content /OC/OCPrint BDC}%
9034     \rlap{\copy0}%
9035     \@pdfm@mark{content EMC/OC/OCView BDC}%
9036     \begingroup
9037     \expandafter\HyColor@UseColor\Hy@ocgcolor
9038     \box0 %
9039     \endgroup
9040     \@pdfm@mark{content EMC}%
9041     }%
9042     \fi
9043     \endgroup
9044 }%
9045 }%
9046 \else
9047 \Hy@DisableOption{ocgcolorlinks}%
9048 \fi

9049 \def\Hy@BeginAnnot#1{%
9050 \stepcounter{Hy@AnnotLevel}%
9051 \ifnum\value{Hy@AnnotLevel}=\@ne
9052     #1%
9053 \fi
9054 }
9055 \def\Hy@endAnnot{%
9056 \ifnum\value{Hy@AnnotLevel}=\@ne
9057     \Hy@endcolorlink
9058     \@pdfm@mark{eann}%
9059 \fi
9060 \addtocounter{Hy@AnnotLevel}\m@ne
9061 }

9062 \def\Hy@undefinedname{UNDEFINED}
9063 \def\hyper@linkstart#1#2{%
9064 \Hy@VerboseLinkStart{#1}{#2}%
9065 \Hy@BeginAnnot{%
9066     \protected@edef\Hy@testname{#2}%
9067     \ifx\Hy@testname\@empty
9068     \Hy@Warning{%
9069         Empty destination name,\MessageBreak
9070         using '\Hy@undefinedname'%
9071     }%
9072     \let\Hy@testname\Hy@undefinedname
9073 \else
9074     \Hy@pstringdef\Hy@testname{%
9075         \expandafter\HyperDestNameFilter\expandafter{%
9076             \Hy@testname
9077         }%
9078     }%
9079 \fi

```

```

9080 \pdfmark{
9081   bann<<
9082   /Type/Annot
9083   /Subtype/Link
9084   \ifHy@pdfa /F 4\fi
9085   \Hy@setpdfborder
9086   \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9087   \else
9088     /C[\csname @#1bordercolor\endcsname]
9089   \fi
9090   /A<<
9091   /S/GoTo
9092   /D(\Hy@testname)
9093   >>
9094   >>
9095 }
9096 \expandafter\Hy@colorlink\csname @#1color\endcsname
9097 }
9098 }
9099 \def\hyper@linkend{\Hy@endAnnot}%
9100 \def\hyper@link#1#2#3{
9101   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9102 }
9103 \def\hyper@linkfile#1#2#3{
9104   \leavevmode
9105   \Hy@BeginAnnot{
9106     \Hy@pstringdef\Hy@pstringF{#2}
9107     \Hy@pstringdef\Hy@pstringD{#3}
9108     \pdfmark{
9109       bann<<
9110       /Type/Annot
9111       /Subtype/Link
9112       \ifHy@pdfa /F 4\fi
9113       \Hy@setpdfborder
9114       \ifx\@filebordercolor\relax
9115       \else
9116         /C[\@filebordercolor]
9117       \fi
9118       /A<<
9119       /S/GoToR
9120       /F(\Hy@pstringF)
9121       /D\ifx\#3\[\[0 \pdfstartview\else(\Hy@pstringD)\fi
9122       \Hy@SetNewWindow
9123       >>
9124       >>
9125     }
9126     \Hy@colorlink\@filecolor
9127   }
9128   #1
9129   \Hy@endAnnot
9130 }
9131 \def\hyper@linkurl#1#2{
9132   \leavevmode
9133   \Hy@BeginAnnot{
9134     \Hy@pstringdef\Hy@pstringURI{#2}
9135     \pdfmark{
9136       bann<<

```

```

9137      /Type/Annot%
9138      /Subtype/Link%
9139      \ifHy@pdfa /F 4\fi
9140      \Hy@setpdfborder
9141      \ifx\@urlbordercolor\relax
9142      \else
9143      /C[\@urlbordercolor]%
9144      \fi
9145      /A<<%
9146      /S/URI%
9147      /URI(\Hy@pstringURI)%
9148      >>%
9149      >>%
9150      }%
9151      \Hy@colorlink\@urlcolor
9152      }%
9153      #1%
9154      \Hy@endAnnot
9155      }
9156      \def\Acrobatmenu#1#2{%
9157      \Hy@Acrobatmenu{#1}{#2}{%
9158      \Hy@BeginAnnot{%
9159      \@pdfm@mark{%
9160      bann<<%
9161      /Type/Annot%
9162      /Subtype/Link%
9163      \ifHy@pdfa /F 4\fi
9164      /A<<%
9165      /S/Named%
9166      /N/#1%
9167      >>%
9168      \Hy@setpdfborder
9169      \ifx\@menubordercolor\relax
9170      \relax
9171      /C[\@menubordercolor]%
9172      \fi
9173      >>%
9174      }%
9175      \Hy@colorlink\@menucolor
9176      }%
9177      #2%
9178      \Hy@endAnnot
9179      }%
9180      }
9181      \ifx\@pdfproducer\relax
9182      \def\@pdfproducer{dvipdfm}%

```

Detect Xe_TTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9183      \begingroup\expandafter\expandafter\expandafter\endgroup
9184      \expandafter\ifx\csname XeTeXversion\endcsname\relax
9185      \else
9186      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9187      \fi
9188      \fi
9189      \def\PDF@FinishDoc{%
9190      \Hy@UseMaketitleInfos
9191      \HyInfo@GenerateAddons
9192      \@pdfm@mark{%

```

```

9193 docinfo<<%
9194   /Title(\@pdftitle)%
9195   /Subject(\@pdfsubject)%
9196   /Creator(\@pdfcreator)%
9197   \ifx\@pdfcreationdate\@empty
9198   \else
9199     /CreationDate(\@pdfcreationdate)%
9200   \fi
9201   \ifx\@pdfmoddate\@empty
9202   \else
9203     /ModDate(\@pdfmoddate)%
9204   \fi
9205   /Author(\@pdfauthor)%
9206   \ifx\@pdfproducer\relax
9207   \else
9208     /Producer(\@pdfproducer)%
9209   \fi
9210   /Keywords(\@pdfkeywords)%
9211   \ifx\@pdftrapped\@empty
9212   \else
9213     /Trapped/\@pdftrapped
9214   \fi
9215   \HyInfo@Addons
9216   >>%
9217 }%
9218 \Hy@DisableOption{pdfauthor}%
9219 \Hy@DisableOption{pdftitle}%
9220 \Hy@DisableOption{pdfsubject}%
9221 \Hy@DisableOption{pdfcreator}%
9222 \Hy@DisableOption{pdfcreationdate}%
9223 \Hy@DisableOption{pdfmoddate}%
9224 \Hy@DisableOption{pdfproducer}%
9225 \Hy@DisableOption{pdfkeywords}%
9226 \Hy@DisableOption{pdftrapped}%
9227 \Hy@DisableOption{pdfinfo}%
9228 }

9229 \def\PDF@SetupDoc{%
9230   \edef\Hy@temp{%
9231     \ifHy@toolbar\else /HideToolbar true\fi
9232     \ifHy@menubar\else /HideMenubar true\fi
9233     \ifHy>windowui\else /HideWindowUI true\fi
9234     \ifHy@fitwindow /FitWindow true\fi
9235     \ifHy@centerwindow /CenterWindow true\fi
9236     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9237     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9238     \Hy@UseNameKey{Direction}\@pdfdirection
9239     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9240     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9241     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9242     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9243     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9244     \Hy@UseNameKey{Duplex}\@pdfduplex
9245     \ifx\@pdfpicktraybypdfsize\@empty
9246     \else
9247       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9248     \fi
9249     \ifx\@pdfprintpagerange\@empty

```

```

9250 \else
9251   /PrintPageRange[\@pdfprintpagerange]%
9252 \fi
9253 \ifx\@pdfnumcopies\@empty
9254 \else
9255   /NumCopies \@pdfnumcopies
9256 \fi
9257 }%
9258 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9259 \@pdfm@mark{%
9260   docview<<%
9261     \ifx\@pdfstartpage\@empty
9262     \else
9263       \ifx\@pdfstartview\@empty
9264       \else
9265         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9266       \fi
9267     \fi
9268     \ifx\@baseurl\@empty
9269     \else
9270       /URI<</Base(\Hy@pstringB)>>%
9271     \fi
9272     /PageMode/\@pdfpagemode
9273     \ifx\Hy@temp\@empty
9274     \else
9275       /ViewerPreferences<<\Hy@temp>>%
9276     \fi
9277     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9278     \ifx\@pdflang\@empty
9279     \else
9280       /Lang(\@pdflang)%
9281     \fi
9282   >>%
9283 }%
9284 \ifx\@pdfpagescrop\@empty
9285 \else
9286   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9287 \fi
9288 }
9289 </dvipdfm | xetex>

```

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

```

9290 <*dvipdfm>
9291 \AtBeginShipoutFirst{%
9292   \ifHy@setpagesize
9293     \begingroup
9294     \@ifundefined{stockwidth}{%
9295       \ifdim\paperwidth>\z@
9296       \ifdim\paperheight>\z@
9297         \special{papersize=\the\paperwidth,\the\paperheight}%
9298       \fi
9299     \fi
9300   }{%
9301     \ifdim\stockwidth>\z@
9302     \ifdim\stockheight>\z@
9303       \special{papersize=\the\stockwidth,\the\stockheight}%
9304     \fi

```

```

9305     \fi
9306   }%
9307 \endgroup
9308 \fi
9309 \Hy@DisableOption{setpagesize}%
9310 }
9311 </dvipdfm>

```

46.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

9312 <*vtexhtml>
9313 \providecommand*{\XR@ext}{htm}
9314 \RequirePackage{vtexhtml}
9315 \newif\if@Localurl
9316 \def\PDF@FinishDoc{}
9317 \def\PDF@SetupDoc{%
9318   \ifx\@baseurl\@empty
9319     \else
9320       \special{!direct <base href="\@baseurl">}%
9321     \fi
9322 }
9323 \def\@urltype{url}
9324 \def\hyper@link#1#2#3{%
9325   \Hy@VerboseLinkStart{#1}{#2}%
9326   \leavevmode
9327   \special{!direct <a href=%
9328     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9329   #3%
9330   \special{!direct </a>}%
9331 }
9332 \def\hyper@linkurl#1#2{%
9333   \begingroup
9334     \hyper@chars
9335     \leavevmode
9336     \MathBSuppress=1\relax
9337     \special{!direct <a href=%
9338       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9339     #1%
9340     \MathBSuppress=0\relax
9341     \special{!direct </a>}%
9342   \endgroup
9343 }
9344 \def\hyper@linkfile#1#2#3{%
9345   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
9346 }
9347 \def\hyper@linkstart#1#2{%
9348   \Hy@VerboseLinkStart{#1}{#2}%
9349   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
9350     \@Localurltrue
9351     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9352   \else
9353     \@Localurlfalse
9354   \begingroup
9355     \hyper@chars
9356     \special{!aref \HyperDestNameFilter{#2}}%

```



```

9357 \endgroup
9358 \fi
9359 }
9360 \def\hyper@linkend{%
9361 \if@Localurl
9362 \special{!endaref}%
9363 \else
9364 \special{!direct </a>}%
9365 \fi
9366 }
9367 \def\hyper@anchorstart#1{%
9368 \Hy@SaveLastskip
9369 \Hy@VerboseAnchor{#1}%
9370 \begingroup
9371 \hyper@chars
9372 \special{!aname #1}%
9373 \special{!direct <a name=%
9374 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9375 \endgroup
9376 \Hy@Activeanchortrue
9377 }
9378 \def\hyper@anchorend{%
9379 \special{!direct </a>}%
9380 \Hy@Activeanchorfalse
9381 \Hy@RestoreLastskip
9382 }
9383 \def\hyper@anchor#1{%
9384 \Hy@SaveLastskip
9385 \Hy@VerboseAnchor{#1}%
9386 \begingroup
9387 \let\protect=\string
9388 \hyper@chars
9389 \leavevmode
9390 \special{!aname #1}%
9391 \special{!direct <a name=%
9392 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9393 \endgroup
9394 \Hy@Activeanchortrue
9395 \bgroup\anchor@spot\egroup
9396 \special{!direct </a>}%
9397 \Hy@Activeanchorfalse
9398 \Hy@RestoreLastskip
9399 }
9400 \def\@Form[#1]{%
9401 \typeout{Sorry, TeXpider does not yet support FORMs}%
9402 }
9403 \def\@endForm{}
9404 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9405 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9406 }
9407 \def\@TextField[#1]#2{% parameters, label
9408 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9409 }
9410 \def\@CheckBox[#1]#2{% parameters, label
9411 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9412 }
9413 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

9414 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9415 }
9416 \def\@PushButton[#1]#2{% parameters, label
9417 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9418 }
9419 \def\@Reset[#1]#2{%
9420 \typeout{Sorry, TeXpider does not yet support FORMs}%
9421 }
9422 \def\@Submit[#1]#2{%
9423 \typeout{Sorry, TeXpider does not yet support FORMs}%
9424 }
9425 \</vtexhtml>
9426 \< *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.

```

9427 \ifx\mediaheight\@undefined
9428 \else
9429 \ifx\mediaheight\relax
9430 \else
9431 \ifHy@setpagesize
9432 \providecommand*\VTeXInitMediaSize{%
9433 \ltx@ifundefined{stockwidth}{%
9434 \ifdim\paperheight>0pt %
9435 \setlength\mediaheight\paperheight
9436 \fi
9437 \ifdim\paperheight>0pt %
9438 \setlength\mediawidth\paperwidth
9439 \fi
9440 }{%
9441 \ifdim\stockheight>0pt %
9442 \setlength\mediaheight\stockheight
9443 \fi
9444 \ifdim\stockwidth>0pt %
9445 \setlength\mediawidth\stockwidth
9446 \fi
9447 }%
9448 }%
9449 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9450 \fi
9451 \Hy@DisableOption{setpagesize}%
9452 \fi
9453 \fi

```

Older versions of VTeX require xyz in lower case.

```

9454 \providecommand*\@pdfview{xyz}
9455 \providecommand*\@pdfborder{0 0 1}
9456 \providecommand*\@pdfborderstyle{}
9457 \let\CurrentBorderColor\@linkbordercolor
9458 \def\hyper@anchor#1{%
9459 \Hy@SaveLastskip
9460 \Hy@VerboseAnchor{#1}%
9461 \begingroup
9462 \let\protect=\string
9463 \hyper@chars
9464 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9465 \endgroup

```

```

9466 \Hy@activeanchortrue
9467 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9468 \Hy@activeanchorfalse
9469 \Hy@RestoreLastskip
9470 }
9471 \def\hyper@anchorstart#1{%
9472 \Hy@SaveLastskip
9473 \Hy@VerboseAnchor{#1}%
9474 \begingroup
9475 \hyper@chars
9476 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9477 \endgroup
9478 \Hy@activeanchortrue
9479 }
9480 \def\hyper@anchorend{%
9481 \Hy@activeanchorfalse
9482 \Hy@RestoreLastskip
9483 }
9484 \def\@urltype{url}
9485 \def\Hy@undefinedname{UNDEFINED}
9486 \def\hyper@linkstart#1#2{%
9487 \Hy@VerboseLinkStart{#1}{#2}%
9488 \Hy@pstringdef\Hy@pstringURI{#2}%
9489 \expandafter\Hy@colorlink\csname @#1color\endcsname
9490 \ltx@ifundefined{@#1bordercolor}{%
9491 \let\CurrentBorderColor\relax
9492 }{%
9493 \edef\CurrentBorderColor{%
9494 \csname @#1bordercolor\endcsname
9495 }%
9496 }%
9497 \def\Hy@tempa{#1}%
9498 \ifx\Hy@tempa\@urltype
9499 \special{!%
9500 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9501 a=<%
9502 \ifHy@pdfa /F 4\fi
9503 \Hy@setpdfborder
9504 \ifx\CurrentBorderColor\relax
9505 \else
9506 /C [\CurrentBorderColor]%
9507 \fi
9508 >%
9509 }%
9510 \else
9511 \protected@edef\Hy@testname{#2}%
9512 \ifx\Hy@testname\@empty
9513 \Hy@Warning{%
9514 Empty destination name,\MessageBreak
9515 using '\Hy@undefinedname'%
9516 }%
9517 \let\Hy@testname\Hy@undefinedname
9518 \fi
9519 \special{!%
9520 aref \expandafter\HyperDestNameFilter
9521 \expandafter{\Hy@testname};%
9522 a=<%

```

```

9523     \ifHy@pdfa /F 4\fi
9524     \Hy@setpdfborder
9525     \ifx\CurrentBorderColor\relax
9526     \else
9527         /C [\CurrentBorderColor]%
9528     \fi
9529     >%
9530     }%
9531 \fi
9532 }
9533 \def\hyper@linkend{%
9534     \special{!endaref}%
9535     \Hy@endcolorlink
9536 }
9537 \def\hyper@linkfile#1#2#3{%
9538     \leavevmode
9539     \special{!%
9540         aref <%
9541         \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9542         f=#2>#3;%
9543         a=<%
9544         \ifHy@pdfa /F 4\fi
9545         \Hy@setpdfborder
9546         \ifx\@filebordercolor\relax
9547         \else
9548             /C [\@filebordercolor]%
9549         \fi
9550         >%
9551         }%
9552         \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9553         \special{!endaref}%
9554     }
9555 \def\hyper@linkurl#1#2{%
9556     \begingroup
9557     \Hy@pstringdef\Hy@pstringURI{#2}%
9558     \hyper@chars
9559     \leavevmode
9560     \special{!%
9561         aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9562         a=<%
9563         \ifHy@pdfa /F 4\fi
9564         \Hy@setpdfborder
9565         \ifx\@urlbordercolor\relax
9566         \else
9567             /C [\@urlbordercolor]%
9568         \fi
9569         >%
9570         }%
9571         \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9572         \special{!endaref}%
9573     \endgroup
9574 }
9575 \def\hyper@link#1#2#3{%
9576     \Hy@VerboseLinkStart{#1}{#2}%
9577     \ltx@ifundefined{@#1bordercolor}{%
9578         \let\CurrentBorderColor\relax
9579     }{%

```

```

9580 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9581 }%
9582 \leavevmode
9583 \protected@edef\Hy@testname{#2}%
9584 \ifx\Hy@testname\@empty
9585 \Hy@Warning{%
9586   Empty destination name,\MessageBreak
9587   using '\Hy@undefinedname'%
9588 }%
9589 \let\Hy@testname\Hy@undefinedname
9590 \fi
9591 \special{!%
9592   aref \expandafter\HyperDestNameFilter
9593   \expandafter{\Hy@testname};%
9594   a=<%
9595   \ifHy@pdfa /F 4\fi
9596   \Hy@setpdfborder
9597   \ifx\CurrentBorderColor\relax
9598   \else
9599     /C [\CurrentBorderColor]%
9600   \fi
9601   >%
9602 }%
9603 \expandafter
9604 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9605 \special{!endaref}%
9606 }
9607 \def\hyper@image#1#2{%
9608 \hyper@linkurl{#2}{#1}%
9609 }
9610 \def\@hyper@launch run:#1\#2#3{%
9611 \Hy@pstringdef\Hy@pstringF{#1}%
9612 \Hy@pstringdef\Hy@pstringP{#3}%
9613 \leavevmode
9614 \special{!aref %
9615   <u=%
9616     /Type/Action%
9617     /S/Launch%
9618     /F(\Hy@pstringF)%
9619     \Hy@SetNewWindow
9620     \ifx\#3\%
9621     \else
9622       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9623     \fi%
9624   >%
9625   a=<%
9626     \ifHy@pdfa /F 4\fi
9627     \Hy@setpdfborder
9628     \ifx\@runbordercolor\relax
9629     \else
9630       /C[\@runbordercolor]%
9631     \fi
9632   >%
9633 }%
9634 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9635 \special{!endaref}%
9636 }

```

```

9637 \def\Acrobatmenu#1#2{%
9638   \Hy@Acrobatmenu{#1}{#2}{%
9639     \special{!%
9640       aref <u=/S /Named /N /#1>;%
9641       a=<%
9642         \ifHy@pdfa /F 4\fi
9643         \Hy@setpdfborder
9644         \ifx\@menubordercolor\relax
9645         \else
9646           /C[\@menubordercolor]%
9647         \fi
9648       >%
9649     }%
9650   \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9651   \special{!endaref}%
9652 }%
9653 }

```

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

The code below makes sense for VT_EX 7.02 or later.

Please never use \@ifundefined{VTeXversion}{..}{..} *globally*.

```

9654 \ifnum\Hy@VTeXversion<702 %
9655 \else
9656   \def\hyper@pagetransition{%
9657     \ifx\@pdfpagetransition\relax
9658     \else
9659       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9660   \else
9661     \hvtex@parse@trans\@pdfpagetransition
9662   \fi
9663 \fi
9664 }%

```

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

Syntax of VT_EX \special{!trans <transition_effect>}:</p>
</div>
<div>

```

<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>

```

</div>
<div>
<p>Transition codes:</p>
</div>
<div>

```

9665 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}}%
9666 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}}%

```

</div>
<div>
<p>214</p>
</div>

```

9667 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}}%
9668 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}}%
9669 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}}%
9670 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}}%
9671 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%

```

Optional parameters:

```

9672 \def\hvtex@par@dimension{/Dm}%
9673 \def\hvtex@par@direction{/Di}%
9674 \def\hvtex@par@duration{/D}%
9675 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9676 \def\hvtex@gettoken{%
9677   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9678 }%

```

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

```

9679 \def\hvtex@gettoken@#1 #2\@nil{%
9680   \edef\hvtex@token{#1}%
9681   \edef\hvtex@buffer{#2}%
9682 }%
9683 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9684 \let\hvtex@trans@code\@empty
9685 \let\hvtex@param@dimension\@empty
9686 \let\hvtex@param@direction\@empty
9687 \let\hvtex@param@duration\@empty
9688 \let\hvtex@param@motion\@empty
9689 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9690 \hvtex@gettoken
9691 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9692   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9693   \else
9694     \hvtex@gettoken
9695   \fi
9696 \fi
9697 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9698 \hvtex@trans@params
9699 }%

```

Reentrant macro to parse optional parameters.

```

9700 \def\hvtex@trans@params{%
9701   \ifx\hvtex@buffer\@empty
9702   \else
9703     \hvtex@gettoken
9704     \let\hvtex@trans@par\hvtex@token
9705     \ifx\hvtex@buffer\@empty
9706     \else
9707       \hvtex@gettoken
9708       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```
9709      \let\hvtex@param@duration\hvtex@token
9710      \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9711      \expandafter\edef\expandafter\hvtex@param@motion
9712      \expandafter{\expandafter\@gobble\hvtex@token}%
9713      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9714      \expandafter\edef\expandafter\hvtex@param@dimension
9715      \expandafter{\expandafter\@gobble\hvtex@token}%
9716      \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).

```
9717      \let\hvtex@param@direction\hvtex@token
9718      \fi\fi\fi
9719      \fi
9720      \fi
9721      \ifx\hvtex@buffer\@empty
9722      \let\next\hvtex@produce@trans
9723      \else
9724      \let\next\hvtex@trans@params
9725      \fi
9726      \next
9727      }%
```

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

```
9728 \def\hvtex@produce@trans{%
9729 \let\vtex@trans@special\@empty
9730 \if S\hvtex@trans@code
9731 \edef\vtex@trans@special{\hvtex@trans@code
9732 \hvtex@param@dimension\hvtex@param@motion}%
9733 \else\if B\hvtex@trans@code
9734 \edef\vtex@trans@special{%
9735 \hvtex@trans@code\hvtex@param@dimension
9736 }%
9737 \else\if X\hvtex@trans@code
9738 \edef\vtex@trans@special{%
9739 \hvtex@trans@code\hvtex@param@motion
9740 }%
9741 \else\if W\hvtex@trans@code
9742 \edef\vtex@trans@special{%
9743 \hvtex@trans@code\hvtex@param@direction
9744 }%
9745 \else\if D\hvtex@trans@code
9746 \let\vtex@trans@special\hvtex@trans@code
9747 \else\if R\hvtex@trans@code
9748 \let\vtex@trans@special\hvtex@trans@code
9749 \else\if G\hvtex@trans@code
9750 \edef\vtex@trans@special{%
9751 \hvtex@trans@code\hvtex@param@direction
9752 }%
9753 \fi\fi\fi\fi\fi
9754 \ifx\vtex@trans@special\@empty
9755 \else
9756 \ifx\hvtex@param@duration\@empty
```



```

9757 \else
9758 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9759 \multiply\dimen@\@m
9760 \edef\vtex@trans@special{%
9761 \vtex@trans@special,\strip@pt\dimen@
9762 }%
9763 \fi

```

And all the mess is just for this.

```

9764 \special{!trans \vtex@trans@special}%
9765 \fi
9766 }%

9767 \def\hyper@pageduration{%
9768 \ifx\@pdfpageduration\relax
9769 \else
9770 \ifx\@pdfpageduration\@empty
9771 \special{!duration-}%
9772 \else
9773 \special{!duration \@pdfpageduration}%
9774 \fi
9775 \fi
9776 }%

9777 \def\hyper@pagehidden{%
9778 \ifHy@useHidKey
9779 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9780 \fi
9781 }%

9782 \g@addto@macro\Hy@EveryPageBoxHook{%
9783 \hyper@pagetransition
9784 \hyper@pageduration
9785 \hyper@pagehidden
9786 }%
9787 \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

```

9788 \ifx\@pdfproducer\relax
9789 \def\@pdfproducer{VTeX}%
9790 \ifnum\Hy@VTeXversion>\z@
9791 \count@\VTeXversion
9792 \divide\count@ 100 %
9793 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9794 \multiply\count@ -100 %
9795 \advance\count@\VTeXversion
9796 \edef\@pdfproducer{%
9797 \@pdfproducer
9798 .\ifnum\count@<10 0\fi\the\count@
9799 \ifx\VTeXOS\@undefined\else

```

```

9800 \ifnum\VTexOS>0 %
9801 \ifnum\VTexOS<6 %
9802 \space(
9803 \ifcase\VTexOS
9804 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9805 \fi
9806 )%
9807 \fi
9808 \fi
9809 \fi
9810 ,\space
9811 \ifnum\OpMode=\@ne PDF\else PS\fi
9812 \space backend%
9813 \ifx\gexmode\@undefined\else
9814 \ifnum\gexmode>\z@\space with GeX\fi
9815 \fi
9816 }%
9817 \fi
9818 \fi

```

Current !pdfinfo key syntax:

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

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

```

9819 \def\PDF@SetupDoc{%
9820 \ifx\@pdfpagescrop\@empty
9821 \else
9822 \special{!pdfinfo b=<\@pdfpagescrop>}%
9823 \fi
9824 \ifx\@pdfstartpage\@empty
9825 \else
9826 \ifx\@pdfstartview\@empty
9827 \else
9828 \special{!onopen Page\@pdfstartpage}%
9829 \fi
9830 \fi
9831 \special{!pdfinfo p=</\@pdfpagemode>}%
9832 \ifx\@baseurl\@empty
9833 \else
9834 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9835 \fi
9836 \special{!pdfinfo v=<<<%
9837 \ifHy@toolbar\else /HideToolbar true\fi
9838 \ifHy@menubar\else /HideMenubar true\fi
9839 \ifHy>windowui\else /HideWindowUI true\fi
9840 \ifHy@fitwindow /FitWindow true\fi
9841 \ifHy@centerwindow /CenterWindow true\fi

```

```

9842 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9843 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9844 \Hy@UseNameKey{Direction}\@pdfdirection
9845 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9846 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9847 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9848 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9849 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9850 \Hy@UseNameKey{Duplex}\@pdfduplex
9851 \ifx\@pdfpicktraybypdfsize\@empty
9852 \else
9853 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9854 \fi
9855 \ifx\@pdfprintpagerange\@empty
9856 \else
9857 /PrintPageRange[\@pdfprintpagerange]%
9858 \fi
9859 \ifx\@pdfnumcopies\@empty
9860 \else
9861 /NumCopies \@pdfnumcopies
9862 \fi
9863 >>>}%
9864 \ifx\@pdfpagelayout\@empty
9865 \else
9866 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9867 \fi
9868 }%
9869 \HyInfo@AddonUnsupportedtrue
9870 \def\PDF@FinishDoc{%
9871 \Hy@UseMaketitleInfos
9872 \HyInfo@TrappedUnsupported
9873 \special{!pdfinfo a=<\@pdfauthor>}%
9874 \special{!pdfinfo t=<\@pdftitle>}%
9875 \special{!pdfinfo s=<\@pdfsubject>}%
9876 \special{!pdfinfo c=<\@pdfcreator>}%
9877 \ifx\@pdfproducer\relax
9878 \else
9879 \special{!pdfinfo r=<\@pdfproducer>}%
9880 \fi
9881 \special{!pdfinfo k=<\@pdfkeywords>}%
9882 \Hy@DisableOption{pdfauthor}%
9883 \Hy@DisableOption{pdftitle}%
9884 \Hy@DisableOption{pdfsubject}%
9885 \Hy@DisableOption{pdfcreator}%
9886 \Hy@DisableOption{pdfcreationdate}%
9887 \Hy@DisableOption{pdfmoddate}%
9888 \Hy@DisableOption{pdfproducer}%
9889 \Hy@DisableOption{pdfkeywords}%
9890 \Hy@DisableOption{pdftrapped}%
9891 \Hy@DisableOption{pdfinfo}%
9892 }
9893 </vtex>

```

46.7 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.

```
9894 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
9895 <package>\providecommand*{\Hy@DistillerDestFix}{%  
9896 <*pdfmark | dviwindo>  
9897 \def\Hy@DistillerDestFix{%  
9898   \begingroup  
9899   \let\x\literalps@out
```

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

```
9900   \ifnum \@ifundefined{OpMode}{0}{%  
9901     \@ifundefined{gexmode}{0}{%  
9902       \ifnum\gexmode>0 \OpMode\else 0\fi  
9903     }>1 %  
9904   \def\x##1{%  
9905     \immediate\special{!=##1}%  
9906   }%  
9907   \fi  
9908   \x{%  
9909     /product where{%  
9910       pop %  
9911       product(Distiller)search{%  
9912         pop pop pop %  
9913         version(.)search{%  
9914           exch pop exch pop%  
9915           (3011)eq{%  
9916             gsave %  
9917             newpath 0 0 moveto closepath clip%  
9918             /Courier findfont 10 scalefont setfont %  
9919             72 72 moveto(.).show %  
9920             grestore%  
9921           }if%  
9922         }{pop}ifelse%  
9923       }{pop}ifelse%  
9924     }if%  
9925   }%  
9926   \endgroup  
9927 }  
9928 </pdfmark | dviwindo>
```

46.8 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

```

9929 (*pdfmark)
9930 \Hy@breaklinks@unsupported
9931 \def\hyper@anchor#1{%
9932   \Hy@SaveLastskip
9933   \Hy@VerboseAnchor{#1}%
9934   \begingroup
9935     \pdfmark[\anchor@spot]{%
9936       pdfmark=/DEST,%
9937       linktype=anchor,%
9938       View=/\@pdfview \@pdfviewparams,%
9939       DestAnchor={#1}%
9940     }%
9941   \endgroup
9942   \Hy@RestoreLastskip
9943 }
9944 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
9945 \def\hyper@anchorstart#1{%
9946   \Hy@SaveLastskip
9947   \Hy@VerboseAnchor{#1}%
9948   \literalps@out{H.S}%
9949   \Hy@AllowHyphens
9950   \xdef\hyper@currentanchor{#1}%
9951   \Hy@activeanchortrue
9952 }
9953 \def\hyper@anchorend{%
9954   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9955   \pdfmark{%
9956     pdfmark=/DEST,%
9957     linktype=anchor,%
9958     View=/\@pdfview \@pdfviewparams,%
9959     DestAnchor=\hyper@currentanchor,%
9960   }%
9961   \Hy@activeanchorfalse
9962   \Hy@RestoreLastskip
9963 }
9964 \def\hyper@linkstart#1#2{%
9965   \Hy@VerboseLinkStart{#1}{#2}%
9966   \ifHy@breaklinks
9967     \else
9968     \leavevmode\hbox\bgroup
9969     \fi
9970     \expandafter\Hy@colorlink\csname @#1color\endcsname
9971     \literalps@out{H.S}%
9972     \Hy@AllowHyphens
9973     \xdef\hyper@currentanchor{#2}%
9974     \gdef\hyper@currentlinktype{#1}%
9975   }
9976 \def\hyper@linkend{%
9977   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9978   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%

```

```

9979 \let\Hy@tempcolor\relax
9980 }{%
9981 \edef\Hy@tempcolor{%
9982 \csname @\hyper@currentlinktype bordercolor\endcsname
9983 }%
9984 }%
9985 \pdfmark{%
9986 pdfmark=/ANN,%
9987 linktype=link,%
9988 Subtype=/Link,%
9989 PDFAFlags=4,%
9990 Dest=\hyper@currentanchor,%
9991 AcroHighlight=\@pdfhighlight,%
9992 Border=\@pdfborder,%
9993 BorderStyle=\@pdfborderstyle,%
9994 Color=\Hy@tempcolor,%
9995 Raw=H.B%
9996 }%
9997 \Hy@endcolorlink
9998 \ifHy@breaklinks
9999 \else
10000 \egroup
10001 \fi
10002 }

```

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.

```

10003 \begingroup
10004 \catcode'P=12 %
10005 \catcode'T=12 %
10006 \lowercase{\endgroup
10007 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
10008 }
10009 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10010 \def\hyper@pagetransition{%
10011 \ifx\@pdfpagetransition\relax
10012 \else
10013 \ifx\@pdfpagetransition\@empty
10014 % 1. Does an old entry have to be deleted?
10015 % 2. If 1=yes, how to delete?
10016 \else
10017 \pdfmark{%
10018 pdfmark=/PUT,%
10019 Raw={%
10020 \string{ThisPage\string}%
10021 <</Trans << /S /\@pdfpagetransition\space >> >>%
10022 }%
10023 }%
10024 \fi
10025 \fi
10026 }

```

\hyper@pageduration

```

10027 \def\hyper@pageduration{%

```

```

10028 \ifx\@pdfpageduration\relax
10029 \else
10030 \ifx\@pdfpageduration\@empty
10031 % 1. Does an old entry have to be deleted?
10032 % 2. If 1=yes, how to delete?
10033 \else
10034 \pdfmark{%
10035 pdfmark=/PUT,%
10036 Raw={%
10037 \string{ThisPage\string}%
10038 <</Dur \@pdfpageduration>>%
10039 }%
10040 }%
10041 \fi
10042 \fi
10043 }

```

\hyper@pagehidden

```

10044 \def\hyper@pagehidden{%
10045 \ifHy@useHidKey
10046 \pdfmark{%
10047 pdfmark=/PUT,%
10048 Raw={%
10049 \string{ThisPage\string}%
10050 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10051 }%
10052 }%
10053 \fi
10054 }

10055 \g@addto@macro\Hy@EveryPageBoxHook{%
10056 \hyper@pagetransition
10057 \hyper@pageduration
10058 \hyper@pagehidden
10059 }

10060 \def\hyper@image#1#2{%
10061 \hyper@linkurl{#2}{#1}%
10062 }
10063 \def\Hy@undefinedname{UNDEFINED}
10064 \def\hyper@link#1#2#3{%
10065 \Hy@VerboseLinkStart{#1}{#2}%
10066 \ltx@ifundefined{@#1bordercolor}{%
10067 \let\Hy@tempcolor\relax
10068 }{%
10069 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10070 }%
10071 \begingroup
10072 \protected@edef\Hy@testname{#2}%
10073 \ifx\Hy@testname\@empty
10074 \Hy@Warning{%
10075 Empty destination name,\MessageBreak
10076 using '\Hy@undefinedname'%
10077 }%
10078 \let\Hy@testname\Hy@undefinedname
10079 \fi
10080 \pdfmark[{#3}]{%
10081 Color=\Hy@tempcolor,%

```

```

10082     linktype={#1},%
10083     AcroHighlight=\@pdfhighlight,%
10084     Border=\@pdfborder,%
10085     BorderStyle=\@pdfborderstyle,%
10086     pdfmark=/ANN,%
10087     Subtype=/Link,%
10088     PDFAFlags=4,%
10089     Dest=\Hy@testname
10090   }%
10091 \endgroup
10092 }
10093 \newtoks\pdf@docset
10094 \def\PDF@FinishDoc{%
10095   \Hy@UseMaketitleInfos
10096   \HyInfo@GenerateAddons
10097   \let\Hy@temp\@empty
10098   \ifx\@pdfcreationdate\@empty
10099   \else
10100     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10101   \fi
10102   \ifx\@pdfmoddate\@empty
10103   \else
10104     \expandafter\def\expandafter\Hy@temp\expandafter{%
10105       \Hy@temp
10106       ModDate=\@pdfmoddate,%
10107     }%
10108   \fi
10109   \ifx\@pdfproducer\relax
10110   \else
10111     \expandafter\def\expandafter\Hy@temp\expandafter{%
10112       \Hy@temp
10113       Producer=\@pdfproducer,%
10114     }%
10115   \fi
10116   \expandafter
10117   \pdfmark\expandafter{%
10118     \Hy@temp
10119     pdfmark=/DOCINFO,%
10120     Title=\@pdftitle,%
10121     Subject=\@pdfsubject,%
10122     Creator=\@pdfcreator,%
10123     Author=\@pdfauthor,%
10124     Keywords=\@pdfkeywords,%
10125     Trapped=\@pdftrapped
10126   }%
10127   \ifx\HyInfo@Addons\@empty
10128   \else
10129     \pdfmark{%
10130       pdfmark=/DOCINFO,%
10131       Raw={\HyInfo@Addons}%
10132     }%
10133   \fi
10134   \Hy@DisableOption{pdfauthor}%
10135   \Hy@DisableOption{pdftitle}%
10136   \Hy@DisableOption{pdfsubject}%
10137   \Hy@DisableOption{pdfcreator}%
10138   \Hy@DisableOption{pdfcreationdate}%

```



```

10139 \Hy@DisableOption{pdfmoddate}%
10140 \Hy@DisableOption{pdfproducer}%
10141 \Hy@DisableOption{pdfkeywords}%
10142 \Hy@DisableOption{pdftrapped}%
10143 \Hy@DisableOption{pdfinfo}%
10144 }
10145 \def\PDF@SetupDoc{%
10146 \def\Hy@temp{%
10147 \ifx\@pdfstartpage\@empty
10148 \else
10149 \ifx\@pdfstartview\@empty
10150 \else
10151 \edef\Hy@temp{%
10152 ,Page=\@pdfstartpage
10153 ,View=\@pdfstartview
10154 }%
10155 \fi
10156 \fi
10157 \edef\Hy@temp{%
10158 \noexpand\pdfmark{%
10159 pdfmark=/DOCVIEW,%
10160 PageMode=/\@pdfpagemode
10161 \Hy@temp
10162 }%
10163 }%
10164 \Hy@temp
10165 \ifx\@pdfpagescrop\@empty
10166 \else
10167 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10168 \fi
10169 \edef\Hy@temp{%
10170 \ifHy@toolbar\else /HideToolbar true\fi
10171 \ifHy@menubar\else /HideMenubar true\fi
10172 \ifHy>windowui\else /HideWindowUI true\fi
10173 \ifHy@fitwindow /FitWindow true\fi
10174 \ifHy@centerwindow /CenterWindow true\fi
10175 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10176 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10177 \Hy@UseNameKey{Direction}\@pdfdirection
10178 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10179 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10180 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10181 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10182 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10183 \Hy@UseNameKey{Duplex}\@pdfduplex
10184 \ifx\@pdfpicktraybypdfsize\@empty
10185 \else
10186 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10187 \fi
10188 \ifx\@pdfprintpagerange\@empty
10189 \else
10190 /PrintPageRange\@pdfprintpagerange}%
10191 \fi
10192 \ifx\@pdfnumcopies\@empty
10193 \else
10194 /NumCopies \@pdfnumcopies
10195 \fi

```

```

10196 }%
10197 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10198 \pdfmark{%
10199 pdfmark=/PUT,%
10200 Raw={%
10201 \string{Catalog\string}<<%
10202 \ifx\Hy@temp\@empty
10203 \else
10204 /ViewerPreferences<<\Hy@temp>>%
10205 \fi
10206 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10207 \ifx\@pdflang\@empty
10208 \else
10209 /Lang(\@pdflang)%
10210 \fi
10211 \ifx\@baseurl\@empty
10212 \else
10213 /URI<</Base(\Hy@pstringB)>>%
10214 \fi
10215 >>%
10216 }%
10217 }%
10218 }
10219 </pdfmark>
10220 <*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.

```

10221 \newif\ifHy@pdfmarkerror
10222 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10223 \def\pdfmark@[#1]#2{%
10224 \Hy@pdfmarkerrorfalse
10225 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10226 \@processme
10227 \let\pdf@type\relax
10228 \setkeys{PDF}{#2}%
10229 \ifHy@pdfmarkerror
10230 \else
10231 \ifx\pdf@type\relax
10232 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10233 \ifx\#1\%
10234 \else
10235 \pdf@rect{#1}%
10236 \fi
10237 \else
10238 \ifx\#1\%
10239 \literalps@out{%
10240 [\the\pdf@toks\space\pdf@type\space pdfmark%
10241 }%
10242 \else
10243 \ltx@ifundefined{@\pdf@linktype color}{%
10244 \Hy@colorlink\@linkcolor
10245 }{%
10246 \expandafter\Hy@colorlink

```

```

10247             \csname @\pdf@linktype color\endcsname
10248         }%
10249         \pdf@rect{#1}%
10250         \literalps@out{%
10251             [\the\pdf@toks\space\pdf@type\space pdfmark%
10252         }%
10253         \Hy@endcolorlink
10254     \fi
10255 \fi
10256 \fi
10257 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (tobyth@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}

```

```

10258 \newsavebox{\pdf@box}
10259 \providecommand*{\Hy@setouterhbox}{\sbox}
10260 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10261 \def\Hy@DEST{/DEST}
10262 \def\pdf@rect#1{%
10263     \leavevmode
10264     \ifHy@breaklinks
10265         \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10266     \else
10267         \sbox\pdf@box{#1}%
10268     \fi
10269     \dimen@ \ht\pdf@box
10270     \ifdim\dp\pdf@box=\z@
10271         \literalps@out{H.S}%
10272     \else
10273         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10274     \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...).

```

10275 \ifHy@breaklinks
10276     \expandafter\Hy@breaklinksunhbox
10277 \else
10278     \expandafter\box
10279 \fi
10280 \pdf@box

```

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

```

```

10281 \ifdim\dimen@=\z@
10282     \literalps@out{H.R}%
10283 \else

```

```

10284 \raise\dimen@\hbox{\literalps@out{H.R}}}%
10285 \fi
10286 \ifx\pdf@type\Hy@DEST
10287 \else
10288 \pdf@addtoksx{H.B}%
10289 \fi
10290 }

```

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.

```

10291 \newtoks\pdf@toks
10292 \newtoks\pdf@defaulttoks
10293 \pdf@defaulttoks={}%
10294 \def\pdf@addtoks#1#2{%
10295 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10296 \@processme
10297 }
10298 \def\pdf@addtoksx#1{%
10299 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10300 \@processme
10301 }
10302 \def\PDFdefaults#1{%
10303 \pdf@defaulttoks={#1}%
10304 }

```

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

```

10305 % what is the type of pdfmark?
10306 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10307 % what is the link type?
10308 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10309 \def\pdf@linktype{link}
10310 % parameter is a stream of PDF
10311 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10312 % parameter is a name
10313 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10314 % parameter is a array
10315 \define@key{PDF}{Border}{%
10316 \edef\Hy@temp{#1}%
10317 \ifx\Hy@temp\@empty
10318 \else
10319 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10320 \fi
10321 }
10322 \let\Hy@BorderArrayPatch\@empty
10323 % parameter is a dictionary
10324 \define@key{PDF}{BorderStyle}{%
10325 \edef\Hy@temp{#1}%
10326 \ifx\Hy@temp\@empty
10327 \else
10328 \pdf@addtoks{<<#1>>}{BS}%
10329 \fi
10330 }
10331 % parameter is a array
10332 \define@key{PDF}{Color}{%
10333 \ifx\relax#1\relax
10334 \else
10335 \pdf@addtoks{[#1]}{Color}% hash-ok
10336 \fi

```

```

10337 }
10338 % parameter is a string
10339 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10340 % parameter is a integer
10341 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10342 % parameter is a array
10343 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10344 % parameter is a string
10345 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10346 % parameter is a string or file
10347 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10348 % parameter is a destination
10349 \define@key{PDF}{Dest}{%
10350   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10351   \ifx\Hy@pstringDest\@empty
10352     \Hy@pdfmarkerrortrue
10353     \Hy@Warning{Destination with empty name ignored}%
10354   \else
10355     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10356   \fi
10357 }
10358 \define@key{PDF}{DestAnchor}{%
10359   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10360   \ifx\Hy@pstringDest\@empty
10361     \Hy@pdfmarkerrortrue
10362     \Hy@Warning{Destination with empty name ignored}%
10363   \else
10364     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10365   \fi
10366 }
10367 % parameter is a string
10368 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10369 % parameter is a string
10370 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10371 % parameter is a int
10372 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10373 \define@key{PDF}{PDFAFlags}{%
10374   \ifHy@pdfa
10375     \pdf@addtoks{#1}{F}%
10376   \fi
10377 }
10378 % parameter is a name
10379 \define@key{PDF}{AcroHighlight}{%
10380   \begingroup
10381     \edef\x{#1}%
10382     \expandafter\endgroup\ifx\x\@empty
10383     \else
10384       \pdf@addtoks{#1}{H}%
10385     \fi
10386 }
10387 % parameter is a string
10388 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10389 % parameter is a string
10390 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10391 % parameter is a string
10392 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10393 % parameter is a string

```

```

10394 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10395 % parameter is a Boolean
10396 \define@key{PDF}{Open}{\pdf@addtoks{(#1)}{Open}}
10397 % parameter is a integer or name
10398 \define@key{PDF}{Page}{\pdf@addtoks{(#1)}{Page}}
10399 % parameter is a name
10400 \define@key{PDF}{PageMode}{\pdf@addtoks{(#1)}{PageMode}}
10401 % parameter is a string
10402 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10403 % parameter is a array
10404 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10405 % parameter is a integer
10406 \define@key{PDF}{SrcPg}{\pdf@addtoks{(#1)}{SrcPg}}
10407 % parameter is a name
10408 \define@key{PDF}{Subtype}{\pdf@addtoks{(#1)}{Subtype}}
10409 % parameter is a string
10410 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10411 % parameter is a string
10412 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10413 % parameter is a string
10414 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10415 % parameter is an array
10416 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10417 % parameter is a string
10418 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10419 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10420 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10421 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10422 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10423 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10424 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10425 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10426 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10427 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10428 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
10429 \define@key{PDF}{Trapped}{%
10430   \edef\Hy@temp{#1}%
10431   \ifx\Hy@temp\empty
10432     \else
10433       \pdf@addtoks{/#1}{Trapped}%
10434     \fi
10435 }
10436
10437 </pdfmarkbase>
10438 <*pdfmark>
10439 \def\Acrobatmenu#1#2{%
10440   \Hy@Acrobatmenu{#1}{#2}{%
10441     \pdfmark[{#2}]{%
10442       linktype=menu,%
10443       pdfmark=/ANN,%
10444       AcroHighlight=\pdfhighlight,%
10445       Border=\pdfborder,%
10446       BorderStyle=\pdfborderstyle,%
10447       Action={<< /Subtype /Named /N /#1 >>},%
10448       Subtype=/Link,%
10449       PDFANFlags=4%

```

```

10450 }%
10451 }%
10452 }

```

And now for some useful examples:

```

10453 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10454 \def\PDFNextPage@[#1]#2{%
10455   \pdfmark[{#2}]{%
10456     #1,%
10457     Border=\@pdfborder,%
10458     BorderStyle=\@pdfborderstyle,%
10459     Color=.2 .1 .5,%
10460     pdfmark=/ANN,%
10461     Subtype=/Link,%
10462     PDFAFlags=4,%
10463     Page=/Next%
10464   }%
10465 }
10466 \def\PDFPreviousPage{%
10467   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10468 }
10469 \def\PDFPreviousPage@[#1]#2{%
10470   \pdfmark[{#2}]{%
10471     #1,%
10472     Border=\@pdfborder,%
10473     BorderStyle=\@pdfborderstyle,%
10474     Color=.4 .4 .1,%
10475     pdfmark=/ANN,%
10476     Subtype=/Link,%
10477     PDFAFlags=4,%
10478     Page=/Prev%
10479   }%
10480 }
10481 \def\PDFOpen#1{%
10482   \pdfmark{#1,pdfmark=/DOCVIEW}%
10483 }

```

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

```

10484 \def\hyper@linkurl#1#2{%
10485   \begingroup
10486     \Hy@pstringdef\Hy@pstringURI{#2}%
10487     \hyper@chars
10488     \leavevmode
10489     \pdfmark[{#1}]{%
10490       pdfmark=/ANN,%
10491       linktype=url,%
10492       AcroHighlight=\@pdfhighlight,%
10493       Border=\@pdfborder,%
10494       BorderStyle=\@pdfborderstyle,%
10495       Color=\@urlbordercolor,%
10496       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10497       Subtype=/Link,%
10498       PDFAFlags=4%
10499     }%
10500   \endgroup
10501 }
10502 \def\hyper@linkfile#1#2#3{%
10503   \begingroup

```

```

10504 \Hy@pstringdef\Hy@pstringF{#2}%
10505 \Hy@pstringdef\Hy@pstringD{#3}%
10506 \leavevmode
10507 \pdfmark[{#1}]{%
10508   pdfmark=/ANN,%
10509   Subtype=/Link,%
10510   PDFAFlags=4,%
10511   AcroHighlight=\@pdfhighlight,%
10512   Border=\@pdfborder,%
10513   BorderStyle=\@pdfborderstyle,%
10514   linktype=file,%
10515   Color=\@filebordercolor,%
10516   Action={%
10517     <<%
10518       /S/GoToR%
10519       \Hy@SetNewWindow
10520       /F(\Hy@pstringF)%
10521       /D\ifx\#3\@0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
10522     >>%
10523   }%
10524 }%
10525 \endgroup
10526 }
10527 \def\@hyper@launch run:#1\#2#3{%
10528   \begingroup
10529   \Hy@pstringdef\Hy@pstringF{#1}%
10530   \Hy@pstringdef\Hy@pstringP{#3}%
10531   \leavevmode
10532   \pdfmark[{#2}]{%
10533     pdfmark=/ANN,%
10534     Subtype=/Link,%
10535     PDFAFlags=4,%
10536     AcroHighlight=\@pdfhighlight,%
10537     Border=\@pdfborder,%
10538     BorderStyle=\@pdfborderstyle,%
10539     linktype=run,%
10540     Color=\@runbordercolor,%
10541     Action={%
10542       <<%
10543         /S/Launch%
10544         \Hy@SetNewWindow
10545         /F(\Hy@pstringF)%
10546         \ifx\#3\@%
10547         \else
10548           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10549         \fi
10550       >>%
10551     }%
10552   }%
10553   \endgroup
10554 }
10555 \pdfmark

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

46.9 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.

```
10556 <*dvips>
10557 \providecommand*\XR@ext}{pdf}
10558 \def\Hy@raisedlink{}
10559 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10560 \def\headerps@out#1{\special{! #1}}%
10561 \input{pdfmark.def}%
10562 \ifx\@pdfproducer\relax
10563   \def\@pdfproducer{dvips + Distiller}%
10564 \fi
10565 \providecommand*\@pdfborder{0 0 1}
10566 \providecommand*\@pdfborderstyle{}
10567 \providecommand*\@pdfview{XYZ}
10568 \providecommand*\@pdfviewparams{ H.V}
10569 \def\Hy@BorderArrayPatch{BorderArrayPatch}

10570 \g@addto@macro\Hy@FirstPageHook{%
10571   \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.

```
10572 /DvipsToPDF{72.27 mul Resolution div} def%
10573 /PDFToDvips{72.27 div Resolution mul} def%
10574 /BPToDvips{72 div Resolution mul}def%
```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```
10575 /BorderArrayPatch{%
10576   [exch{%
10577     dup dup type/integertype eq exch type/realtype eq or%
10578     {BPToDvips}if%
10579   }forall]%
10580 }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.

```
10581 /HyperBorder {1 PDFToDvips} def%
10582 /H.V {pdf@hoff pdf@voff null} def%
10583 /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

```
10584 /H.S {%
```

```

10585     currentpoint %
10586     HyperBorder add /pdf@lly exch def %
10587     dup DvipsToPDF 72 add /pdf@hoff exch def %
10588     HyperBorder sub /pdf@llx exch def%
10589 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

10590 /H.L {%
10591     2 sub dup%
10592     /HyperBasePt exch def %
10593     PDFToDvips /HyperBaseDvips exch def %
10594     currentpoint %
10595     HyperBaseDvips sub /pdf@ury exch def%
10596     /pdf@urx exch def%
10597 } def%
10598 /H.A {%
10599     H.L %
10600 % | /pdf@voff| = the distance from the top of the page to a point
10601 % | \baselineskip| above the current point in PDF coordinates
10602     currentpoint exch pop %
10603     vsize 72 sub exch DvipsToPDF %
10604     HyperBasePt sub % baseline skip
10605     sub /pdf@voff exch def%
10606 } def%
10607 /H.R {%
10608     currentpoint %
10609     HyperBorder sub /pdf@ury exch def %
10610     HyperBorder add /pdf@urx exch def %
10611 % | /pdf@voff| = the distance from the top of the page to the current point, in
10612 % PDF coordinates
10613     currentpoint exch pop vsize 72 sub %
10614     exch DvipsToPDF sub /pdf@voff exch def%
10615 } def%
10616 }%
10617 }
10618 \AtBeginShipoutFirst{%
10619     \ifHy@setpagesize
10620     \begingroup
10621     \@ifundefined{stockwidth}{%
10622         \ifdim\paperwidth>\z@
10623         \ifdim\paperheight>\z@
10624             \special{papersize=\the\paperwidth,\the\paperheight}%
10625         \fi
10626     \fi
10627 }{%
10628     \ifdim\stockwidth>\z@
10629     \ifdim\stockheight>\z@
10630         \special{papersize=\the\stockwidth,\the\stockheight}%
10631     \fi
10632     \fi
10633 }%

```

```

10634 \endgroup
10635 \fi
10636 \Hy@DisableOption{setpagesize}%
10637 }
10638 </dvips>

```

46.10 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.

```

10639 <*vtexpdfmark>
10640 \providecommand*\XR@ext{-pdf}
10641 \def\Hy@raisedlink{}
10642 \def\literalps@out#1{\special{pS:#1}}%
10643 \def\headerps@out#1{\immediate\special{pS:#1}}%
10644 \input{pdfmark.def}%
10645 \ifx\@pdfproducer\relax
10646 \ifnum\OpMode=\@ne
10647 \def\@pdfproducer{VTeX}%
10648 \else
10649 \def\@pdfproducer{VTeX + Distiller}%
10650 \fi
10651 \fi
10652 \providecommand*\@pdfborder{0 0 1}
10653 \providecommand*\@pdfborderstyle{}
10654 \providecommand*\@pdfview{XYZ}
10655 \providecommand*\@pdfviewparams{ H.V}

10656 \g@addto@macro\Hy@FirstPageHook{%
10657 \headerps@out{%
10658 /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.

```

10659 /HyperBorder {1} def%
10660 /H.V {pdf@hoff pdf@voff null} def%
10661 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10662 /H.S {%
10663 currentpoint %
10664 HyperBorder sub%
10665 /pdf@lly exch def %
10666 dup 72 add /pdf@hoff exch def %
10667 HyperBorder sub%
10668 /pdf@llx exch def%
10669 } def%

```

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

```

10670 /H.L {%
10671 2 sub%
10672 /HyperBasePt exch def %
10673 currentpoint %

```

```

10674   HyperBasePt add HyperBorder add%
10675   /pdf@ury exch def %
10676   HyperBorder add%
10677   /pdf@urx exch def%
10678   } def%
10679   /H.A {%
10680     H.L %
10681     currentpoint exch pop %
10682     vsize 72 sub exch %
10683     HyperBasePt add add%
10684     /pdf@voff exch def%
10685   } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
10686   /H.R {%
10687     currentpoint %
10688     HyperBorder add%
10689     /pdf@ury exch def %
10690     HyperBorder add%
10691     /pdf@urx exch def %
10692     currentpoint exch pop vsize 72 sub add%
10693     /pdf@voff exch def%
10694   } def%
10695   }%
10696 }
10697 </vtxpdfmark>

```

46.11 Textures

```

10698 <*textures>
10699 \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.

```

10700 \begingroup
10701   \obeylines %
10702   \gdef\Hy@ps@CR{\noexpand
10703     }%
10704 \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`.

```

10705 \def\literalps@out#1{%

```

```

10706 \special{postscript 0 0 transform}%
10707 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10708 }%
10709 %

```

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.

```

10710 \def\headerps@out#1{%
10711   \special{%
10712     prepostscript TeXdict begin\Hy@ps@CR
10713       #1\Hy@ps@CR
10714     end%
10715   }%
10716 }%
10717 %

```

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.

```

10718 \g@addto@macro\Hy@FirstPageHook{%
10719   \headerps@out{%
10720     /betterpdfmark {%
10721       systemdict begin %
10722         dup /BP eq%
10723         {cleartomark gsave nulldevice []%
10724           {dup /EP eq%
10725             {cleartomark cleartomark grestore}%
10726             {cleartomark}%
10727           ifelse%
10728         }ifelse %
10729       end%
10730     }def\Hy@ps@CR
10731     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10732   }% end of \headerps@out
10733 }% end of \AtBeginShipoutFirst
10734 %
10735 \input{pdfmark.def}%
10736 %
10737 \ifx\@pdfproducer\relax
10738   \def\@pdfproducer{Textures + Distiller}%
10739 \fi
10740 \providecommand*\@pdfborder{0 0 1}
10741 \providecommand*\@pdfborderstyle{}
10742 \providecommand*\@pdfview{XYZ}
10743 \providecommand*\@pdfviewparams{ H.V}
10744 %

```

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 T_EX.

```

10745 \Hy@AtBeginDocument{%
10746   \headerps@out{%

```

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

```

10747   /vsize {\Hy@pageheight} def%

```

```

10748 /DvipsToPDF {} def%
10749 /PDFToDvips {} def%
10750 /BPToDvips {} def%
10751 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10752 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10753 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10754 /H.S {%
10755     currentpoint %
10756     HyperBorder add /pdf@lly exch def %
10757     dup DvipsToPDF 72 add /pdf@hoff exch def %
10758     HyperBorder sub /pdf@llx exch def%
10759 } def\Hy@ps@CR
10760 /H.L {%
10761     2 sub %
10762     PDFToDvips /HyperBase exch def %
10763     currentpoint %
10764     HyperBase sub /pdf@ury exch def%
10765     /pdf@urx exch def%
10766 } def\Hy@ps@CR
10767 /H.A {%
10768     H.L %
10769     currentpoint exch pop %
10770     vsize 72 sub exch DvipsToPDF %
10771     HyperBase sub % baseline skip
10772     sub /pdf@voff exch def%
10773 } def\Hy@ps@CR
10774 /H.R {%
10775     currentpoint %
10776     HyperBorder sub /pdf@ury exch def %
10777     HyperBorder add /pdf@urx exch def %
10778     currentpoint exch pop vsize 72 sub %
10779     exch DvipsToPDF sub /pdf@voff exch def%
10780 } def\Hy@ps@CR
10781 }%
10782 }

10783 \Hy@AtBeginDocument{%
10784 \ifHy@colorlinks
10785 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10786 \fi
10787 }

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.

10788 \expandafter\let\expandafter\keepPDF@SetupDoc
10789 \csname PDF@SetupDoc\endcsname
10790 \def\PDF@SetupDoc{%
10791 \ifx\@baseurl\@empty
10792 \else
10793 \special{html:<base href="\@baseurl">}%
10794 \fi
10795 \keepPDF@SetupDoc
10796 }
10797 \def\hyper@anchor#1{%
10798 \Hy@SaveLastskip
10799 \Hy@VerboseAnchor{#1}%
10800 \begingroup
10801 \let\protect=\string

```

```

10802 \special{html:<a name=%
10803 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10804 \endgroup
10805 \Hy@activeanchortrue
10806 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10807 \special{html:</a>}%
10808 \Hy@activeanchorfalse
10809 \Hy@RestoreLastskip
10810 }
10811 \def\hyper@anchorstart#1{%
10812 \Hy@SaveLastskip
10813 \Hy@VerboseAnchor{#1}%
10814 \begingroup
10815 \hyper@chars
10816 \special{html:<a name=%
10817 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10818 \endgroup
10819 \Hy@activeanchortrue
10820 }
10821 \def\hyper@anchorend{%
10822 \special{html:</a>}%
10823 \Hy@activeanchorfalse
10824 \Hy@RestoreLastskip
10825 }
10826 \def\@urlltype{url}
10827 \def\hyper@linkstart#1#2{%
10828 \Hy@VerboseLinkStart{#1}{#2}%
10829 \expandafter\Hy@colorlink\csname @#1color\endcsname
10830 \def\Hy@tempa{#1}%
10831 \ifx\Hy@tempa\@urlltype
10832 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10833 \else
10834 \begingroup
10835 \hyper@chars
10836 \special{%
10837 html:<a href=%
10838 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
10839 }%
10840 \endgroup
10841 \fi
10842 }
10843 \def\hyper@linkend{%
10844 \special{html:</a>}%
10845 \Hy@endcolorlink
10846 }
10847 \def\hyper@linkfile#1#2#3{%
10848 \hyper@linkurl{#1}{%
10849 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10850 }%
10851 }
10852 \def\hyper@linkurl#1#2{%
10853 \leavevmode
10854 \ifHy@raiselinks
10855 \setbox\@tempboxa=\color@hbox #1\color@endbox
10856 \@linkdim\dp\@tempboxa
10857 \lower\@linkdim\hbox{%
10858 \hyper@chars

```

```

10859 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10860 }%
10861 \Hy@colorlink\@urlcolor#1%
10862 \@linkdim\ht\@tempboxa
10863 \advance\@linkdim by -6.5\p@
10864 \raise\@linkdim\hbox{\special{html:</a>}}%
10865 \Hy@endcolorlink
10866 \else
10867 \begingroup
10868 \hyper@chars
10869 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10870 \Hy@colorlink\@urlcolor#1%
10871 \special{html:</a>}%
10872 \Hy@endcolorlink
10873 \endgroup
10874 \fi
10875 }

```

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

```

10876 \def\hyper@link#1#2#3{%
10877 \Hy@VerboseLinkStart{#1}{#2}%
10878 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10879 }
10880 \def\hyper@image#1#2{%
10881 \begingroup
10882 \hyper@chars
10883 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10884 \endgroup
10885 }
10886 </textures>

```

46.12 dvipsone

```

10887 % \subsection{dvipsone driver}
10888 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10889 % |\special| commands.
10890 (*dvipsone)
10891 \providecommand*\XR@ext}{pdf}
10892 \def\Hy@raisedlink{}
10893 \providecommand*\@pdfborder{0 0 1}
10894 \providecommand*\@pdfborderstyle{}
10895 \def\literalps@out#1{\special{ps:#1}}%
10896 \def\headerps@out#1{\special{headertext=#1}}%
10897 \input{pdfmark.def}%
10898 \ifx\@pdfproducer\relax
10899 \def\@pdfproducer{dvipsone + Distiller}%
10900 \fi
10901 \HyInfo@AddonUnsupportedtrue
10902 \def\PDF@FinishDoc{%
10903 \Hy@UseMaketitleInfos
10904 \HyInfo@TrappedUnsupported
10905 \special{PDF: Keywords \@pdfkeywords}%
10906 \special{PDF: Title \@pdftitle}%
10907 \special{PDF: Creator \@pdfcreator}%
10908 \ifx\@pdfcreationdate\empty
10909 \else
10910 \special{PDF: CreationDate \@pdfcreationdate}%
10911 \fi

```



```

10912 \ifx\@pdfmoddate\@empty
10913 \else
10914 \special{PDF: ModDate \@pdfmoddate}%
10915 \fi
10916 \special{PDF: Author \@pdfauthor}%
10917 \ifx\@pdfproducer\relax
10918 \else
10919 \special{PDF: Producer \@pdfproducer}%
10920 \fi
10921 \special{PDF: Subject \@pdfsubject}%
10922 \Hy@DisableOption{pdfauthor}%
10923 \Hy@DisableOption{pdftitle}%
10924 \Hy@DisableOption{pdfsubject}%
10925 \Hy@DisableOption{pdfcreator}%
10926 \Hy@DisableOption{pdfcreationdate}%
10927 \Hy@DisableOption{pdfmoddate}%
10928 \Hy@DisableOption{pdfproducer}%
10929 \Hy@DisableOption{pdfkeywords}%
10930 \Hy@DisableOption{pdftrapped}%
10931 \Hy@DisableOption{pdfinfo}%
10932 }
10933 \def\PDF@SetupDoc{%
10934 \def\Hy@temp{}%
10935 \ifx\@pdfstartpage\@empty
10936 \else
10937 \ifx\@pdfstartview\@empty
10938 \else
10939 \edef\Hy@temp{%
10940 ,Page=\@pdfstartpage
10941 ,View=\@pdfstartview
10942 }%
10943 \fi
10944 \fi
10945 \edef\Hy@temp{%
10946 \noexpand\pdfmark{%
10947 pdfmark=/DOCVIEW,%
10948 PageMode=/\@pdfpagemode
10949 \Hy@temp
10950 }%
10951 }%
10952 \Hy@temp
10953 \ifx\@pdfpagescrop\@empty
10954 \else
10955 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10956 \fi
10957 \edef\Hy@temp{%
10958 \ifHy@toolbar\else /HideToolbar true\fi
10959 \ifHy@menubar\else /HideMenubar true\fi
10960 \ifHy>windowui\else /HideWindowUI true\fi
10961 \ifHy@fitwindow /FitWindow true\fi
10962 \ifHy@centerwindow /CenterWindow true\fi
10963 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10964 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10965 \Hy@UseNameKey{Direction}\@pdfdirection
10966 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10967 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10968 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

10969 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10970 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10971 \Hy@UseNameKey{Duplex}\@pdfduplex
10972 \ifx\@pdfpicktraybypdfsize\@empty
10973 \else
10974 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10975 \fi
10976 \ifx\@pdfprintpagerange\@empty
10977 \else
10978 /PrintPageRange[\@pdfprintpagerange]%
10979 \fi
10980 \ifx\@pdfnumcopies\@empty
10981 \else
10982 /NumCopies \@pdfnumcopies
10983 \fi
10984 }%
10985 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10986 \pdfmark{%
10987 pdfmark=/PUT,%
10988 Raw={%
10989 \string{Catalog\string}<<%
10990 \ifx\Hy@temp\@empty
10991 \else
10992 /ViewerPreferences<<\Hy@temp>>%
10993 \fi
10994 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10995 \ifx\@pdflang\@empty
10996 \else
10997 /Lang(\@pdflang)%
10998 \fi
10999 \ifx\@baseurl\@empty
11000 \else
11001 /URI<</Base(\Hy@pstringB)>>%
11002 \fi
11003 >>%
11004 }%
11005 }%
11006 }
11007 \providecommand*\@pdfview{XYZ}
11008 \providecommand*\@pdfviewparams{ %
11009 gsave revscl currentpoint grestore %
11010 72 add exch pop null exch null%
11011 }
11012 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to $T_E X$.

```

11013 \g@addto@macro\Hy@FirstPageHook{%
11014 \headerps@out{%

```

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

```

11015 /DvipsToPDF { 65781 div } def%
11016 /PDFToDvips { 65781 mul } def%
11017 /BPToDvips{65781 mul}def%
11018 /HyperBorder { 1 PDFToDvips } def%

```

```
11019 /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.

```
11020 /BorderArrayPatch{%
11021   [exch{%
11022     dup dup type/integertype eq exch type/realtype eq or%
11023     {BPToDvips}if%
11024   }forall]%
11025 }def%
11026 /H.S {%
11027   currentpoint %
11028   HyperBorder add /pdf@lly exch def %
11029   dup DvipsToPDF 72 add /pdf@hoff exch def %
11030   HyperBorder sub /pdf@llx exch def%
11031 } def%
11032 /H.L {%
11033   2 sub %
11034   PDFToDvips /HyperBase exch def %
11035   currentpoint %
11036   HyperBase sub /pdf@ury exch def%
11037   /pdf@urx exch def%
11038 } def%
11039 /H.A {%
11040   H.L %
11041   currentpoint exch pop %
11042   HyperBase sub % baseline skip
11043   DvipsToPDF /pdf@voff exch def%
11044 } def%
11045 /H.R {%
11046   currentpoint %
11047   HyperBorder sub /pdf@ury exch def %
11048   HyperBorder add /pdf@urx exch def %
11049   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11050 } def%
11051 }%
11052 }
11053 </dvipsone>
```

46.13 TeX4ht

```
11054 <*tex4ht>
11055 \providecommand*{\XR@ext}{html}
11056 \def\Hy@raisedlink{}
11057 \ifpackageloaded{tex4ht}{%
11058   \typeout{hyperref tex4ht: tex4ht already loaded}%
11059 }{%
11060   \RequirePackage[hTeX4ht]{tex4ht}%
11061 }
11062 \hyperlinkfileprefix{}
11063 \def\PDF@FinishDoc{}
11064 \def\PDF@SetupDoc{%
11065   \ifx\@baseurl\@empty
11066   \else
11067     \special{t4ht=<base href="\@baseurl">}%
11068   \fi
11069 }
```

```

11070 \def\hyper@anchor#1{%
11071   \Hy@SaveLastskip
11072   \Hy@VerboseAnchor{#1}%
11073   \begingroup
11074     \let\protect=\string
11075     \special{t4ht=<a name=%
11076       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11077   \endgroup
11078   \Hy@activeanchortrue
11079   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11080   \special{t4ht=</a>}%
11081   \Hy@activeanchorfalse
11082   \Hy@RestoreLastskip
11083 }
11084 \def\hyper@anchorstart#1{%
11085   \Hy@SaveLastskip
11086   \Hy@VerboseAnchor{#1}%
11087   \begingroup
11088     \hyper@chars\special{t4ht=<a name=%
11089       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11090   \endgroup
11091   \Hy@activeanchortrue
11092 }
11093 \def\hyper@anchorend{%
11094   \special{t4ht=</a>}%
11095   \Hy@activeanchorfalse
11096   \Hy@RestoreLastskip
11097 }
11098 \def\@urltype{url}
11099 \def\hyper@linkstart#1#2{%
11100   \Hy@VerboseLinkStart{#1}{#2}%
11101   \expandafter\Hy@colorlink\csname @#1color\endcsname
11102   \def\Hy@tempa{#1}%
11103   \ifx\Hy@tempa\@urltype
11104     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11105   \else
11106     \begingroup
11107       \hyper@chars
11108       \special{t4ht=<a href=%
11109         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
11110     \endgroup
11111   \fi
11112 }
11113 \def\hyper@linkend{%
11114   \special{t4ht=</a>}%
11115   \Hy@endcolorlink
11116 }
11117 \def\hyper@linkfile#1#2#3{%
11118   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11119 }
11120 \def\hyper@linkurl#1#2{%
11121   \leavevmode
11122   \ifHy@raiselinks
11123     \setbox\@tempboxa=\color@hbox #1\color@endbox
11124     \@linkdim\dp\@tempboxa
11125     \lower\@linkdim\hbox{%
11126       \begingroup

```

```

11127 \hyper@chars
11128 \special{%
11129   t4ht=<a href=\hyper@quote#2\hyper@quote>%
11130 }%
11131 \endgroup
11132 }%
11133 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11134 \@linkdim\ht\@tempboxa
11135 \advance\@linkdim by -6.5\p@
11136 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11137 \else
11138 \begingroup
11139 \hyper@chars
11140 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11141 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11142 \special{t4ht=</a>}%
11143 \endgroup
11144 \fi
11145 }

```

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

```

11146 \def\hyper@link#1#2#3{%
11147   \Hy@VerboseLinkStart{#1}{#2}%
11148   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11149 }
11150 \def\hyper@image#1#2{%
11151   \begingroup
11152   \hyper@chars
11153   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11154   \endgroup
11155 }
11156 \let\autoref\ref
11157 \ifx \rEfLiNK \UnDef
11158   \def\rEfLiNK #1#2{#2}%
11159 \fi
11160 \def\backref#1{}
11161 </tex4ht>
11162 <*tex4htcfg>
11163 \IfFileExists{\jobname.cfg}{\endinput}{}
11164 \Preamble{html}
11165 \begin{document}%
11166 \EndPreamble
11167 \def\TeX{TeX}
11168 \def\OMEGA{\Omega}
11169 \def\LaTeX{LaTeX}
11170 \def\LaTeXe{\LaTeX2e}
11171 \def\eTeX{eTeX}
11172 \def\MF{Metafont}
11173 \def\MP{MetaPost}
11174 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11175 <*pdfmark>
11176 \long\def\@Form[#1]{%
11177 \g@addto@macro\Hy@FirstPageHook{%

```

```

11178 \headerps@out{%
11179 [%
11180 /_objdef{pdfDocEncoding}%
11181 /type/dict%
11182 /OBJ pdfmark%
11183 [%
11184 {pdfDocEncoding}%
11185 <<%
11186 /Type/Encoding%
11187 /Differences[%
11188 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11189 /tilde %
11190 39/quotesingle %
11191 96/grave %
11192 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11193 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11194 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11195 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11196 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11197 164/currency %
11198 166/brokenbar %
11199 168/dieresis/copyright/ordfeminine %
11200 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11201 /twosuperior/threesuperior/acute/mu %
11202 183/periodcentered/cedilla/onesuperior/ordmasculine %
11203 188/onequarter/onehalf/threequarters %
11204 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11205 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11206 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11207 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11208 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11209 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11210 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11211 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11212 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11213 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11214 ]%
11215 >>%
11216 /PUT pdfmark%
11217 [%
11218 /_objdef{ZaDb}%
11219 /type/dict%
11220 /OBJ pdfmark%
11221 [%
11222 {ZaDb}%
11223 <<%
11224 /Type/Font%
11225 /Subtype/Type1%
11226 /Name/ZaDb%
11227 /BaseFont/ZapfDingbats%
11228 >>%
11229 /PUT pdfmark%
11230 [%
11231 /_objdef{Helv}%
11232 /type/dict%
11233 /OBJ pdfmark%
11234 [%

```

```

11235 {Helv}%
11236 <<%
11237 /Type/Font%
11238 /Subtype/Type1%
11239 /Name/Helv%
11240 /BaseFont/Helvetica%
11241 /Encoding{pdfDocEncoding}%
11242 >>%
11243 /PUT pdfmark%
11244 [%
11245 /__objdef{aform}%
11246 /type/dict%
11247 /OBJ pdfmark%
11248 [%
11249 /__objdef{afields}%
11250 /type/array%
11251 /OBJ pdfmark%
11252 {%
11253 [%
11254 /BBox[0 0 100 100]%
11255 /__objdef{Check}%
11256 /BP pdfmark %
11257 1 0 0 setrgbcolor%
11258 /ZapfDingbats 80 selectfont %
11259 20 20 moveto%
11260 (4)show%
11261 [/EP pdfmark%
11262 [%
11263 /BBox[0 0 100 100]%
11264 /__objdef{Cross}%
11265 /BP pdfmark %
11266 1 0 0 setrgbcolor%
11267 /ZapfDingbats 80 selectfont %
11268 20 20 moveto%
11269 (8)show%
11270 [/EP pdfmark%
11271 [%
11272 /BBox[0 0 250 100]%
11273 /__objdef{Submit}%
11274 /BP pdfmark %
11275 0.6 setgray %
11276 0 0 250 100 rectfill %
11277 1 setgray %
11278 2 2 moveto %
11279 2 98 lineto %
11280 248 98 lineto %
11281 246 96 lineto %
11282 4 96 lineto %
11283 4 4 lineto %
11284 fill %
11285 0.34 setgray %
11286 248 98 moveto %
11287 248 2 lineto %
11288 2 2 lineto %
11289 4 4 lineto %
11290 246 4 lineto %
11291 246 96 lineto %

```

```

11292 fill%
11293 /Helvetica 76 selectfont %
11294 0 setgray %
11295 8 22.5 moveto%
11296 (Submit)show%
11297 [/EP pdfmark%
11298 [%
11299 /BBox[0 0 250 100]%
11300 /_objdef{SubmitP}%
11301 /BP pdfmark %
11302 0.6 setgray %
11303 0 0 250 100 rectfill %
11304 0.34 setgray %
11305 2 2 moveto %
11306 2 98 lineto %
11307 248 98 lineto %
11308 246 96 lineto %
11309 4 96 lineto %
11310 4 4 lineto %
11311 fill %
11312 1 setgray %
11313 248 98 moveto %
11314 248 2 lineto %
11315 2 2 lineto %
11316 4 4 lineto %
11317 246 4 lineto %
11318 246 96 lineto %
11319 fill%
11320 /Helvetica 76 selectfont %
11321 0 setgray %
11322 10 20.5 moveto%
11323 (Submit)show%
11324 [/EP pdfmark%
11325 } ?pdfmark%
11326 [%
11327 {aform}%
11328 <<%
11329 /Fields{afields}%
11330 /DR<<%
11331 /Font<<%
11332 /ZaDb{ZaDb}%
11333 /Helv{Helv}%
11334 >>%
11335 >>%
11336 /DA(/Helv 10 Tf 0 g)%
11337 /CO{corder}%
11338 \ifHy@pdfa
11339 \else
11340 /NeedAppearances true%
11341 \fi
11342 >>%
11343 /PUT pdfmark%
11344 [%
11345 {Catalog}%
11346 <<%
11347 /AcroForm{aform}%
11348 >>%

```



```

11349 /PUT pdfmark%
11350 [%
11351   /_objdef{corder}%
11352   /type/array%
11353 /OBJ pdfmark% dps
11354 }}%
11355   \setkeys{Form}{#1}%
11356 }
11357 \def\@endForm{}
11358 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11359   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11360 }
11361 \def\@TextField[#1]#2{% parameters, label
11362   \def\Fld@name{#2}%
11363   \def\Fld@default{}%
11364   \let\Fld@value\@empty
11365   \def\Fld@width{\DefaultWidthofText}%
11366   \def\Fld@height{%
11367     \ifFld@multiline
11368       \DefaultHeightofTextMultiline
11369     \else
11370       \DefaultHeightofText
11371     \fi
11372   }%
11373   \begingroup
11374     \Field@toks={ }%
11375     \expandafter\HyField@SetKeys\expandafter{%
11376       \DefaultOptionsofText,#1%
11377     }%
11378     \HyField@FlagsText
11379     \ifFld@hidden\def\Fld@width{1sp}\fi
11380     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11381     \LayoutTextField{#2}{%
11382       \Hy@escapeform\PDFForm@Text
11383       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11384         pdfmark=/ANN,Raw={\PDFForm@Text}%
11385       }%
11386     }%
11387   \endgroup
11388 }
11389 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11390   \def\Fld@name{#2}%
11391   \let\Fld@default\relax
11392   \let\Fld@value\relax
11393   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11394   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11395   \begingroup
11396     \Fld@menulength=0 %
11397     \@tempdima\z@
11398     \@for\@curropt:=#3\do{%
11399       \expandafter\Fld@checkequals\@curropt==\%
11400       \Hy@StepCount\Fld@menulength
11401       \settowidth{\@tempdimb}{\@currDisplay}%
11402       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11403     }%
11404     \advance\@tempdima by 15\p@
11405     \Field@toks={ }%

```

```

11406 \begingroup
11407   \HyField@SetKeys{#1}%
11408 \edef\x{\endgroup
11409   \noexpand\expandafter
11410   \noexpand\HyField@SetKeys
11411   \noexpand\expandafter{%
11412     \expandafter\noexpand\csname DefaultOptionsof%
11413       \ifFld@radio
11414         Radio%
11415       \else
11416         \ifFld@combo
11417           \ifFld@popdown
11418             PopdownBox%
11419           \else
11420             ComboBox%
11421         \fi
11422       \else
11423         ListBox%
11424       \fi
11425     \fi
11426   \endcsname
11427   }%
11428 }\x
11429 \HyField@SetKeys{#1}%
11430 \ifFld@hidden\def\Fld@width{1sp}\fi
11431 \ifx\Fld@value\relax
11432   \let\Fld@value\Fld@default
11433 \fi
11434 \LayoutChoiceField{#2}{%
11435   \ifFld@radio
11436     \HyField@FlagsRadioButton
11437     \@@Radio{#3}%
11438   \else
11439     \begingroup
11440     \HyField@FlagsChoice
11441     \ifdim\Fld@width<\@tempdima
11442       \ifdim\@tempdima<1cm\@tempdima1cm\fi
11443       \edef\Fld@width{\the\@tempdima}%
11444     \fi
11445     \ifFld@combo
11446     \else
11447       \@tempdima=\the\Fld@menulength\Fld@charsize
11448       \advance\@tempdima by \Fld@borderwidth bp %
11449       \advance\@tempdima by \Fld@borderwidth bp %
11450       \edef\Fld@height{\the\@tempdima}%
11451     \fi
11452     \@@ListBox{#3}%
11453   \endgroup
11454   \fi
11455 }%
11456 \endgroup
11457 }
11458 \def\@@Radio#1{%
11459   \Fld@listcount=0 %
11460   \@for\@curropt:=#1\do{%
11461     \expandafter\Fld@checkequals\@curropt==\\%
11462     \Hy@StepCount\Fld@listcount

```

```

11463 \currDisplay\space
11464 \Hy@escapeform\PDFForm@Radio
11465 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11466 pdfmark=/ANN,%
11467 Raw={%
11468 \PDFForm@Radio /AP <</N <</\currValue\space {Check}>> >>%
11469 }%
11470 } % deliberate space between radio buttons
11471 }%
11472 }
11473 \newcount\Fld@listcount
11474 \def\@@ListBox#1{%
11475 \HyField@PDFChoices{#1}%
11476 \Hy@escapeform\PDFForm@List
11477 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11478 pdfmark=/ANN,Raw={\PDFForm@List}%
11479 }%
11480 }
11481 \def\@PushButton[#1]#2{% parameters, label
11482 \def\Fld@name{#2}%
11483 \begingroup
11484 \Field@toks={ }%
11485 \expandafter\HyField@SetKeys\expandafter{%
11486 \DefaultOptionsofPushButton,#1%
11487 }%
11488 \ifHy@pdfa
11489 \PackageError{hyperref}{%
11490 PDF/A: Push button with JavaScript is prohibited%
11491 }\@ehc
11492 \LayoutPushButtonField{%
11493 \leavevmode
11494 \MakeButtonField{#2}%
11495 }%
11496 \else
11497 \HyField@FlagsPushButton
11498 \ifFld@hidden\def\Fld@width{1sp}\fi
11499 \LayoutPushButtonField{%
11500 \leavevmode
11501 \Hy@escapeform\PDFForm@Push
11502 \pdfmark[\MakeButtonField{#2}]{%
11503 pdfmark=/ANN,Raw={\PDFForm@Push}%
11504 }%
11505 }%
11506 \fi
11507 \endgroup
11508 }
11509 \def\@Submit[#1]#2{%
11510 \Field@toks={ }%
11511 \def\Fld@width{\DefaultWidthofSubmit}%
11512 \def\Fld@height{\DefaultHeightofSubmit}%
11513 \begingroup
11514 \expandafter\HyField@SetKeys\expandafter{%
11515 \DefaultOptionsofSubmit,#1%
11516 }%
11517 \HyField@FlagsPushButton
11518 \HyField@FlagsSubmit
11519 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11520 \Hy@escapeform\PDFForm@Submit
11521 \pdfmark[\MakeButtonField{#2}]{%
11522 pdfmark=/ANN,%
11523 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11524 }%
11525 \endgroup
11526 }
11527 \def\@Reset[#1]#2{%
11528 \Field@toks={ }%
11529 \def\Fld@width{\DefaultWidthofReset}%
11530 \def\Fld@height{\DefaultHeightofReset}%
11531 \begingroup
11532 \expandafter\HyField@SetKeys\expandafter{%
11533 \DefaultOptionsofReset,#1%
11534 }%
11535 \leavevmode
11536 \ifHy@pdfa
11537 \PackageError{hyperref}{%
11538 PDF/A: Reset action is prohibited%
11539 }\@ehc
11540 \MakeButtonField{#2}%
11541 \else
11542 \HyField@FlagsPushButton
11543 \ifFld@hidden\def\Fld@width{1sp}\fi
11544 \Hy@escapeform\PDFForm@Reset
11545 \pdfmark[\MakeButtonField{#2}]{%
11546 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11547 }%
11548 \fi
11549 \endgroup
11550 }%
11551 \def\@CheckBox[#1]#2{% parameters, label
11552 \def\Fld@name{#2}%
11553 \def\Fld@default{0}%
11554 \begingroup
11555 \def\Fld@width{\DefaultWidthofCheckBox}%
11556 \def\Fld@height{\DefaultHeightofCheckBox}%
11557 \Field@toks={ }%
11558 \expandafter\HyField@SetKeys\expandafter{%
11559 \DefaultOptionsofCheckBox,#1%
11560 }%
11561 \HyField@FlagsCheckBox
11562 \ifFld@hidden\def\Fld@width{1sp}\fi
11563 \LayoutCheckField{#2}{%
11564 \Hy@escapeform\PDFForm@Check
11565 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11566 pdfmark=/ANN,Raw={\PDFForm@Check}%
11567 }%
11568 }%
11569 \endgroup
11570 }
11571 \pdfmark

```

47.2 HyperTeX

```

11572 \hypertex
11573 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11574 \def\@endForm{}

```

```

11575 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11576 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11577 }
11578 \def\@TextField[#1]#2{% parameters, label
11579 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11580 }
11581 \def\@CheckBox[#1]#2{% parameters, label
11582 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11583 }
11584 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11585 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11586 }
11587 \def\@PushButton[#1]#2{% parameters, label
11588 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11589 }
11590 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11591 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11592 \end{hypertex}

```

47.3 TeX4ht

```

11593 \begin{tex4ht}
11594 \def\@Form[#1]{%
11595 \setkeys{Form}{#1}%
11596 \HCode{<form action="\Form@action" method="\Form@method">}%
11597 }
11598 \def\@endForm{\HCode{</form>}}
11599 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11600 \typeout{Sorry, TeX4ht does not support gauges}%
11601 }
11602 \def\@TextField[#1]#2{% parameters, label
11603 \let\Hy@reserved@a\@empty
11604 \def\Fld@name{#2}%
11605 \def\Fld@default{}%
11606 \bgroup
11607 \Field@toks={ }%
11608 \setkeys{Field}{#1}%
11609 \HCode{<label for="\Fld@name">#2</label>}%
11610 \ifFld@password
11611 \@@PasswordField
11612 \else
11613 \@@TextField
11614 \fi
11615 \egroup
11616 }
11617 \def\@@PasswordField{%
11618 \HCode{%
11619 <input type="password" %
11620 id="\Fld@name" %
11621 name="\Fld@name" %
11622 \ifFld@hidden type="hidden" \fi
11623 value="\Fld@default" %
11624 \the\Field@toks
11625 >%
11626 }%
11627 }
11628 \def\@@TextField{%
11629 \ifFld@multiline

```

```

11630 \HCode{<textarea %
11631 \ifFld@readonly readonly \fi
11632 id="\Fld@name" %
11633 name="\Fld@name" %
11634 \ifFld@hidden type="hidden" \fi
11635 \the\Field@toks>%
11636 }%
11637 \Fld@default
11638 \HCode{</textarea>}%
11639 \else
11640 \HCode{<input type="textbox" %
11641 \ifFld@readonly readonly \fi
11642 id="\Fld@name" %
11643 name="\Fld@name" %
11644 \ifFld@hidden type="hidden" \fi
11645 value="\Fld@default" %
11646 \the\Field@toks>%
11647 }%
11648 \fi
11649 }
11650 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11651 \def\Fld@name{#2}%
11652 \def\Fld@default{}%
11653 \let\Hy@reserved@a\relax
11654 \begingroup
11655 \expandafter\Fld@findlength#3\\%
11656 \Field@toks={ }%
11657 \setkeys{Field}{#1}%
11658 #2%
11659 \ifFld@radio
11660 \expandafter\@@Radio#3\\%
11661 \else
11662 \expandafter\@@Menu#3\\%
11663 \fi
11664 \endgroup
11665 }
11666 \def\Fld@findlength#1\\{%
11667 \Fld@menulength=0 %
11668 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11669 }
11670 \def\@@Menu#1\\{%
11671 \HCode{<select size="\the\Fld@menulength" %
11672 name="\Fld@name" %
11673 \the\Field@toks>%
11674 }%
11675 \@for\@curropt:=#1\do{%
11676 \expandafter\Fld@checkequals\@curropt==\\%
11677 \HCode{<option %
11678 \ifx\@curropt\Fld@default selected \fi
11679 value="\@currValue">\@currDisplay</option>%
11680 }%
11681 }%
11682 \HCode{</select>}%
11683 }
11684 \def\@@Radio#1\\{%
11685 \@for\@curropt:=#1\do{%
11686 \expandafter\Fld@checkequals\@curropt==\\%

```

```

11687 \HCode{<input type="radio" %
11688 \ifx\@curropt\Fld@default checked \fi
11689 name="\Fld@name" %
11690 value="\@currValue" %
11691 \the\Fld@toks>%
11692 }%
11693 \@currDisplay
11694 }%
11695 }
11696 \def\@PushButton[#1]#2{% parameters, label
11697 \def\Fld@name{#2}%
11698 \bgroup
11699 \Field@toks={ }%
11700 \setkeys{Field}{#1}%
11701 \HCode{<input type="button" %
11702 name="\Fld@name" %
11703 value="#2" %
11704 \the\Fld@toks>%
11705 }%
11706 \HCode{</button>}%
11707 \egroup
11708 }
11709 \def\@Submit[#1]#2{%
11710 \HCode{<button type="submit">#2</button>}%
11711 }
11712 \def\@Reset[#1]#2{%
11713 \HCode{<button type="reset">#2</button>}%
11714 }
11715 \def\@CheckBox[#1]#2{% parameters, label
11716 \let\Hy@reserved@a\@empty
11717 \def\Fld@name{#2}%
11718 \def\Fld@default{0}%
11719 \bgroup
11720 \Field@toks={ }%
11721 \setkeys{Field}{#1}%
11722 \HCode{<input type="checkbox" %
11723 \ifFld@checked checked \fi
11724 \ifFld@disabled disabled \fi
11725 \ifFld@readonly readonly \fi
11726 name="\Fld@name" %
11727 \ifFld@hidden type="hidden" \fi
11728 value="\Fld@default" %
11729 \the\Fld@toks>%
11730 #2%
11731 }%
11732 \egroup
11733 }
11734 </tex4ht>

```

47.4 pdfTeX

```

11735 <*pdfTeX>
11736 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11737 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11738 }
11739 \def\MakeFieldObject#1#2{\sbox0{#1}%
11740 \immediate\pdfxform0 %
11741 \expandafter\edef\csname #2Object\endcsname{%

```

```

11742 \the\pdflastxform\space 0 R%
11743 }%
11744 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
11745 }%
11746 \def\HyField@afields{}
11747 \begingroup\expandafter\expandafter\expandafter\endgroup
11748 \expandafter\ifx\csname pdflastlink\endcsname\relax
11749 \let\HyField@AddToFields\relax
11750 \PackageInfo{hyperref}{%
11751   You need pdfTeX 1.40.0 for setting the /Fields entry.%
11752   \MessageBreak
11753   Adobe Reader/Acrobat accepts an empty /Field array,%
11754   \MessageBreak
11755   but other PDF viewers might complain%
11756 }%
11757 \else
11758 \def\HyField@AuxAddToFields#1{%
11759 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11760 \Hy@AtBeginDocument{%
11761   \if@filesw
11762     \immediate\write\@mainaux{%
11763       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11764     }%
11765   \fi
11766 \let\HyField@AfterAuxOpen\@firstofone
11767 \def\HyField@AuxAddToFields#1{%
11768   \xdef\HyField@afields{%
11769     \ifx\HyField@afields\@empty
11770     \else
11771       \HyField@afields
11772       \space
11773     \fi
11774     #1 0 R%
11775   }%
11776 }%
11777 }%
11778 \def\HyField@AddToFields{%
11779 \expandafter\HyField@@AddToFields\expandafter{%
11780   \the\pdflastlink
11781 }%
11782 }%
11783 \def\HyField@@AddToFields#1{%
11784 \HyField@AfterAuxOpen{%
11785   \if@filesw
11786     \write\@mainaux{%
11787       \string\HyField@AuxAddToFields{#1}%
11788     }%
11789   \fi
11790 }%
11791 }%
11792 \fi
11793 \def\@Form[#1]{%
11794 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11795 \setkeys{Form}{#1}%
11796 \Hy@FormObjects
11797 \ifnum\pdfTeXversion>13 %
11798 \pdfrefobj\OBJ@pdfdocencoding

```



```

11799 \pdfrefobj\OBJ@ZaDb
11800 \pdfrefobj\OBJ@Helv
11801 \fi
11802 \AtVeryEndDocument{%
11803 \immediate\pdfobj{%
11804 <<%
11805 /Fields\HyField@afields}%
11806 /DR<<%
11807 /Font<<%
11808 /ZaDb \OBJ@ZaDb\space 0 R%
11809 /Helv \OBJ@Helv\space 0 R%
11810 >>%
11811 >>%
11812 /DA(/Helv 10 Tf 0 g)%
11813 \ifHy@pdfa
11814 \else
11815 /NeedAppearances true%
11816 \fi
11817 >>%
11818 }%
11819 \edef\OBJ@acroform{\the\pdfastobj}%
11820 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11821 }%
11822 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

11823 \begingroup
11824 \fontfamily{pzd}%
11825 \fontencoding{U}%
11826 \fontseries{m}%
11827 \fontshape{n}%
11828 \selectfont
11829 \char123 %
11830 \endgroup
11831 }{Ding}%
11832 \MakeFieldObject{%
11833 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11834 }{Submit}%
11835 \MakeFieldObject{%
11836 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11837 }{SubmitP}%
11838 }
11839 \def\@endForm{}
11840 \def\@TextField[#1]#2{% parameters, label
11841 \def\Fld@name{#2}%
11842 \def\Fld@default{}%
11843 \let\Fld@value\@empty
11844 \def\Fld@width{\DefaultWidthofText}%
11845 \def\Fld@height{%
11846 \ifFld@multiline
11847 \DefaultHeightofTextMultiline
11848 \else
11849 \DefaultHeightofText
11850 \fi
11851 }%
11852 \begingroup
11853 \Field@toks={}%
11854 \expandafter\HyField@SetKeys\expandafter{%

```

```

11855 \DefaultOptionsofText,#1%
11856 }%
11857 \PDFForm@Name
11858 \HyField@FlagsText
11859 \ifFld@hidden\def\Fld@width{1sp}\fi
11860 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
11861 \LayoutTextField{#2}{%
11862 \Hy@escapeform\PDFForm@Text
11863 \pdfstartlink user {\PDFForm@Text}\relax
11864 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11865 \HyField@AddToFields
11866 }%
11867 \endgroup
11868 }
11869 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11870 \def\Fld@name{#2}%
11871 \let\Fld@default\relax
11872 \let\Fld@value\relax
11873 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11874 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11875 \beginngroup
11876 \Fld@menulength=0 %
11877 \@tempdima\z@
11878 \@for\@curropt:=#3\do{%
11879 \expandafter\Fld@checkequals\@curropt==\%
11880 \Hy@StepCount\Fld@menulength
11881 \settowidth{\@tempdimb}{\@currDisplay}%
11882 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11883 }%
11884 \advance\@tempdima by 15\p@
11885 \Field@toks={ }%
11886 \beginngroup
11887 \HyField@SetKeys{#1}%
11888 \edef\x{\endgroup
11889 \noexpand\expandafter
11890 \noexpand\HyField@SetKeys
11891 \noexpand\expandafter{%
11892 \expandafter\noexpand\csname DefaultOptionsof%
11893 \ifFld@radio
11894 Radio%
11895 \else
11896 \ifFld@combo
11897 \ifFld@popdown
11898 PopdownBox%
11899 \else
11900 ComboBox%
11901 \fi
11902 \else
11903 ListBox%
11904 \fi
11905 \fi
11906 \endcsname
11907 }%
11908 }\x
11909 \HyField@SetKeys{#1}%
11910 \PDFForm@Name
11911 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11912 \ifx\Fld@value\relax
11913 \let\Fld@value\Fld@default
11914 \fi
11915 \LayoutChoiceField{#2}{%
11916 \ifFld@radio
11917 \HyField@FlagsRadioButton
11918 \@@Radio{#3}%
11919 \else
11920 \beginngroup
11921 \HyField@FlagsChoice
11922 \ifdim\Fld@width<\@tempdima
11923 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11924 \edef\Fld@width{\the\@tempdima}%
11925 \fi
11926 \ifFld@combo
11927 \else
11928 \@tempdima=\the\Fld@menulength\Fld@charsize
11929 \advance\@tempdima by \Fld@borderwidth bp %
11930 \advance\@tempdima by \Fld@borderwidth bp %
11931 \edef\Fld@height{\the\@tempdima}%
11932 \fi
11933 \@@ListBox{#3}%
11934 \endgroup
11935 \fi
11936 }%
11937 \endgroup
11938 }
11939 \def\@@Radio#1{%
11940 \Fld@listcount=0 %
11941 \@for\@curropt:=#1\do{%
11942 \expandafter\Fld@checkequals\@curropt==\%
11943 \Hy@StepCount\Fld@listcount
11944 \@currDisplay\space
11945 \leavevmode
11946 \Hy@escapeform\PDFForm@Radio
11947 \pdfstartlink user {%
11948 \PDFForm@Radio
11949 /AP<<%
11950 /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.

```

11951 /\@currValue\space \DingObject
11952 >>%
11953 >>%
11954 }%
11955 \relax
11956 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11957 \ifnum\Fld@listcount=1 %
11958 \HyField@AddToFields
11959 \fi
11960 \space % deliberate space between radio buttons
11961 }%
11962 }
11963 \newcount\Fld@listcount
11964 \def\@@ListBox#1{%
11965 \HyField@PDFChoices{#1}%

```

```

11966 \leavevmode
11967 \Hy@escapeform\PDFForm@List
11968 \pdfstartlink user {\PDFForm@List}\relax
11969 \MakeChoiceField{\Fld@width}{\Fld@height}%
11970 \pdfendlink
11971 \HyField@AddToFields
11972 }
11973 \def\@PushButton[#1]#2{% parameters, label
11974 \def\Fld@name{#2}%
11975 \begingroup
11976 \Field@toks={ }%
11977 \expandafter\HyField@SetKeys\expandafter{%
11978 \DefaultOptionsofPushButton,#1%
11979 }%
11980 \PDFForm@Name
11981 \ifHy@pdfa
11982 \PackageError{hyperref}{%
11983 PDF/A: Push button with JavaScript is prohibited%
11984 }\@ehc
11985 \LayoutPushButtonField{%
11986 \leavevmode
11987 \MakeButtonField{#2}%
11988 }%
11989 \else
11990 \HyField@FlagsPushButton
11991 \ifFld@hidden\def\Fld@width{1sp}\fi
11992 \LayoutPushButtonField{%
11993 \leavevmode
11994 \Hy@escapeform\PDFForm@Push
11995 \pdfstartlink user {\PDFForm@Push}\relax
11996 \MakeButtonField{#2}%
11997 \pdfendlink
11998 \HyField@AddToFields
11999 }%
12000 \fi
12001 \endgroup
12002 }
12003 \def\@Submit[#1]#2{%
12004 \Field@toks={ }%
12005 \def\Fld@width{\DefaultWidthofSubmit}%
12006 \def\Fld@height{\DefaultHeightofSubmit}%
12007 \begingroup
12008 \expandafter\HyField@SetKeys\expandafter{%
12009 \DefaultOptionsofSubmit,#1%
12010 }%
12011 \HyField@FlagsPushButton
12012 \HyField@FlagsSubmit
12013 \ifFld@hidden\def\Fld@width{1sp}\fi
12014 \leavevmode
12015 \Hy@escapeform\PDFForm@Submit
12016 \pdfstartlink user {%
12017 \PDFForm@Submit
12018 /AP<</N \SubmitObject/D \SubmitPObject>>%
12019 }%
12020 \relax
12021 \MakeButtonField{#2}%
12022 \pdfendlink

```

```

12023 \HyField@AddToFields
12024 \endgroup
12025 }
12026 \def\@Reset[#1]#2{%
12027 \Field@toks={ }%
12028 \def\Fld@width{\DefaultWidthofReset}%
12029 \def\Fld@height{\DefaultHeightofReset}%
12030 \begingroup
12031 \expandafter\HyField@SetKeys\expandafter{%
12032 \DefaultOptionsofReset,#1%
12033 }%
12034 \leavevmode
12035 \ifHy@pdfa
12036 \PackageError{hyperref}{%
12037 PDF/A: Reset action is prohibited%
12038 }\@ehc
12039 \MakeButtonField{#2}%
12040 \else
12041 \HyField@FlagsPushButton
12042 \ifFld@hidden\def\Fld@width{1sp}\fi
12043 \Hy@escapeform\PDFForm@Reset
12044 \pdfstartlink user {\PDFForm@Reset}\relax
12045 \MakeButtonField{#2}%
12046 \pdfendlink
12047 \HyField@AddToFields
12048 \fi
12049 \endgroup
12050 }
12051 \def\@CheckBox[#1]#2{% parameters, label
12052 \def\Fld@name{#2}%
12053 \def\Fld@default{0}%
12054 \begingroup
12055 \def\Fld@width{\DefaultWidthofCheckBox}%
12056 \def\Fld@height{\DefaultHeightofCheckBox}%
12057 \Field@toks={ }%
12058 \expandafter\HyField@SetKeys\expandafter{%
12059 \DefaultOptionsofCheckBox,#1%
12060 }%
12061 \PDFForm@Name
12062 \HyField@FlagsCheckBox
12063 \ifFld@hidden\def\Fld@width{1sp}\fi
12064 \LayoutCheckField{#2}{%
12065 \Hy@escapeform\PDFForm@Check
12066 \pdfstartlink user {\PDFForm@Check}\relax
12067 \MakeCheckField{\Fld@width}{\Fld@height}%
12068 \pdfendlink
12069 \HyField@AddToFields
12070 }%
12071 \endgroup
12072 }
12073 \def\Hy@FormObjects{%
12074 \pdfobj {%
12075 <<%
12076 /Type/Encoding%
12077 /Differences[%
12078 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12079 /ring/tilde %

```

```

12080 39/quotesingle %
12081 96/grave %
12082 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12083 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12084 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12085 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12086 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12087 164/currency %
12088 166/brokenbar %
12089 168/dieresis/copyright/ordfeminine %
12090 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12091 /twosuperior/threesuperior/acute/mu %
12092 183/periodcentered/cedilla/onesuperior/ordmasculine %
12093 188/onequarter/onehalf/threequarters %
12094 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12095 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12096 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12097 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12098 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12099 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12100 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12101 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12102 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12103 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12104 }%
12105 >>%
12106 }%
12107 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12108 \pdfobj{%
12109 <<%
12110 /Type/Font%
12111 /Subtype/Type1%
12112 /Name/ZaDb%
12113 /BaseFont/ZapfDingbats%
12114 >>%
12115 }%
12116 \xdef\OBJ@ZaDb{\the\pdflastobj}%
12117 \pdfobj{%
12118 <<%
12119 /Type/Font%
12120 /Subtype/Type1%
12121 /Name/Helv%
12122 /BaseFont/Helvetica%
12123 /Encoding \OBJ@pdfdocencoding\space 0 R%
12124 >>%
12125 }%
12126 \xdef\OBJ@Helv{\the\pdflastobj}%
12127 \global\let\Hy@FormObjects\relax
12128 }
12129 </pdfTeX>

```

47.5 dvipdfm, xetex

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

```
12130 <*\dvipdfm | xetex>
```

\@Gauge

```

12131 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12132 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12133 }

```

\@Form

```

12134 \def\@Form[#1]{%
12135 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
12136 \setkeys{Form}{#1}%
12137 \Hy@FormObjects
12138 \@pdfm@mark{obj @afields []}%
12139 \@pdfm@mark{obj @corder []}%
12140 \@pdfm@mark{%
12141   obj @aform <<%
12142     /Fields @afields%
12143     /DR<<%
12144     /Font<<%
12145     /ZaDb @OBJZaDb%
12146     /Helv @OBJHelv%
12147     >>%
12148     >>%
12149     /DA(/Helv 10 Tf 0 g)%
12150     /CO @corder%
12151     \ifHy@pdfa
12152     \else
12153     /NeedAppearances true%
12154     \fi
12155     >>%
12156   }%
12157 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
12158 }

```

\@endForm

```

12159 \def\@endForm{}

```

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

```

12160 \def\dvipdfm@setdim{%
12161   height \the\ht\pdfm@box\space
12162   width \the\wd\pdfm@box\space
12163   depth \the\dp\pdfm@box\space
12164 }

```

\HyField@AnnotCount

```

12165 \newcount\HyField@AnnotCount
12166 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

12167 \def\HyField@AdvanceAnnotCount{%
12168 \global\advance\HyField@AnnotCount\@ne
12169 }

```

\HyField@TheAnnotCount

```

12170 \def\HyField@TheAnnotCount{%
12171 \the\HyField@AnnotCount
12172 }

```

\@TextField

```

12173 \def\@TextField[#1]#2{% parameters, label
12174   \def\Fld@name{#2}%
12175   \def\Fld@default{}%
12176   \let\Fld@value\@empty
12177   \def\Fld@width{\DefaultWidthofText}%
12178   \def\Fld@height{%
12179     \ifFld@multiline
12180       \DefaultHeightofTextMultiline
12181     \else
12182       \DefaultHeightofText
12183     \fi
12184   }%
12185   \begingroup
12186     \Field@toks={ }%
12187     \expandafter\HyField@SetKeys\expandafter{%
12188       \DefaultOptionsofText,#1%
12189     }%
12190     \PDFForm@Name
12191     \HyField@FlagsText
12192     \ifFld@hidden\def\Fld@width{1sp}\fi
12193     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12194     \setbox\pdfm@box=\hbox{%
12195       \MakeTextField{\Fld@width}{\Fld@height}%
12196     }%
12197     \HyField@AdvanceAnnotCount
12198     \LayoutTextField{#2}{%
12199       \Hy@escapeform\PDFForm@Text
12200       \@pdfm@mark{%
12201         ann @text\HyField@TheAnnotCount\space
12202         \dvipdfm@setdim << \PDFForm@Text >>%
12203       }%
12204     }%
12205     \unhbox\pdfm@box
12206     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12207     % record in @afields array
12208   \endgroup
12209 }

```

\@ChoiceMenu

```

12210 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12211   \def\Fld@name{#2}%
12212   \let\Fld@default\relax
12213   \let\Fld@value\relax
12214   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12215   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12216   \begingroup
12217     \Fld@menulength=0 %
12218     \@tempdima\z@
12219     \@for\@curropt=#3\do{%
12220       \expandafter\Fld@checkequals\@curropt==\\%
12221       \Hy@StepCount\Fld@menulength
12222       \settowidth{\@tempdimb}{\@currDisplay}%
12223       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12224     }%
12225     \advance\@tempdima by 15\p@
12226     \Field@toks={ }%

```



```

12227 \beginngroup
12228   \HyField@SetKeys{#1}%
12229 \edef\x{\endgroup
12230   \noexpand\expandafter
12231   \noexpand\HyField@SetKeys
12232   \noexpand\expandafter{%
12233     \expandafter\noexpand\csname DefaultOptionsof%
12234     \ifFld@radio
12235       Radio%
12236     \else
12237       \ifFld@combo
12238         \ifFld@popdown
12239           PopdownBox%
12240         \else
12241           ComboBox%
12242         \fi
12243       \else
12244         ListBox%
12245       \fi
12246     \fi
12247   \endcsname
12248   }%
12249 }\x
12250 \HyField@SetKeys{#1}%
12251 \PDFForm@Name
12252 \ifFld@hidden\def\Fld@width{1sp}\fi
12253 \ifx\Fld@value\relax
12254   \let\Fld@value\Fld@default
12255 \fi
12256 \LayoutChoiceField{#2}{%
12257   \ifFld@radio
12258     \HyField@FlagsRadioButton
12259     \@@Radio{#3}%
12260   \else
12261     \beginngroup
12262     \HyField@FlagsChoice
12263     \ifdim\Fld@width<\@tempdima
12264       \ifdim\@tempdima<1cm\@tempdima1cm\fi
12265       \edef\Fld@width{\the\@tempdima}%
12266     \fi
12267     \ifFld@combo
12268     \else
12269       \@tempdima=\the\Fld@menulength\Fld@charsize
12270       \advance\@tempdima by \Fld@borderwidth bp %
12271       \advance\@tempdima by \Fld@borderwidth bp %
12272       \edef\Fld@height{\the\@tempdima}%
12273     \fi
12274     \@@ListBox{#3}%
12275   \endgroup
12276 \fi
12277 }%
12278 \endgroup
12279 }

```

\@@Radio

```

12280 \def\@@Radio#1{%
12281   \Fld@listcount=0 %

```

```

12282 \setbox\pdfm@box=\hbox{%
12283   \MakeRadioField{\Fld@width}{\Fld@height}%
12284 }%
12285 \@for\@curropt:=#1\do{%
12286   \expandafter\Fld@checkequals\@curropt==\%
12287   \Hy@StepCount\Fld@listcount
12288   \@currDisplay\space
12289   \leavevmode
12290   \Hy@escapeform\PDFForm@Radio
12291   \ifnum\Fld@listcount=1 %
12292     \HyField@AdvanceAnnotCount
12293   \fi
12294   \@pdfm@mark{%
12295     ann %
12296     \ifnum\Fld@listcount=1 %
12297       @radio\HyField@TheAnnotCount%
12298     \space
12299   \fi
12300   \dvipdfm@setdim
12301   <<%
12302     \PDFForm@Radio
12303     /AP<</N<</\@currValue /null>>>>%
12304   >>%
12305 }%
12306 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12307 \ifnum\Fld@listcount=1 %
12308   \@pdfm@mark{%
12309     put @afields @radio\HyField@TheAnnotCount
12310   }%
12311 \fi
12312 }%
12313 }

```

\Fld@listcount

```

12314 \newcount\Fld@listcount

```

\@@ListBox

```

12315 \def\@@ListBox#1{%
12316   \HyField@PDFChoices{#1}%
12317   \setbox\pdfm@box=\hbox{%
12318     \MakeChoiceField{\Fld@width}{\Fld@height}%
12319   }%
12320   \leavevmode
12321   \Hy@escapeform\PDFForm@List
12322   \HyField@AdvanceAnnotCount
12323   \@pdfm@mark{%
12324     ann @list\HyField@TheAnnotCount\space
12325     \dvipdfm@setdim
12326     <<\PDFForm@List>>%
12327   }%
12328   \unhbox\pdfm@box
12329   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12330 }

```

\@PushButton

```

12331 \def\@PushButton[#1]#2{% parameters, label
12332   \def\Fld@name{#2}%

```

```

12333 \begingroup
12334 \Field@toks={ }%
12335 \expandafter\HyField@SetKeys\expandafter{%
12336 \DefaultOptionsofPushButton,#1%
12337 }%
12338 \PDFForm@Name
12339 \ifHy@pdfa
12340 \PackageError{hyperref}{%
12341 PDF/A: Push button with JavaScript is prohibited%
12342 }\@ehc
12343 \LayoutPushButtonField{%
12344 \leavevmode
12345 \MakeButtonField{#2}%
12346 }%
12347 \else
12348 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12349 \HyField@FlagsPushButton
12350 \ifFld@hidden\def\Fld@width{1sp}\fi
12351 \HyField@AdvanceAnnotCount
12352 \LayoutPushButtonField{%
12353 \leavevmode
12354 \Hy@escapeform\PDFForm@Push
12355 \@pdfm@mark{%
12356 ann @push\HyField@TheAnnotCount\space
12357 \dvipdfm@setdim
12358 <<\PDFForm@Push>>%
12359 }%
12360 }%
12361 \unhbox\pdfm@box
12362 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12363 \fi
12364 \endgroup
12365 }

```

\@Submit

```

12366 \def\@Submit[#1]#2{%
12367 \Field@toks={ }%
12368 \def\Fld@width{\DefaultWidthofSubmit}%
12369 \def\Fld@height{\DefaultHeightofSubmit}%
12370 \begingroup
12371 \expandafter\HyField@SetKeys\expandafter{%
12372 \DefaultOptionsofSubmit,#1%
12373 }%
12374 \HyField@FlagsPushButton
12375 \HyField@FlagsSubmit
12376 \ifFld@hidden\def\Fld@width{1sp}\fi
12377 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12378 \leavevmode
12379 \Hy@escapeform\PDFForm@Submit
12380 \HyField@AdvanceAnnotCount
12381 \@pdfm@mark{%
12382 ann @submit\HyField@TheAnnotCount\space
12383 \dvipdfm@setdim
12384 <<\PDFForm@Submit>>%
12385 }%
12386 \unhbox\pdfm@box%
12387 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%

```

```

12388 \endgroup
12389 }

\@Reset
12390 \def\@Reset[#1]#2{%
12391   \Field@toks={ }%
12392   \def\Fld@width{\DefaultWidthofReset}%
12393   \def\Fld@height{\DefaultHeightofReset}%
12394   \begingroup
12395     \expandafter\HyField@SetKeys\expandafter{%
12396       \DefaultOptionsofReset,#1%
12397     }%
12398     \leavevmode
12399     \ifHy@pdfa
12400       \PackageError{hyperref}{%
12401         PDF/A: Reset action is prohibited%
12402       }\@ehc
12403       \MakeButtonField{#2}%
12404     \else
12405       \HyField@FlagsPushButton
12406       \ifFld@hidden\def\Fld@width{1sp}\fi
12407       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12408       \Hy@escapeform\PDFForm@Reset
12409       \HyField@AdvanceAnnotCount
12410       \@pdfm@mark{%
12411         ann @reset\HyField@TheAnnotCount\space
12412         \dvipdfm@setdim
12413         <<\PDFForm@Reset>>%
12414       }%
12415       \unhbox\pdfm@box
12416       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12417     \fi
12418   \endgroup
12419 }

\@CheckBox
12420 \def\@CheckBox[#1]#2{% parameters, label
12421   \def\Fld@name{#2}%
12422   \def\Fld@default{0}%
12423   \begingroup
12424     \def\Fld@width{\DefaultWidthofCheckBox}%
12425     \def\Fld@height{\DefaultHeightofCheckBox}%
12426     \Field@toks={ }%
12427     \expandafter\HyField@SetKeys\expandafter{%
12428       \DefaultOptionsofCheckBox,#1%
12429     }%
12430     \PDFForm@Name
12431     \HyField@FlagsCheckBox
12432     \ifFld@hidden\def\Fld@width{1sp}\fi
12433     \setbox\pdfm@box=\hbox{%
12434       \MakeCheckField{\Fld@width}{\Fld@height}%
12435     }%
12436     \HyField@AdvanceAnnotCount
12437     \LayoutCheckField{#2}{%
12438       \Hy@escapeform\PDFForm@Check
12439       \@pdfm@mark{%
12440         ann @check\HyField@TheAnnotCount\space

```

```

12441     \dvipdfm@setdim
12442     <<\PDFForm@Check>>%
12443 }%
12444     \unhbox\pdfm@box
12445     \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12446 }%
12447 \endgroup
12448 }

12449 \def\Hy@FormObjects{%
12450   \@pdfm@mark{obj @OBJpdfdocencoding%
12451     <<%
12452       /Type/Encoding%
12453       /Differences[%
12454         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12455         39/quotesingle %
12456         96/grave %
12457         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12458         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12459         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12460         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12461         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12462         164/currency %
12463         166/brokenbar %
12464         168/dieresis/copyright/ordfeminine %
12465         172/logicalnot/.notdef/registered/macron/degree/plusminus%
12466         /twosuperior/threesuperior/acute/mu %
12467         183/periodcentered/cedilla/onesuperior/ordmasculine %
12468         188/onequarter/onehalf/threequarters %
12469         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12470         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12471         /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12472         /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12473         /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12474         /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12475         /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12476         /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
12477         /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12478         /thorn/ydieresis%
12479     ]%
12480     >>%
12481   }%
12482   \@pdfm@mark{obj @OBJZaDb%
12483     <<%
12484       /Type/Font%
12485       /Subtype/Type1%
12486       /Name/ZaDb%
12487       /BaseFont/ZapfDingbats%
12488     >>%
12489   }%
12490   \@pdfm@mark{obj @OBJHelv%
12491     <<%
12492       /Type/Font%
12493       /Subtype/Type1%
12494       /Name/Helv%
12495       /BaseFont/Helvetica%
12496       /Encoding @OBJpdfdocencoding%
12497     >>%

```

```

12498 }%
12499 \global\let\Hy@FormObjects\relax
12500 }
12501 </dvipdfm | xetex>

```

47.6 Common forms part

```

12502 <*pdfform>

```

\Hy@escapestring

```

12503 \begingroup\expandafter\expandafter\expandafter\endgroup
12504 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12505 \let\Hy@escapestring\@firstofone
12506 \def\Hy@escapeform#1{%
12507   \ifHy@escapeform
12508     \def\Hy@escapestring##1{%
12509       \noexpand\Hy@escapestring{\noexpand##1}%
12510     }%
12511     \edef\Hy@temp{#1}%
12512     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12513     \def\Hy@escapestring##1{%
12514       \@ifundefined{Hy@esc@\string##1}{%
12515         ##1%
12516         \ThisShouldNotHappen
12517       }{%
12518         \csname Hy@esc@\string##1\endcsname
12519       }%
12520     }%
12521   \else
12522     \let\Hy@escapestring\@firstofone
12523   \fi
12524 }%
12525 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12526   \ifx\#3\%
12527   \else
12528     \expandafter
12529     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12530     \Hy@ReturnAfterFi{%
12531       \Hy@@escapeform#3\@nil
12532     }%
12533   \fi
12534 }%
12535 \else
12536 \def\Hy@escapeform#1{%
12537   \ifHy@escapeform
12538     \let\Hy@escapestring\pdfescapestring
12539   \else
12540     \let\Hy@escapestring\@firstofone
12541   \fi
12542 }%
12543 \Hy@escapeform{}%
12544 \fi

```

\PDFForm@Name

```

12545 \def\PDFForm@Name{%
12546   \begingroup
12547   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7

```

```

12548 \ifHy@unicode
12549 \Hy@unicodedefalse
12550 \fi
12551 \fi
12552 \HyPsd@XeTeXBigCharstrue
12553 \pdfstringdef\Hy@gtemp\Fld@name
12554 \endgroup
12555 \let\Fld@name\Hy@gtemp
12556 }

```

\PDFForm@Check

```

12557 \def\PDFForm@Check{%
12558 /Subtype/Widget%
12559 \Fld@annotflags
12560 /T(\Fld@name)%
12561 /FT/Btn%
12562 \Fld@flags
12563 /Q \Fld@align
12564 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12565 /MK<<%
12566 \ifnum\Fld@rotation=\z@
12567 \else
12568 /R \Fld@rotation
12569 \fi
12570 \ifx\Fld@bordercolor\relax
12571 \else
12572 /BC[\Fld@bordercolor]%
12573 \fi
12574 \ifx\Fld@bcolor\relax
12575 \else
12576 /BG[\Fld@bcolor]%
12577 \fi
12578 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12579 >>%
12580 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12581 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12582 /H/P%
12583 \ifFld@checked /V/Yes\else /V/Off\fi
12584 }

```

\PDFForm@Push

```

12585 \ifHy@pdfa
12586 \else
12587 \def\PDFForm@Push{%
12588 /Subtype/Widget%
12589 \Fld@annotflags
12590 /T(\Fld@name)%
12591 /FT/Btn%
12592 \Fld@flags
12593 /H/P%
12594 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12595 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12596 \ifx\Fld@bordercolor\relax\else 1\fi
12597 \space
12598 \else
12599 /MK<<%
12600 \ifnum\Fld@rotation=\z@

```

```

12601     \else
12602         /R \Fld@rotation
12603     \fi
12604     \ifx\Fld@bordercolor\relax
12605     \else
12606         /BC[\Fld@bordercolor]%
12607     \fi
12608     >>%
12609 \fi
12610 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12611 }%
12612 \fi

```

\Fld@additionalactions

```

12613 \def\Fld@@additionalactions{%
K input (keystroke) format
12614 \ifx\Fld@keystroke@code\@empty
12615 \else
12616     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12617 \fi
F display format
12618 \ifx\Fld@format@code\@empty
12619 \else
12620     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12621 \fi
V validation
12622 \ifx\Fld@validate@code\@empty
12623 \else
12624     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12625 \fi
C calculation
12626 \ifx\Fld@calculate@code\@empty
12627 \else
12628     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12629 \fi
Fo receiving the input focus
12630 \ifx\Fld@onfocus@code\@empty
12631 \else
12632     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12633 \fi
Bl loosing the input focus (blurred)
12634 \ifx\Fld@onblur@code\@empty
12635 \else
12636     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12637 \fi
D pressing the mouse button (down)
12638 \ifx\Fld@onmousedown@code\@empty
12639 \else
12640     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12641 \fi
U releasing the mouse button (up)
12642 \ifx\Fld@onmouseup@code\@empty

```



```

12643 \else
12644   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12645 \fi

```

E cursor enters the annotation's active area.

```

12646 \ifx\Fld@onenter@code\@empty
12647 \else
12648   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12649 \fi

```

X cursor exits the annotation's active area.

```

12650 \ifx\Fld@onexit@code\@empty
12651 \else
12652   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12653 \fi
12654 }
12655 \def\Fld@additionalactions{%
12656   \if\Fld@@additionalactions-%
12657   \else
12658     \ifHy@pdfa
12659     \else
12660       /AA<<\Fld@@additionalactions>>%
12661     \fi
12662   \fi
12663 }

```

\PDFForm@List

```

12664 \def\PDFForm@List{%
12665   /Subtype/Widget%
12666   \Fld@annotflags
12667   /T(\Fld@name)%
12668   /FT/Ch%
12669   \Fld@flags
12670   /Q \Fld@align
12671   /BS<</W \Fld@borderwidth/S\Fld@borderstyle>>%
12672   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12673     \ifx\Fld@bordercolor\relax\else 1\fi
12674     \ifx\Fld@bcolor\relax \else 1\fi
12675     \space
12676   \else
12677     /MK<<%
12678     \ifnum\Fld@rotation=\z@
12679     \else
12680       /R \Fld@rotation
12681     \fi
12682     \ifx\Fld@bordercolor\relax
12683     \else
12684       /BC[\Fld@bordercolor]%
12685     \fi
12686     \ifx\Fld@bcolor\relax
12687     \else
12688       /BG[\Fld@bcolor]%
12689     \fi
12690   >>%
12691 \fi
12692 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12693   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12694 \Fld@choices

```

```

12695 \Fld@additionalactions
12696 }

```

\PDFForm@Radio

```

12697 \def\PDFForm@Radio{%
12698 /Subtype/Widget%
12699 \Fld@annotflags
12700 /T(\Fld@name)%
12701 /FT/Btn%
12702 \Fld@flags
12703 /H/P%
12704 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12705 /MK<<%
12706 \ifnum\Fld@rotation=\z@
12707 \else
12708 /R \Fld@rotation
12709 \fi
12710 \ifx\Fld@bordercolor\relax
12711 \else
12712 /BC[\Fld@bordercolor]%
12713 \fi
12714 \ifx\Fld@bcolor\relax
12715 \else
12716 /BG[\Fld@bcolor]%
12717 \fi
12718 /CA(\Fld@radiosymbol)%
12719 >>%
12720 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12721 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12722 \ifx\@currValue\Fld@default
12723 /V/\Fld@default
12724 \else
12725 /V/Off%
12726 \fi
12727 \Fld@additionalactions
12728 }

```

\PDFForm@Text

```

12729 \def\PDFForm@Text{%
12730 /Subtype/Widget%
12731 \Fld@annotflags
12732 /T(\Fld@name)%
12733 /FT/Tx%
12734 \Fld@flags
12735 /Q \Fld@align
12736 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12737 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12738 \ifx\Fld@bordercolor\relax\else 1\fi
12739 \ifx\Fld@bcolor\relax \else 1\fi
12740 \space
12741 \else
12742 /MK<<%
12743 \ifnum\Fld@rotation=\z@
12744 \else
12745 /R \Fld@rotation
12746 \fi
12747 \ifx\Fld@bordercolor\relax

```

```

12748     \else
12749         /BC[\Fld@bordercolor]%
12750     \fi
12751     \ifx\Fld@bcolor\relax
12752     \else
12753         /BG[\Fld@bcolor]%
12754     \fi
12755     >>%
12756 \fi
12757 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12758     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12759 /DV(\Hy@escapestring{\Fld@default})%
12760 /V(\Hy@escapestring{\Fld@value})%
12761 \Fld@additionalactions
12762 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12763 }

```

\PDFForm@Submit

```

12764 \def\PDFForm@Submit{%
12765     /Subtype/Widget%
12766     \Fld@annotflags
12767     /T(\Fld@name)%
12768     /FT/Btn%
12769     \Fld@flags
12770     /H/P%
12771     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12772     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12773         \ifx\Fld@bordercolor\relax\else 1\fi
12774         \space
12775     \else
12776         /MK<<%
12777         \ifnum\Fld@rotation=\z@
12778         \else
12779             /R \Fld@rotation
12780         \fi
12781         \ifx\Fld@bordercolor\relax
12782         \else
12783             /BC[\Fld@bordercolor]%
12784         \fi
12785         >>%
12786     \fi
12787     /A<<%
12788     /S/SubmitForm%
12789     /F<<%
12790     /FS/URL%
12791     /F(\Hy@escapestring{\Form@action})%
12792     >>%
12793     \Fld@submitflags
12794     >>%
12795 }

```

\PDFForm@Reset

```

12796 \ifHy@pdfa
12797 \else
12798     \def\PDFForm@Reset{%
12799         /Subtype/Widget%
12800         \Fld@annotflags

```

```

12801 /T(\Fld@name)%
12802 /FT/Btn%
12803 \Fld@flags
12804 /H/P%
12805 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12806 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12807 \ifx\Fld@bordercolor\relax\else 1\fi
12808 \space
12809 \else
12810 /MK<<%
12811 \ifnum\Fld@rotation=\z@
12812 \else
12813 /R \Fld@rotation
12814 \fi
12815 \ifx\Fld@bordercolor\relax
12816 \else
12817 /BC[\Fld@bordercolor]%
12818 \fi
12819 % /CA (Clear)
12820 % /AC (Done)
12821 >>%
12822 \fi
12823 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12824 /A<</S/ResetForm>>%
12825 }%
12826 \fi

12827 </pdfform>
12828 <*package>

```

48 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`

```

12829 \def\phantomsection{%
12830 \Hy@MakeCurrentHrefAuto{section*}%
12831 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12832 }
12833 </package>

```

48.1 Bookmarks

```
12834 <*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

ϵ - \TeX 's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

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

```

12835 \def\Hy@writebookmark#1#2#3#4#5{%
12836   % section number, text, label, level, file
12837   \ifx\WriteBookmarks\relax%
12838   \else
12839     \ifnum#4>\Hy@bookmarksdepth\relax
12840     \else
12841       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12842     \fi
12843   \fi
12844 }
12845 \def\Hy@currentbookmarklevel{0}
12846 \def\Hy@numberline#1{#1 }
12847 \def\@@writetorep#1#2#3#4#5{%
12848   \begingroup
12849     \edef\Hy@tempa{#5}%
12850     \ifx\Hy@tempa\Hy@bookmarkstype
12851       \edef\Hy@level{#4}%
12852       \ifx\Hy@levelcheck Y%
12853         \@tempcnta\Hy@level\relax
12854         \advance\@tempcnta by -1 %
12855         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12856           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12857           \advance\@tempcnta by 1 %
12858           \Hy@Warning{%
12859             Difference (\the\@tempcnta) between bookmark levels is %
12860             greater \MessageBreak than one, level fixed%
12861           }%
12862           \@tempcnta\Hy@currentbookmarklevel
12863           \advance\@tempcnta by 1 %
12864           \edef\Hy@level{\the\@tempcnta}%
12865         \fi
12866       \else
12867         \global\let\Hy@levelcheck Y%
12868       \fi
12869       \global\let\Hy@currentbookmarklevel\Hy@level
12870       \@tempcnta\Hy@level\relax
12871       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12872       \advance\@tempcnta by -1 %
12873       \edef\Hy@tempa{#3}%
12874       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12875       \ifx\Hy@tempa\Hy@tempb
12876         \Hy@Warning{%
12877           The anchor of a bookmark and its parent's must not%
12878           \MessageBreak be the same. Added a new anchor%
12879         }%
12880       \phantomsection
12881     \fi
12882     \ifHy@bookmarksnumbered
12883       \let\numberline\Hy@numberline
12884       \let\booknumberline\Hy@numberline

```

```

12885 \let\partnumberline\Hy@numberline
12886 \let\chapternumberline\Hy@numberline
12887 \else
12888 \let\numberline\@gobble
12889 \let\booknumberline\@gobble
12890 \let\partnumberline\@gobble
12891 \let\chapternumberline\@gobble
12892 \fi
12893 \HyPsd@XeTeXBigCharstrue
12894 \pdfstringdef\Hy@tempa{#2}%
12895 \HyPsd@SanitizeForOutFile\Hy@tempa
12896 \if@filesw
12897 \stepcounter{bookmark@seq@number}%
12898 \@ifundefined{@outlinefile}{%
12899 }{%
12900 \protected@write\@outlinefile{}{%
12901 \protect\BOOKMARK
12902 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12903 {\Hy@tempa}{\Hy@tempb}%
12904 \@percentchar\space\thebookmark@seq@number
12905 }%
12906 }%
12907 \fi
12908 \fi
12909 \endgroup
12910 }
12911 \newcounter{bookmark@seq@number}

12912 \begingroup
12913 \lccode'('= '{%
12914 \lccode'=' '{%
12915 \lccode'1=\z@
12916 \lccode'2=\z@
12917 \lccode'3=\z@
12918 \lccode'5=\z@
12919 \lccode'7=\z@
12920 \lccode'#= \z@
12921 \lccode'\=' \z@
12922 \lccode'\{=\z@
12923 \lccode'\}=\z@
12924 \lowercase{%
12925 \endgroup
12926 \def\HyPsd@SanitizeForOutFile#1{%
12927 \@onelevel@sanitize\Hy@tempa
12928 \escapechar'\%
12929 \edef\Hy@tempa{%
12930 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12931 }%
12932 \edef\Hy@tempa{%
12933 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12934 }%
12935 }%
12936 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12937 #1%
12938 \ifx\#2\%
12939 \expandafter\ltx@gobble
12940 \else
12941 \expandafter\ltx@firstofone

```

```

12942 \fi
12943 {%
12944 \string\173%
12945 \HyPsd@SanitizeOut@BraceLeft#2\@nil
12946 }%
12947 }%
12948 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12949 #1%
12950 \ifx\#2\%
12951 \expandafter\ltx@gobble
12952 \else
12953 \expandafter\ltx@firstofone
12954 \fi
12955 {%
12956 \string\175%
12957 \HyPsd@SanitizeOut@BraceRight#2\@nil
12958 }%
12959 }%
12960 }

```

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

```

12961 \newcommand{\currentpdfbookmark}{%
12962 \pdfbookmark[\Hy@currentbookmarklevel]%
12963 }
12964 \newcommand{\subpdfbookmark}{%
12965 \@tempcnta\Hy@currentbookmarklevel
12966 \Hy@StepCount\@tempcnta
12967 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12968 }
12969 \newcommand{\belowpdfbookmark}[2]{%
12970 \@tempcnta\Hy@currentbookmarklevel
12971 \Hy@StepCount\@tempcnta
12972 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12973 \advance\@tempcnta by -1 %
12974 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12975 }

```

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.

```

12976 \renewcommand\pdfbookmark[3][0]{%
12977 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12978 \hyper@anchorstart{#3.#1}\hyper@anchorend
12979 }
12980 \def\BOOKMARK{%
12981 \@ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}%
12982 }
12983 \def\@BOOKMARK[#1]{%
12984 \@ifnextchar[\@BOOKMARK[{#1}]{\@@BOOKMARK[{#1}][-]}%
12985 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

48.1.1 Rerun warning

```
\Hy@OutlineRerunCheck
```

```

12986 \RequirePackage{rerunfilecheck}[2009/12/10]
12987 \def\Hy@OutlineRerunCheck{%

```

```

12988 \RerunFileCheck{\jobname.out}{}%
12989 \immediate\closeout\@outlinefile
12990 }{%
12991 Rerun to get outlines right\MessageBreak
12992 or use package 'bookmark'%
12993 }%
12994 }

```

48.1.2 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.

```

12995 <*vtex>
12996 \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.

```

12997 \begingroup
12998 \catcode'\'=12 %
12999 \ifnum\Hy@VTeXversion<650 %
13000 \catcode'\ "=12 %
13001 \gdef\hv@pdf@char#1#2#3{%
13002 \char
13003 \ifcase'#1#2#3 %
13004 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13005 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13006 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13007 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13008 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13009 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13010 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13011 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13012 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13013 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13014 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13015 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13016 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13017 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13018 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
13019 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13020 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13021 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13022 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13023 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13024 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13025 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13026 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13027 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13028 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13029 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13030 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13031 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13032 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%

```



```

13033 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13034 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13035 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13036 \fi
13037 }%
13038 \else
13039 \gdef\hv@pdf@char{\char'}%
13040 \fi
13041 \endgroup

```

\@@BOOKMARK

```

13042 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13043 \expandafter\edef\csname @count@#3\endcsname{%
13044 \the\@serial@counter
13045 }%
13046 \edef\@mycount{\the\@serial@counter}%
13047 \Hy@StepCount\@serial@counter
13048 \edef\@parcount{%
13049 \expandafter\ifx\csname @count@#5\endcsname\relax
13050 0%
13051 \else
13052 \csname @count@#5\endcsname
13053 \fi
13054 }%
13055 \immediate\special{%
13056 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13057 s=\ifx#2-c\else o\fi,t=#4%
13058 }%
13059 }%

```

\ReadBookmarks

```

13060 \def\ReadBookmarks{%
13061 \begingroup
13062 \def\0{\hv@pdf@char 0}%
13063 \def\1{\hv@pdf@char 1}%
13064 \def\2{\hv@pdf@char 2}%
13065 \def\3{\hv@pdf@char 3}%
13066 \def\({}%
13067 \def\)}%
13068 \def\do##1{%
13069 \ifnum\catcode'##1=\active
13070 \@makeother##1%
13071 \else
13072 \ifnum\catcode'##1=6 %
13073 \@makeother##1%
13074 \fi
13075 \fi
13076 }%
13077 \dospecials
13078 \Hy@safe@activetrue
13079 \InputIfFileExists{\jobname.out}{-}{-}%
13080 \endgroup
13081 \ifx\WriteBookmarks\relax
13082 \else
13083 \if@filesw
13084 \newwrite\@outlinefile
13085 \Hy@OutlineRerunCheck

```

```

13086 \immediate\openout\@outlinefile=\jobname.out\relax
13087 \ifHy@typexml
13088 \immediate\write\@outlinefile{<relaxxml>\relax}%
13089 \fi
13090 \fi
13091 \fi
13092 }

13093 </vtex>
13094 <*\vtex>
13095 \def\ReadBookmarks{%
13096 \begingroup
13097 \def\do##1{%
13098 \ifnum\catcode'##1=\active
13099 \@makeother##1%
13100 \else
13101 \ifnum\catcode'##1=6 %
13102 \@makeother##1%
13103 \fi
13104 \fi
13105 }%
13106 \dospecials
13107 \Hy@safe@activetrue
13108 \escapechar='\%
13109 \let\escapechar\@gobble %
13110 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13111 \calc@bm@number{##5}%
13112 }%
13113 \InputIfFileExists{\jobname.out}{-}{-}%
13114 \ifx\WriteBookmarks\relax
13115 \global\let\WriteBookmarks\relax
13116 \fi
13117 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13118 \def\Hy@temp{##4}%
13119 <*\pdfTeX>
13120 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13121 \Hy@OutlineName{\Hy@pstringName{%
13122 ##2\check@bm@number{##3}}%
13123 }{%
13124 \expandafter\strip@prefix\meaning\Hy@temp
13125 }%
13126 </pdfTeX>
13127 <*\pdfmark>
13128 \pdfmark{%
13129 pdfmark=/OUT,%
13130 Count={##2\check@bm@number{##3}},%
13131 Dest={##3},%
13132 Title=\expandafter\strip@prefix\meaning\Hy@temp
13133 }%
13134 </pdfmark>
13135 <*\dviPDFM|xetex>
13136 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13137 \@pdfm@mark{%
13138 outline \ifHy@DvipdfmxOutlineOpen
13139 [%
13140 \ifnum##21>\z@
13141 \else
13142 -%

```

```

13143         \fi
13144     ] %
13145     \fi
13146     ##1<<%
13147     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13148     /A<<%
13149     /S/GoTo%
13150     /D(\Hy@pstringName)%
13151     >>%
13152     >>%
13153     }%
13154 </dvipdfm | xetex>
13155 }%
13156 {%
13157     \def\WriteBookmarks{0}%
13158     \InputIfFileExists{\jobname.out}{-}{-}%
13159 }%
13160 {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
13161 \ifx\WriteBookmarks\relax
13162 \else
13163     \if@files
13164         \newwrite\@outlinefile
13165         \Hy@OutlineRerunCheck
13166         \immediate\openout\@outlinefile=\jobname.out\relax
13167         \ifHy@typexml
13168             \immediate\write\@outlinefile{<relaxxml>\relax}%
13169         \fi
13170     \fi
13171 \fi
13172 \endgroup
13173 }
13174 <*pdfTex>
13175 \def\Hy@OutlineName#1#2#3#4{%
13176     \pdfoutline goto name{#2}count#3{#4}%
13177 }
13178 </pdfTex>
13179 \def\check@bm@number#1{%
13180     \expandafter\ifx\csname B_#1\endcsname\relax
13181     0%
13182     \else
13183         \csname B_#1\endcsname
13184     \fi
13185 }
13186 \def\calc@bm@number#1{%
13187     \@tempcnta=\check@bm@number{#1}\relax
13188     \advance\@tempcnta by 1 %
13189     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13190 }
13191 </!vtex>

13192 \ifHy@implicit
13193 \else
13194     \expandafter\endinput
13195 \fi

13196 </outlines>
13197 <*outlines | hypertex>

13198 \newlength\Hy@SectionHShift

```

```

13199 \def\Hy@SectionAnchorHref#1{%
13200   \ifx\protect\@typeset@protect
13201     \Hy@@@SectionAnchor{#1}%
13202   \fi
13203 }
13204 \DeclareRobustCommand*\Hy@@@SectionAnchor}[1]{%
13205   \leavevmode
13206   \hbox to 0pt{%
13207     \kern-\Hy@SectionHShift
13208     \Hy@raisedlink{%
13209       \hyper@anchorstart{#1}\hyper@anchorend
13210     }%
13211     \hss
13212   }%
13213 }
13214 \let\H@old@ssect\@ssect
13215 \def\@ssect#1#2#3#4#5{%
13216   \Hy@MakeCurrentHrefAuto{section*}%
13217   \setlength{\Hy@SectionHShift}{#1}%
13218   \begingroup
13219     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13220     \toks\tw@\expandafter{%
13221       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13222       #5%
13223     }%
13224   \edef\x{\endgroup
13225     \the\toks@{\the\toks\tw@}}%
13226   }\x
13227 }
13228 \let\H@old@schapter\@schapter
13229 \def\@schapter#1{%
13230   \begingroup
13231     \let\@mkboth\@gobbletwo
13232     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13233     \Hy@raisedlink{%
13234       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13235     }%
13236   \endgroup
13237   \H@old@schapter{#1}%
13238 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

13239 \ltx@ifundefined{@chapter}{-}{%
13240   \let\Hy@org@chapter\@chapter
13241   \def\@chapter{%
13242     \def\Hy@next{%
13243       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13244       \Hy@raisedlink{%
13245         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13246       }%
13247     }%
13248     \ifnum\c@secnumdepth>\m@ne
13249       \ltx@ifundefined{if@mainmatter}%
13250       \iftrue{\csname if@mainmatter\endcsname}%
13251       \let\Hy@next\relax
13252     \fi

```

```

13253 \fi
13254 \Hy@next
13255 \Hy@org@chapter
13256 }%
13257 }

13258 \let\H@old@part\@part
13259 \begingroup\expandafter\expandafter\expandafter\endgroup
13260 \expandafter\ifx\csname chapter\endcsname\relax
13261 \let\Hy@secnum@part\z@
13262 \else
13263 \let\Hy@secnum@part\m@ne
13264 \fi
13265 \def\@part{%
13266 \ifnum\Hy@secnum@part>\c@secnumdepth
13267 \phantomsection
13268 \fi
13269 \H@old@part
13270 }

13271 \let\H@old@spart\@spart
13272 \def\@spart#1{%
13273 \Hy@MakeCurrentHrefAuto{part*}%
13274 \Hy@raisedlink{%
13275 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13276 }%
13277 \H@old@spart{#1}%
13278 }

13279 \let\H@old@sect\@sect
13280 \def\@sect#1#2#3#4#5#6[#7]#8{%
13281 \ifnum #2>\c@secnumdepth
13282 \expandafter\@firstoftwo
13283 \else
13284 \expandafter\@secondoftwo
13285 \fi
13286 {%
13287 \Hy@MakeCurrentHrefAuto{section*}%
13288 \setlength{\Hy@SectionHShift}{#3}%
13289 \begingroup
13290 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13291 \toks\tw@\expandafter{%
13292 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13293 #8%
13294 }%
13295 \edef\x{\endgroup
13296 \the\toks@\the\toks\tw@}%
13297 }\x
13298 }{%
13299 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13300 }%
13301 }

13302 </outlines | hypertex>
13303 <*outlines>

13304 \expandafter\def\csname Parent-4\endcsname{}
13305 \expandafter\def\csname Parent-3\endcsname{}
13306 \expandafter\def\csname Parent-2\endcsname{}
13307 \expandafter\def\csname Parent-1\endcsname{}
13308 \expandafter\def\csname Parent0\endcsname{}

```

```

13309 \expandafter\def\csname Parent1\endcsname{}
13310 \expandafter\def\csname Parent2\endcsname{}
13311 \expandafter\def\csname Parent3\endcsname{}
13312 \expandafter\def\csname Parent4\endcsname{}
13313 </outlines>

```

49 Compatibility with koma-script classes

```
13314 <*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.

```

13315 \def\Hy@tempa{%
13316   \def\@addchap{##1}##2{%
13317     \typeout{##2}%
13318     \if@twoside
13319       \@mkboth{##1}{}%
13320     \else
13321       \@mkboth{}{##1}%
13322     \fi
13323     \addtocontents{lof}{\protect\addvspace{10\p@}}%
13324     \addtocontents{lot}{\protect\addvspace{10\p@}}%
13325     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13326     \Hy@raisedlink{%
13327       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13328     }%
13329     \if@twocolumn
13330       \@topnewpage[\@makeschapterhead{##2}]%
13331     \else
13332       \@makeschapterhead{##2}%
13333       \@afterheading
13334     \fi
13335     \addcontentsline{toc}{chapter}{##1}%
13336   }%
13337 }
13338 \ifclassloaded{scrbook}{%
13339   \@ifclasslater{scrbook}{2001/01/01}{%
13340     \let\Hy@tempa\@empty
13341   }{}%
13342 }{%
13343   \@ifclassloaded{scrreprt}{%
13344     \@ifclasslater{scrreprt}{2001/01/01}{%
13345       \let\Hy@tempa\@empty
13346     }{}%
13347   }{%
13348     \let\Hy@tempa\@empty
13349   }%
13350 }%
13351 \Hy@tempa
13352 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

13353 `(*pdlenc)`

13354 `\DeclareFontEncoding{PD1}{-}{-}`

Accents

13355 `\DeclareTextAccent{'}{PD1}{\textasciigrave}`
13356 `\DeclareTextAccent{'}{PD1}{\textacute}`
13357 `\DeclareTextAccent{^}{PD1}{\textasciicircum}`
13358 `\DeclareTextAccent{~}{PD1}{\texttilde}`
13359 `\DeclareTextAccent{"}{PD1}{\textasciidieresis}`
13360 `\DeclareTextAccent{r}{PD1}{\textring}`
13361 `\DeclareTextAccent{v}{PD1}{\textasciicaron}`
13362 `\DeclareTextAccent{.}{PD1}{\textdotaccent}`
13363 `\DeclareTextAccent{c}{PD1}{\textcedilla}`
13364 `\DeclareTextAccent{=}{PD1}{\textasciimacron}`
13365 `\DeclareTextAccent{b}{PD1}{\textmacronbelow}`
13366 `\DeclareTextAccent{d}{PD1}{\textdotbelow}`
13367 `\DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}`
13368 `\DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}`
13369 `\DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}`
13370 `\DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}`
13371 `\DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}`
13372 `\DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}`
13373 `\DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}`
13374 `\DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}`
13375 `\DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}`
13376 `\DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}`
13377 `\DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}`
13378 `\DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}`
13379 `\DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}`
13380 `\DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}`
13381 `\DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}`
13382 `\DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}`
13383 `\DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}`
13384 `\DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}`
13385 `\DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}`
13386 `\DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}`
13387 `\DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}`
13388 `\DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}`
13389 `\DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}`
13390 `\DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}`
13391 `\DeclareTextCommand{k}{PD1}[1]{\TextSymbolUnavailable{k{#1}}{#1}}`
13392 `\DeclareTextCommand{t}{PD1}[1]{\TextSymbolUnavailable{t{#1}}{#1}}`
13393 `\DeclareTextCommand{\newtie}{PD1}[1]{%`
13394 `\TextSymbolUnavailable{\newtie{#1}}{#1}%`
13395 `}`

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

13396 `% U+0009 (CHARACTER TABULATION)`
13397 `\DeclareTextCommand{textHT}{PD1}{\011}% U+0009`
13398 `% U+000A (LINE FEED)`
13399 `\DeclareTextCommand{textLF}{PD1}{\012}% U+000A`
1400 `% U+000D (CARRIAGE RETURN)`
13401 `\DeclareTextCommand{textCR}{PD1}{\015}% U+000D`

Accent glyph names

13402 `% U+02D8 BREVE; breve`
13403 `\DeclareTextCommand{textasciibreve}{PD1}{\030}% U+02D8`
13404 `% U+02C7 CARON; caron`

13405 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 13406 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 13407 \DeclareTextCommand{\textcirc{}}{PD1}{\032}% U+02C6
 13408 % U+02D9 DOT ABOVE; dotaccent
 13409 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 13410 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13411 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 13412 % U+02DB OGONEK; ogonek
 13413 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 13414 % U+02DA RING ABOVE; ring
 13415 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 13416 % U+02DC SMALL TILDE; ilde, *tilde
 13417 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 13418 % U+0022 QUOTATION MARK; quotedbl
 13419 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 13420 % U+0023 NUMBER SIGN; numbersign
 13421 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 13422 % U+0024 DOLLAR SIGN; dollar
 13423 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 13424 % U+0025 PERCENT SIGN; percent
 13425 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 13426 % U+0026 AMPERSAND; ampersand
 13427 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 13428 % U+0028 LEFT PARENTHESIS; parenleft
 13429 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 13430 % U+0029 RIGHT PARENTHESIS; parenright
 13431 \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
 13432 % U+002E FULL STOP; period
 13433 \DeclareTextCommand{\textdotbelow}{PD1}{\string\cdot}% \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
 13434 % U+003C LESS-THAN SIGN; less
 13435 \DeclareTextCommand{\textless}{PD1}{\string<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13436 % U+003E GREATER-THAN SIGN; greater
 13437 \DeclareTextCommand{\textgreater}{PD1}{\string>}% \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
 13438 % U+005C REVERSE SOLIDUS; backslash
 13439 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13440 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13441 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13442 % U+005F LOW LINE; underscore
 13443 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13444 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13445 % U+0060 GRAVE ACCENT; grave
 13446 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13447 % U+0069 LATIN SMALL LETTER I; i
 13448 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13449 % U+007B LEFT CURLY BRACKET; braceleft
 13450 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13451 % U+007C VERTICAL LINE; *bar, verticalbar
 13452 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13453 % U+007D RIGHT CURLY BRACKET; braceright
 13454 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13455 % U+007E TILDE; asciitilde
 13456 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13457 % U+2022 BULLET; bullet
 13458 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13459 % U+2020 DAGGER; dagger
 13460 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13461 % U+2021 DOUBLE DAGGER; daggerdbl
 13462 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13463 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13464 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13465 % U+2014 EM DASH; emdash
 13466 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13467 % U+2013 EN DASH; endash
 13468 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13469 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13470 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13471 % U+2044 FRACTION SLASH; fraction
 13472 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13473 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 13474 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 13475 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 13476 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 13477 % U+2212 MINUS SIGN; minus
 13478 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13479 % U+2030 PER MILLE SIGN; perthousand
 13480 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13481 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

13482 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13483 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13484 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13485 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13486 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13487 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13488 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13489 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13490 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13491 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13492 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13493 % U+2122 TRADE MARK SIGN; trademark
13494 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13495 % U+FB01 LATIN SMALL LIGATURE FI; fi
13496 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13497 % U+FB02 LATIN SMALL LIGATURE FL; fl
13498 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13499 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13500 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13501 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13502 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13503 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13504 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13505 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13506 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
13507 \DeclareTextCommand{\IJ}{PD1}{\230}
13508 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13509 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13510 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13511 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13512 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13513 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13514 % U+0153 LATIN SMALL LIGATURE OE; oe
13515 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13516 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13517 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13518 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13519 \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.

13520 % U+20AC EURO SIGN; *Euro, euro
13521 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
13522 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
13523 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
13524 % U+00A2 CENT SIGN; cent
13525 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
13526 % U+00A3 POUND SIGN; sterling
13527 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
13528 % U+00A4 CURRENCY SIGN; currency
13529 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
13530 % U+00A5 YEN SIGN; yen
13531 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
13532 % U+00A6 BROKEN BAR; brokenbar
13533 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
13534 % U+00A7 SECTION SIGN; section
13535 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
13536 % U+00A8 DIAERESIS; dieresis

13537 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
13538 % U+00A9 COPYRIGHT SIGN; copyright
13539 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
13540 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13541 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
13542 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
13543 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
13544 % U+00AC NOT SIGN; logicalnot
13545 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
13546 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
13547 % U+00AE REGISTERED SIGN; registered
13548 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
13549 % U+00AF MACRON; *macron, overscore
13550 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
13551 % U+00B0 DEGREE SIGN; degree
13552 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
13553 % U+00B1 PLUS-MINUS SIGN; plusminus
13554 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
13555 % U+00B2 SUPERSCRIPT TWO; twosuperior
13556 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
13557 % U+00B3 SUPERSCRIPT THREE; threesuperior
13558 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
13559 % U+00B4 ACUTE ACCENT; acute
13560 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
13561 % U+00B5 MICRO SIGN; mu, mul
13562 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
13563 % U+00B6 PILCROW SIGN; paragraph
13564 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
13565 % U+00B7 MIDDLE DOT; middot, *periodcentered
13566 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
13567 % U+00B8 CEDILLA; cedilla
13568 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
13569 % U+00B9 SUPERSCRIPT ONE; onesuperior
13570 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13571 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13572 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13573 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13574 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13575 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13576 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13577 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13578 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13579 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13580 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13581 % U+00BF INVERTED QUESTION MARK; questiondown
13582 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13583 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13584 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13585 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13586 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13587 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13588 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13589 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13590 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3

13591 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13592 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
13593 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13594 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13595 % U+00C6 LATIN CAPITAL LETTER AE; AE
13596 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13597 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13598 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13599 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13600 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13601 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13602 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13603 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13604 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13605 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13606 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
13607 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13608 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13609 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13610 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13611 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13612 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13613 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13614 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
13615 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13616 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13617 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13618 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13619 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13620 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13621 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13622 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13623 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13624 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13625 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13626 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13627 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13628 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13629 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13630 % U+00D7 MULTIPLICATION SIGN; multiply
13631 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13632 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13633 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13634 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13635 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13636 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13637 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13638 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13639 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13640 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13641 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13642 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13643 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13644 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13645 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13646 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13647 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF

13648 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13649 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13650 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13651 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13652 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13653 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13654 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13655 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13656 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13657 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13658 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13659 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13660 % U+00E6 LATIN SMALL LETTER AE; ae
13661 \DeclareTextCompositeCommand{\ae}{PD1}{\346}% U+00E6
13662 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13663 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13664 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13665 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13666 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13667 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13668 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13669 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13670 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13671 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13672 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13673 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13674 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13675 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13676 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13677 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
13678 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13679 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13680 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13681 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13682 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13683 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13684 % U+00F0 LATIN SMALL LETTER ETH; eth
13685 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13686 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13687 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13688 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13689 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13690 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13691 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13692 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13693 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13694 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13695 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
13696 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13697 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13698 % U+00F7 DIVISION SIGN; divide
13699 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13700 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13701 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13702 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13703 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13704 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute

```

13705 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13706 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13707 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
13708 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13709 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13710 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13711 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13712 % U+00FE LATIN SMALL LETTER THORN; thorn
13713 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13714 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13715 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13716 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

13717 \DeclareTextCommand{\SS}{PD1}{SS}
13718 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

13719 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13720 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13721 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13722 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
13723 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13724 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13725 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13726 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

13727 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13728 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13729 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13730 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13731 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13732 \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).

```

13733 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13734 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13735 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13736 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13737 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13738 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13739 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13740 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13741 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13742 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13743 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13744 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13745 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13746 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

13747 </pdlenc>

```

50.2 PU encoding

```

13748 <*puenc>
13749 \DeclareFontEncoding{PU}{-}{}

```

50.2.1 NFSS2 accents

13750 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13751 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
 13752 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13753 \DeclareTextCommand{\~}{PU}[1]{#1\83\001}% U+0301
 13754 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13755 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13756 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13757 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13758 % U+0304 COMBINING MACRON; macroncmb
 13759 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13760 % U+0306 COMBINING BREVE; brevecmb
 13761 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13762 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13763 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13764 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13765 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13766 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13767 % U+030A COMBINING RING ABOVE; ringcmb
 13768 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13769 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13770 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13771 % U+030C COMBINING CARON; caroncmb
 13772 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13773 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13774 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13775 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13776 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13777 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13778 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13779 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13780 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13781 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13782 % U+0327 COMBINING CEDILLA; cedillacmb
 13783 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13784 % U+0328 COMBINING OGONEK; ogonekcmb
 13785 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13786 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13787 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13788 % U+20DD COMBINING ENCLOSING CIRCLE
 13789 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

13790 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
 13791 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textacute}
 13792 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
 13793 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13794 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
 13795 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
 13796 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
 13797 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
 13798 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
 13799 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
 13800 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
 13801 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
 13802 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
 13803 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
 13804 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}

```

13805 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13806 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13807 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13808 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13809 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13810 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13811 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
13812 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13813 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13814 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13815 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13816 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13817 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13818 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13819 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13820 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13821 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13822 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13823 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13824 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13825 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13826 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13827 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13828 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13829 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13830 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}
13831 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13832 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13833 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13834 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\^{#1}}
13835 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13836 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13837 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13838 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13839 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13840 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13841 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13842 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

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

Special white space escape characters.

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13843 % U+0009 (CHARACTER TABULATION)
13844 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13845 % U+000A (LINE FEED)
13846 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13847 % U+000D (CARRIAGE RETURN)
13848 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
13849 % U+0022 QUOTATION MARK; quotedbl
13850 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13851 % U+0023 NUMBER SIGN; numbersign
13852 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13853 % U+0024 DOLLAR SIGN; dollar
13854 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

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13855 % U+0025 PERCENT SIGN; percent
 13856 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 13857 % U+0026 AMPERSAND; ampersand
 13858 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 13859 % U+0027 APOSTROPHE; quotesingle
 13860 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 13861 % U+0028 LEFT PARENTHESIS; parenleft
 13862 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 13863 % U+0029 RIGHT PARENTHESIS; parenright
 13864 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 13865 % U+002A ASTERISK; asterisk
 13866 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A (?)
 \80\053: U+002B PLUS SIGN; plus
 \80\054: U+002C COMMA; comma
 \80\055: U+002D HYPHEN-MINUS; hyphen
 \80\056: U+002E FULL STOP; period
 \80\057: U+002F SOLIDUS; slash
 \80\060: U+0030 DIGIT ZERO; zero
 ...
 \80\071: U+0039 DIGIT NINE; nine
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 13867 % U+003C LESS-THAN SIGN; less
 13868 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 13869 % U+003E GREATER-THAN SIGN; greater
 13870 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 \80\100: U+0040 COMMERCIAL AT; at
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 13871 % U+005C REVERSE SOLIDUS; backslash
 13872 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13873 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13874 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13875 % U+005F LOW LINE; underscore
 13876 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13877 % U+0060 GRAVE ACCENT; grave
 13878 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 13879 % U+0069 LATIN SMALL LETTER I; i
 13880 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 13881 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 13882 % U+007B LEFT CURLY BRACKET; braceleft

13883 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13884 % U+007C VERTICAL LINE; *bar, verticalbar
 13885 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13886 % U+007D RIGHT CURLY BRACKET; braceright
 13887 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13888 % U+007E TILDE; asciitilde
 13889 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

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

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 13890 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13891 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13892 % U+00A2 CENT SIGN; cent
 13893 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13894 % U+00A3 POUND SIGN; sterling
 13895 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13896 % U+00A4 CURRENCY SIGN; currency
 13897 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13898 % U+00A5 YEN SIGN; yen
 13899 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13900 % U+00A6 BROKEN BAR; brokenbar
 13901 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13902 % U+00A7 SECTION SIGN; section
 13903 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13904 % U+00A8 DIAERESIS; dieresis
 13905 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13906 % U+00A9 COPYRIGHT SIGN; copyright
 13907 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13908 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13909 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13910 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 13911 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13912 % U+00AC NOT SIGN; logicalnot
 13913 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13914 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13915 % U+00AE REGISTERED SIGN; registered
 13916 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13917 % U+00AF MACRON; *macron, overscore
 13918 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13919 % U+00B0 DEGREE SIGN; degree
 13920 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13921 % U+00B1 PLUS-MINUS SIGN; plusminus
 13922 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13923 % U+00B2 SUPERScript TWO; twosuperior
 13924 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13925 % U+00B3 SUPERScript THREE; threesuperior
 13926 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13927 % U+00B4 ACUTE ACCENT; acute
 13928 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13929 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13930 % U+00B5 MICRO SIGN; mu, mu1
 13931 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13932 % U+00B6 PILCROW SIGN; paragraph
 13933 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

13934 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13935 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 13936 % U+00B8 CEDILLA; cedilla
 13937 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 13938 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13939 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 13940 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13941 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 13942 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13943 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 13944 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13945 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 13946 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13947 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 13948 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13949 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 13950 % U+00BF INVERTED QUESTION MARK; questiondown
 13951 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 13952 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13953 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 13954 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13955 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 13956 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13957 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 13958 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13959 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 13960 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13961 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 13962 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13963 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 13964 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13965 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13966 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 13967 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 13968 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 13969 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 13970 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 13971 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 13972 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 13973 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 13974 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 13975 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 13976 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 13977 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 13978 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 13979 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 13980 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 13981 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 13982 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 13983 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
 13984 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 13985 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
 13986 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 13987 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
 13988 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 13989 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

13990 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13991 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13992 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13993 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
13994 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13995 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
13996 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13997 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
13998 % U+00D7 MULTIPLICATION SIGN; multiply
13999 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14000 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14001 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14002 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14003 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
14004 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14005 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14006 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14007 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
14008 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14009 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
14010 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14011 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14012 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14013 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14014 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14015 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
14016 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14017 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
14018 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14019 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14020 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14021 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
14022 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14023 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
14024 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14025 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14026 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14027 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14028 % U+00E6 LATIN SMALL LETTER AE; ae
14029 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14030 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14031 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14032 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14033 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
14034 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14035 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14036 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14037 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14038 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14039 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14040 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14041 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14042 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14043 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14044 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14045 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14046 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

14047 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
 14048 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 14049 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 14050 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 14051 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
 14052 % U+00F0 LATIN SMALL LETTER ETH; eth
 14053 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 14054 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 14055 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 14056 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 14057 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 14058 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 14059 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 14060 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 14061 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 14062 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 14063 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 14064 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 14065 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 14066 % U+00F7 DIVISION SIGN; divide
 14067 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 14068 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 14069 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 14070 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 14071 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 14072 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 14073 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 14074 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 14075 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 14076 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 14077 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 14078 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14079 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 14080 % U+00FE LATIN SMALL LETTER THORN; thorn
 14081 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14082 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14083 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

14084 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14085 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14086 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14087 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14088 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14089 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14090 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14091 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14092 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14093 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14094 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14095 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14096 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14097 \DeclareTextCompositeCommand{\`}{PU}{C}{\81\006}% U+0106
 14098 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14099 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 14100 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex

14101 \DeclareTextCompositeCommand{\~}{PU}{C}{\81\010}% U+0108
14102 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
14103 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
14104 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
14105 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
14106 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
14107 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
14108 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
14109 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
14110 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
14111 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
14112 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
14113 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
14114 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
14115 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
14116 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14117 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14118 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14119 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14120 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14121 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14122 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14123 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14124 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14125 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14126 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14127 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14128 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14129 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14130 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14131 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14132 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14133 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14134 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14135 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14136 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14137 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14138 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14139 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14140 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14141 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14142 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14143 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14144 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14145 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14146 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14147 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14148 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14149 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14150 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14151 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14152 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14153 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14154 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14155 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14156 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex

14157 \DeclareTextCompositeCommand{\~}{PU}{H}{\81\044}% U+0124
14158 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14159 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14160 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14161 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14162 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14163 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14164 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14165 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14166 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14167 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14168 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14169 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14170 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14171 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14172 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14173 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14174 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14175 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14176 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14177 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14178 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14179 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14180 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14181 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14182 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14183 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14184 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14185 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14186 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14187 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14188 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14189 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14190 % U+0133 LATIN SMALL LIGATURE IJ; ij
14191 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14192 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14193 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
14194 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14195 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14196 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14197 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
14198 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14199 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14200 \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 \tex-
tkra.
14201 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14202 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14203 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14204 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14205 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14206 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14207 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
14208 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B

14209 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14210 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14211 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14212 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14213 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14214 \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.
 14215 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14216 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14217 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14218 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14219 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14220 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14221 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14222 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14223 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14224 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14225 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14226 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14227 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14228 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14229 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14230 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14231 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14232 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14233 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14234 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14235 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14236 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14237 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14238 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14239 % U+014B LATIN SMALL LETTER ENG; eng
 14240 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14241 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14242 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 14243 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14244 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14245 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14246 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14247 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14248 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14249 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 14250 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14251 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 14252 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14253 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14254 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 14255 % U+0153 LATIN SMALL LIGATURE OE; oe
 14256 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 14257 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14258 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14259 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

14260 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14261 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14262 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14263 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14264 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14265 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14266 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14267 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14268 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14269 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14270 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14271 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14272 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14273 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14274 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14275 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14276 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14277 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14278 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14279 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14280 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14281 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14282 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14283 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14284 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14285 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14286 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14287 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14288 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14289 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14290 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14291 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14292 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14293 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14294 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14295 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14296 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14297 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14298 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14299 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14300 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14301 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14302 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14303 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14304 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14305 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14306 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14307 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14308 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14309 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14310 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14311 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14312 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14313 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut

14314 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14315 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhun-
 garumlaut
 14316 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14317 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14318 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14319 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14320 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14321 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14322 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14323 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14324 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14325 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14326 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14327 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14328 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14329 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14330 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14331 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14332 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14333 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14334 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14335 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14336 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14337 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14338 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14339 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14340 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14341 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14342 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14343 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14344 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

14345 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14346 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14347 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14348 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14349 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14350 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14351 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14352 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14353 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14354 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14355 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14356 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14357 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14358 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14359 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14360 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14361 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14362 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 14363 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14364 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14365 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14366 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14367 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

14368 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14369 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14370 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14371 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14372 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14373 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14374 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14375 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14376 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14377 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14378 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14379 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14380 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14381 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14382 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14383 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14384 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14385 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14386 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14387 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14388 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14389 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14390 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14391 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14392 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
14393 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14394 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
14395 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14396 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
14397 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14398 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
14399 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14400 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14401 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14402 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14403 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14404 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14405 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14406 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14407 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14408 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14409 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14410 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14411 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14412 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14413 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14414 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
14415 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
14416 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
14417 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
14418 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
14419 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
14420 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
14421 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
14422 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave

14423 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14424 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14425 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14426 % U+021F LATIN SMALL LETTER H WITH CARON
 14427 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14428 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14429 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14430 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14431 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14432 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14433 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14434 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14435 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14436 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14437 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14438 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14439 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14440 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14441 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14442 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14443 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14444 % U+0237 LATIN SMALL LETTER DOTLESS J
 14445 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

14446 % U+02C7 CARON; caron
 14447 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14448 % U+02D8 BREVE; breve
 14449 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14450 % U+02D9 DOT ABOVE; dotaccent
 14451 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14452 % U+02DA RING ABOVE; ring
 14453 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14454 % U+02DB OGONEK; ogonek
 14455 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14456 % U+02DC SMALL TILDE; ilde, *tilde
 14457 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14458 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14459 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14460 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14461 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14462 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14463 % U+02F7 MODIFIER LETTER LOW TILDE
 14464 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

14465 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14466 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14467 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14468 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14469 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14470 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14471 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14472 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14473 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14474 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

14475 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
14476 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
14477 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
14478 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
14479 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
14480 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
14481 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
14482 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
14483 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
14484 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
14485 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
14486 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
14487 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
crontonos
14488 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
14489 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
14490 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
14491 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
14492 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
14493 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
tadiesisistonos
14494 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
14495 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
14496 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
14497 % U+0392 GREEK CAPITAL LETTER BETA; Beta
14498 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
14499 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
14500 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
14501 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
14502 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
14503 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
14504 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
14505 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14506 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14507 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14508 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14509 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14510 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14511 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14512 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14513 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14514 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14515 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14516 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14517 % U+039C GREEK CAPITAL LETTER MU; Mu
14518 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14519 % U+039D GREEK CAPITAL LETTER NU; Nu
14520 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14521 % U+039E GREEK CAPITAL LETTER XI; Xi
14522 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14523 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14524 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14525 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14526 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14527 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14528 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1

14529 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 14530 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 14531 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 14532 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 14533 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 14534 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 14535 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 14536 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 14537 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 14538 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 14539 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 14540 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 14541 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
 14542 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
 14543 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
 14544 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
 14545 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
 14546 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
 14547 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 14548 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
 14549 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
 14550 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
 14551 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 14552 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
 14553 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 14554 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotonos
 14555 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 14556 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
 14557 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
 14558 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 14559 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
 14560 % U+03B2 GREEK SMALL LETTER BETA; beta
 14561 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 14562 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 14563 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 14564 % U+03B4 GREEK SMALL LETTER DELTA; delta
 14565 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 14566 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 14567 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 14568 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 14569 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 14570 % U+03B7 GREEK SMALL LETTER ETA; eta
 14571 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 14572 % U+03B8 GREEK SMALL LETTER THETA; theta
 14573 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 14574 % U+03B9 GREEK SMALL LETTER IOTA; iota
 14575 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
 14576 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 14577 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 14578 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 14579 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 14580 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 14581 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 14582 % U+03BD GREEK SMALL LETTER NU; nu
 14583 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD

14584 % U+03BE GREEK SMALL LETTER XI; xi
14585 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14586 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14587 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14588 % U+03C0 GREEK SMALL LETTER PI; pi
14589 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14590 % U+03C1 GREEK SMALL LETTER RHO; rho
14591 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14592 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14593 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14594 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14595 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14596 % U+03C4 GREEK SMALL LETTER TAU; tau
14597 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14598 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14599 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14600 % U+03C6 GREEK SMALL LETTER PHI; phi
14601 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14602 % U+03C7 GREEK SMALL LETTER CHI; chi
14603 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14604 % U+03C8 GREEK SMALL LETTER PSI; psi
14605 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14606 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14607 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14608 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
14609 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14610 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silonudieresis
14611 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14612 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14613 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14614 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14615 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14616 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14617 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
14618 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
14619 % U+03DA GREEK LETTER STIGMA; Stigmagreek
14620 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
14621 % U+03DB GREEK SMALL LETTER STIGMA
14622 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
14623 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
14624 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
14625 % U+03DD GREEK SMALL LETTER DIGAMMA
14626 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
14627 % U+03DE GREEK LETTER KOPPA; Koppagreek
14628 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
14629 % U+03DF GREEK SMALL LETTER KOPPA
14630 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
14631 % U+03E0 GREEK LETTER SAMPI; Sampigreek
14632 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
14633 % U+03E1 GREEK SMALL LETTER SAMPI
14634 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

14635 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE

14636 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14637 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
14638 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14639 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
14640 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14641 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14642 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14643 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14644 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
14645 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14646 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14647 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14648 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
14649 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14650 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
14651 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14652 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
14653 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14654 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14655 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14656 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14657 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14658 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14659 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14660 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14661 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14662 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14663 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14664 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14665 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
14666 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14667 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14668 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14669 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14670 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14671 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14672 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14673 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14674 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14675 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14676 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14677 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14678 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14679 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14680 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14681 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14682 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14683 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14684 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14685 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14686 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrillic, *afii10026
14687 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14688 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrrillic, *afii10027
14689 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14690 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14691 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrrillic, *afii10028

14692 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14693 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14694 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14695 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14696 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14697 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14698 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14699 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14700 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14701 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14702 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14703 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14704 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14705 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14706 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14707 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14708 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14709 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14710 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14711 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14712 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14713 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14714 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14715 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14716 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14717 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14718 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14719 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14720 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14721 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14722 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14723 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14724 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14725 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14726 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14727 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14728 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14729 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14730 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14731 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14732 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14733 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14734 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14735 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14736 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14737 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14738 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14739 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14740 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14741 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14742 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14743 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14744 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14745 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14746 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14747 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14748 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436

14749 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
 14750 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
 14751 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
 14752 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
 14753 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
 14754 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
 14755 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
 14756 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
 14757 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
 14758 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
 14759 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
 14760 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
 14761 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
 14762 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
 14763 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
 14764 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
 14765 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
 14766 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
 14767 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
 14768 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
 14769 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
 14770 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
 14771 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
 14772 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
 14773 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
 14774 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
 14775 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
 14776 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
 14777 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
 14778 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
 14779 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
 14780 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
 14781 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
 14782 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
 14783 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
 14784 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
 14785 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
 14786 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
 14787 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
 14788 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
 14789 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
 14790 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
 14791 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
 14792 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
 14793 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
 14794 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
 14795 \DeclareTextCommand{\cyrrerev}{PU}{\84\115}% U+044D
 14796 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
 14797 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
 14798 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 14799 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 14800 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 14801 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
 14802 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 14803 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 14804 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 14805 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic

14806 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14807 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14808 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14809 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14810 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14811 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14812 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14813 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14814 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14815 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14816 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14817 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
14818 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14819 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14820 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14821 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14822 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14823 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14824 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14825 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14826 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14827 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14828 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14829 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
14830 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14831 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14832 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14833 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14834 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14835 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14836 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14837 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14838 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14839 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14840 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14841 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14842 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14843 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14844 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14845 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14846 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14847 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
14848 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14849 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
14850 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14851 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitleio-
tifiedcyrillic
14852 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14853 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
fiedcyrillic
14854 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14855 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14856 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14857 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14858 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B

14859 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-cyrillic
 14860 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14861 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbgiotifiedcyrillic
 14862 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14863 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14864 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14865 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14866 \DeclareTextCommand{\cyrkxi}{PU}{\84\157}% U+046F
 14867 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14868 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14869 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14870 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14871 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 14872 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14873 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 14874 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 14875 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 14876 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14877 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 14878 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14879 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 14880 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14881 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 14882 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14883 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14884 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14885 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14886 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14887 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 14888 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14889 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14890 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14891 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 14892 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14893 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 14894 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14895 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14896 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14897 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14898 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14899 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14900 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14901 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14902 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14903 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14904 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumata-

cyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14905 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14906 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14907 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14908 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14909 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14910 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14911 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14912 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14913 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14914 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14915 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14916 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14917 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 14918 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14919 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14920 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14921 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14922 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14923 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14924 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14925 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14926 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14927 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14928 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14929 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14930 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14931 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14932 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14933 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14934 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14935 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14936 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14937 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 14938 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14939 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14940 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14941 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 14942 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 14943 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic

14944 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 14945 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
 ticalstrokecyrillic
 14946 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 14947 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 14948 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 14949 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 14950 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 14951 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 14952 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 14953 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 14954 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 14955 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 14956 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 14957 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 14958 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 14959 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 14960 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 14961 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 14962 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 14963 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 14964 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 14965 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 14966 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 14967 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 14968 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 14969 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 14970 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 14971 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
 dercyrillic
 14972 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 14973 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 14974 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
 cyrillic
 14975 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 14976 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
 14977 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
 dercyrillic
 14978 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 14979 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-
 cyrillic
 14980 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 14981 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 14982 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 14983 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 14984 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 14985 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 14986 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 14987 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 14988 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

14989 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hades-
 cendercyrillic
 14990 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 14991 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dercyrillic
 14992 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 14993 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 14994 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 14995 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 14996 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 14997 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescen-
 dercyrillic
 14998 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 14999 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 15000 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 15001 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 erticalstrokecyrillic
 15002 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 15003 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 erticalstrokecyrillic
 15004 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 15005 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 15006 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 15007 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 15008 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 15009 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 15010 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 15011 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 15012 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 15013 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 15014 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 15015 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 15016 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 15017 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 15018 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 15019 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 15020 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 15021 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 15022 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 15023 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15024 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15025 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15026 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15027 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15028 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15029 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15030 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15031 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15032 \DeclareTextCommand{\cyrlpsc}{PU}{\84\306}% U+04C6
 15033 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15034 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15035 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic

15036 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15037 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 15038 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15039 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 15040 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15041 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15042 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15043 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15044 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15045 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15046 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15047 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15048 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15049 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15050 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 15051 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15052 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 15053 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15054 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15055 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15056 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15057 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 15058 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15059 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 15060 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15061 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15062 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15063 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 15064 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15065 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 15066 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 15067 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
 15068 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 15069 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
 15070 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 15071 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-cyrillic
 15072 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 15073 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-cyrillic
 15074 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 15075 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresis-cyrillic
 15076 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 15077 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 15078 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15079 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15080 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15081 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15082 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2

15083 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15084 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
15085 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
15086 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15087 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
15088 \DeclareTextCompositeCommand{\'} {PU}{\cyri}{\84\345}% U+04E5
15089 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
15090 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15091 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
15092 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15093 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
15094 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
15095 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
15096 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
15097 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
15098 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
15099 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
15100 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
15101 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
15102 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
15103 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
15104 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
15105 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
15106 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
15107 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
15108 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
15109 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
15110 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
15111 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
15112 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
15113 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
15114 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
15115 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
15116 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
15117 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
15118 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
15119 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
15120 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
15121 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
15122 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
15123 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
15124 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
15125 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
15126 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
15127 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
15128 \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

15129 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15130 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15131 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15132 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

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

15133 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15134 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

15135 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15136 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15137 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15138 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15139 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15140 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15141 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15142 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15143 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15144 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15145 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15146 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15147 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15148 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15149 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15150 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15151 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15152 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 15153 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 15154 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 15155 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 15156 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 15157 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 15158 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 15159 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 15160 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 15161 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 15162 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 15163 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 15164 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 15165 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 15166 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 15167 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 15168 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 15169 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 15170 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 15171 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 15172 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 15173 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
 15174 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
 15175 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 15176 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 15177 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 15178 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31

15179 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15180 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15181 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15182 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15183 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15184 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15185 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15186 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15187 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15188 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15189 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15190 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15191 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15192 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15193 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15194 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15195 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15196 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15197 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15198 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15199 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15200 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15201 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15202 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15203 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15204 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15205 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15206 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15207 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15208 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15209 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15210 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15211 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15212 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15213 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15214 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15215 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15216 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15217 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15218 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15219 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15220 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15221 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15222 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15223 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15224 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15225 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15226 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15227 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15228 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15229 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15230 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15231 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15232 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\200}% U+1E80
15233 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15234 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
15235 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute

15236 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\202}% U+1E82
 15237 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 15238 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\203}% U+1E83
 15239 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 15240 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
 15241 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 15242 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
 15243 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 15244 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
 15245 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 15246 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
 15247 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 15248 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
 15249 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 15250 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
 15251 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 15252 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 15253 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 15254 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 15255 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 15256 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
 15257 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 15258 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
 15259 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15260 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
 15261 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15262 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
 15263 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15264 \DeclareTextCompositeCommand{b}{PU}{Z}{\9036\224}% U+1E94
 15265 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15266 \DeclareTextCompositeCommand{b}{PU}{z}{\9036\225}% U+1E95
 15267 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15268 \DeclareTextCompositeCommand{b}{PU}{h}{\9036\226}% U+1E96
 15269 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15270 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15271 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15272 \DeclareTextCompositeCommand{r}{PU}{w}{\9036\230}% U+1E98
 15273 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15274 \DeclareTextCompositeCommand{r}{PU}{y}{\9036\231}% U+1E99
 15275 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15276 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15277 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15278 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
 15279 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15280 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}% U+1EBD
 15281 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15282 \DeclareTextCompositeCommand{'}{PU}{Y}{\9036\362}% U+1EF2
 15283 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15284 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}% U+1EF3
 15285 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15286 \DeclareTextCompositeCommand{~}{PU}{Y}{\9036\370}% U+1EF8
 15287 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15288 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}% U+1EF9

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

15289 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner

15290 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15291 % U+2013 EN DASH; endash
 15292 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15293 % U+2014 EM DASH; emdash
 15294 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15295 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15296 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15297 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15298 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15299 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15300 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15301 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15302 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15303 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15304 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 15305 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15306 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15307 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15308 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15309 % U+2020 DAGGER; dagger
 15310 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15311 % U+2021 DOUBLE DAGGER; daggerdbl
 15312 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15313 % U+2022 BULLET; bullet
 15314 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15315 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15316 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15317 % U+2030 PER MILLE SIGN; perthousand
 15318 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15319 % U+2031 PER TEN THOUSAND SIGN
 15320 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15321 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15322 \DeclareTextCommand{\guillemleft}{PU}{\9040\071}% U+2039
 15323 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 15324 \DeclareTextCommand{\guillemright}{PU}{\9040\072}% U+203A
 15325 % U+203B REFERENCE MARK; referencemark
 15326 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15327 % U+203D INTERROBANG
 15328 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15329 % U+2044 FRACTION SLASH; fraction
 15330 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15331 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15332 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15333 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15334 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15335 % U+2052 COMMERCIAL MINUS SIGN
 15336 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

15337 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15338 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15339 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15340 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15341 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15342 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075

15343 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15344 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15345 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15346 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15347 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15348 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15349 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15350 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15351 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15352 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15353 % U+207B SUPERSCRIPT MINUS
 15354 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15355 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15356 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 15357 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15358 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15359 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15360 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15361 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15362 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15363 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15364 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15365 % U+2081 SUBSCRIPT ONE; oneinferior
 15366 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15367 % U+2082 SUBSCRIPT TWO; twoinferior
 15368 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15369 % U+2083 SUBSCRIPT THREE; threeinferior
 15370 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15371 % U+2084 SUBSCRIPT FOUR; fourinferior
 15372 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15373 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15374 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15375 % U+2086 SUBSCRIPT SIX; sixinferior
 15376 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15377 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15378 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15379 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15380 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15381 % U+2089 SUBSCRIPT NINE; nineinferior
 15382 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15383 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15384 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15385 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15386 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

15387 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15388 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15389 % U+20A4 LIRA SIGN; afi08941, *lira
 15390 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15391 % U+20A6 NAIRA SIGN
 15392 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15393 % U+20A7 PESETA SIGN; peseta
 15394 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15395 % U+20A9 WON SIGN; won
 15396 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15397 % U+20AB DONG SIGN; dong

15398 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15399 % U+20AC EURO SIGN; *Euro, euro
 15400 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15401 % U+20B1 PESO SIGN
 15402 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15403 % U+20B2 GUARANI SIGN
 15404 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

15405 % U+2103 DEGREE CELSIUS; centigrade
 15406 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15407 % U+2116 NUMERO SIGN; *afi61352, numero
 15408 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15409 % U+2117 SOUND RECORDING COPYRIGHT
 15410 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15411 % U+211E PRESCRIPTION TAKE; prescription
 15412 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15413 % U+2120 SERVICE MARK
 15414 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15415 % U+2122 TRADE MARK SIGN; trademark
 15416 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15417 % U+2126 OHM SIGN; Ohm, Omega
 15418 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15419 % U+2127 INVERTED OHM SIGN
 15420 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15421 % U+212B ANGSTROM SIGN; angstrom
 15422 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15423 % U+212E ESTIMATED SYMBOL; estimated
 15424 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15425 % U+2135 ALEF SYMBOL; aleph
 15426 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15427 % U+2190 LEFTWARDS ARROW; arrowleft
 15428 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15429 % U+2191 UPWARDS ARROW; arrowup
 15430 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15431 % U+2192 RIGHTWARDS ARROW; arrowright
 15432 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15433 % U+2193 DOWNWARDS ARROW; arrowdown
 15434 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

15435 % U+2212 MINUS SIGN; minus
 15436 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15437 % U+221A SQUARE ROOT; radical
 15438 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

15439 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15440 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15441 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15442 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

15443 % U+2422 BLANK SYMBOL
 15444 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422

15445 % U+2423 OPEN BOX; blank
 15446 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

15447 % U+2460 CIRCLED DIGIT ONE; onecircle
 15448 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15449 % U+2461 CIRCLED DIGIT TWO; twocircle
 15450 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15451 % U+2462 CIRCLED DIGIT THREE; threecircle
 15452 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15453 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15454 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15455 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15456 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15457 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15458 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15459 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 15460 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15461 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15462 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15463 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15464 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15465 % U+2469 CIRCLED NUMBER TEN; tencircle
 15466 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15467 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15468 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15469 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15470 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15471 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15472 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15473 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15474 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15475 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15476 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15477 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15478 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15479 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15480 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15481 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15482 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15483 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15484 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15485 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15486 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15487 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15488 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15489 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15490 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15491 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15492 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15493 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15494 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15495 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15496 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15497 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15498 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15499 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

15500 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15501 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15502 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15503 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15504 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15505 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15506 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15507 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15508 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15509 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15510 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15511 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
15512 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15513 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15514 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15515 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15516 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15517 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15518 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15519 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15520 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15521 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15522 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15523 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15524 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15525 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15526 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
15527 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15528 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15529 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15530 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15531 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15532 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15533 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15534 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15535 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15536 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15537 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15538 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15539 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15540 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15541 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15542 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15543 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15544 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15545 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15546 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15547 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15548 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15549 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15550 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15551 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15552 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15553 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15554 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15555 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15556 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

15557 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15558 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15559 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15560 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15561 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15562 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15563 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15564 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15565 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15566 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15567 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15568 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15569 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15570 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15571 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15572 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15573 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15574 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15575 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15576 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15577 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15578 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15579 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15580 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15581 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15582 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15583 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15584 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15585 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15586 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15587 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15588 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15589 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15590 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15591 % U+24EA CIRCLED DIGIT ZERO
 15592 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15593 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15594 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15595 % U+25EF LARGE CIRCLE; largecircle
 15596 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

15597 % U+266A EIGHTH NOTE; musicalnote
 15598 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15599 % U+26AD MARRIAGE SYMBOL
 15600 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15601 % U+26AE DIVORCE SYMBOL
 15602 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

15603 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15604 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15605 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15606 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

```
15607 % U+FB01 LATIN SMALL LIGATURE FI; fi
15608 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
15609 % U+FB02 LATIN SMALL LIGATURE FL; fl
15610 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
15611 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
15612 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15613 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15614 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15615 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15616 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15617 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15618 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15619 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
15620 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15621 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15622 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15623 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15624 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
15625 </puenc>
```

50.3 PU encoding, additions for VnT_EX

This file is provided by Han The Thanh.

```
15626 <*puvnenc>
15627 \DeclareTextCommand{\abreve}{PU}{\81\003}
15628 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15629 \DeclareTextCommand{\dj}{PU}{\81\021}
15630 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15631 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15632 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15633 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15634 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15635 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15636 \DeclareTextCommand{\DJ}{PU}{\81\020}
15637 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15638 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15639 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15640 \DeclareTextCommand{\UHORN}{PU}{\81\257}
15641 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15642 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15643 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15644 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15645 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15646 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15647 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15648 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15649 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
```

15650 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15651 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15652 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15653 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15654 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15655 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15656 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15657 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15658 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15659 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15660 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15661 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15662 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15663 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15664 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15665 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15666 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15667 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15668 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15669 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15670 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15671 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15672 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15673 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15674 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15675 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15676 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15677 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15678 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15679 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15680 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15681 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15682 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15683 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15684 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15685 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15686 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15687 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15688 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15689 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15690 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15691 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15692 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15693 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15694 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15695 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15696 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15697 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15698 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15699 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15700 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15701 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15702 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15703 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15704 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15705 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15706 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}

15707 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15708 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15709 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15710 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15711 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15712 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15713 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15714 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15715 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15716 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15717 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15718 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15719 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15720 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15721 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15722 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15723 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15724 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15725 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15726 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15727 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15728 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15729 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15730 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15731 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15732 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15733 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15734 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15735 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15736 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
15737 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15738 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15739 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15740 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15741 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15742 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15743 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15744 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15745 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15746 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15747 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15748 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15749 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15750 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15751 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15752 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15753 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15754 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15755 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15756 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15757 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15758 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15759 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15760 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15761 </puvnenc>

50.4 PU encoding, additions for Arabi

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15762 \DeclareTextCommand{\puarenc}
15763 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
TER HAMZA
15764 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15765 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15766 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15767 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15768 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15769 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
15770 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
15771 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
15772 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
15773 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
TER THEH
15774 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
TER JEEM
15775 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
15776 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
15777 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
15778 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
15779 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
15780 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
15781 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
15782 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
TER SHEEN
15783 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
15784 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
15785 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
15786 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
15787 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
15788 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
TER GHAIN
15789 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
15790 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
15791 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
15792 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
15793 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
15794 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LET-
TER MEEM
15795 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
15796 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
15797 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
15798 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LET-
TER ALEF MAKSURA
15799 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
15800 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
15801 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
15802 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
15803 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
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15804 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15805 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15806 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15807 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

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15808 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15809 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
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15810 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15811 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
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15812 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15813 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
    TER YEH

15814 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15815 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15816 \puarenc

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51 End of file hyccheck.tex

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15817 \*check)
15818 \typeout{}
15819 \begin{document}
15820 \end{document}
15821 \check)

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