

Hypertext marks in \LaTeX

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1 Documentation overview for `hyperref`

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

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

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

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \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 `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

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

```

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

```

\HyC@edef
125 \def\HyC@def#1#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 (vtex driver, Unicode support).

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

```
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\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{%
441   \LaTeX2%
442   \ifHy@unicode\textepsilon\else e\fi
443 }%
444 \def\eTeX{%
445   \ifHy@unicode\textepsilon\else e\fi
446   -\TeX%
447 }%
448 \def\SliTeX{\SliTeX}%
449 \def\MF{Metafont}%
450 \def\MP{Metapost}%

```

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

```

451 \let\fontencoding\@gobble
452 \let\fontfamily\@gobble
453 \let\fontseries\@gobble
454 \let\fontshape\@gobble
455 \let\fontsize\@gobbletwo
456 \let\selectfont\@empty
457 \let\usefont\@gobblefour
458 \let\emph\@firstofone
459 \let\textnormal\@firstofone
460 \let\textrm\@firstofone
461 \let\textsf\@firstofone
462 \let\texttt\@firstofone
463 \let\textbf\@firstofone
464 \let\textmd\@firstofone
465 \let\textit\@firstofone

```

```

466 \let\textsc\@firstofone
467 \let\textsl\@firstofone
468 \let\textup\@firstofone
469 \let\normalfont\@empty
470 \let\rmfamily\@empty
471 \let\sfamily\@empty
472 \let\ttfamily\@empty
473 \let\bfseries\@empty
474 \let\mdseries\@empty
475 \let\itshape\@empty
476 \let\scshape\@empty
477 \let\slshape\@empty
478 \let\upshape\@empty
479 \let\em\@empty
480 \let\rm\@empty
481 \let\Huge\@empty
482 \let\LARGE\@empty
483 \let\Large\@empty
484 \let\footnotesize\@empty
485 \let\huge\@empty
486 \let\large\@empty
487 \let\normalsize\@empty
488 \let\scriptsize\@empty
489 \let\small\@empty
490 \let\tiny\@empty
491 \let\mathversion\@gobble
492 \let\phantom\@gobble
493 \let\vphantom\@gobble
494 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

496 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
497 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

498 \let\textlatin\@firstofone
499 \let\IfUndefined{language@group}{\}%
500 \csname HyPsd@babel@language@group\endcsname
501 }%
502 \HyPsd@GreekPatch
503 \HyPsd@SpanishPatch
504 \HyPsd@RussianPatch
505 \HyPsd@BabelPatch
506 \let\@safe@activetrue\relax
507 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

508 \let\cyr\relax

```

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

```

509 \let\es@roman\@Roman

```

Package german.

```

510 \let\glqq\textglqq
511 \let\grqq\textgrqq
512 \let\glq\textglq
513 \let\grq\textgrq
514 \let\flqq\textflqq
515 \let\frqq\textfrqq
516 \let\flq\textflq
517 \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}
518 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

519 \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.

```

520 \let\hspace\HyPsd@hspace

```

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

```

521 \let\label\@gobble
522 \let\index\@gobble
523 \let\glossary\@gobble
524 \let\href\@secondoftwo
525 \let\@mkboth\@gobbletwo

```

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

```

526 \let\ref\HyPsd@ref
527 \let\pageref\HyPsd@pageref
528 \let\nameref\HyPsd@nameref
529 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

530 \let\leavevmode\@empty
531 \let\mbox\@empty

```

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

```

532 \def\halign{\pdfstringdefWarn\halign\@gobble}%
533 \let\ignorespaces\HyPsd@ignorespaces
534 \let\Hy@SectionAnchorHref\@gobble

```

Patch for cjk bookmarks.

```

535 \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`).

```
536 \Hy@pdfstringtrue
537 \pdfstringdefPreHook
```

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

```
538 \HyPsd@LetUnexpandableSpace\space
539 \HyPsd@LetUnexpandableSpace\ %
540 \HyPsd@LetUnexpandableSpace~%
541 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package `xspace`.

```
542 \ltx@ifundefined{@xspace}{%
543   \let\xspace\HyPsd@ITALCORR
544 }{%
545   \let\xspace\HyPsd@XSPACE
546 }%
547 \let\/\HyPsd@ITALCORR
548 \let\bgroup\/%
549 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
550 \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:

```
551 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
552 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
553 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
554 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
555 \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).

```

556 \begingroup
557   \let\GenericError\@gobblefour
558   \let\GenericWarning\@gobbletwo
559   \let\GenericInfo\@gobbletwo

```

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

```

560 \ifx\nofrenchguillemets\@undefined
561   \else
562     \nofrenchguillemets
563   \fi

```

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

```

564 \let\Hy@temp\xdef
565 \let\def\HyPsd@DefCommand
566 \let\gdef\HyPsd@DefCommand
567 \let\edef\HyPsd@DefCommand
568 \let\xdef\HyPsd@DefCommand
569 \let\futurelet\HyPsd@LetCommand
570 \let\let\HyPsd@LetCommand
571 \Hy@temp#1{#2}%
572 \endgroup

```

6.2.3 Postprocessing

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

```
573 \ifx#1\@empty
574 \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 the following item takes into account, that makes 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 find 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 an marker for the xspace support.
- T_EX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

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

```
575 \HyPsd@ProtectSpaces#1%
576 \let\HyPsd@String\@empty
577 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
578 \global\let#1\HyPsd@String
```

Check tokens. After removing the spaces and the grouping characters the string now should only consists of the following tokens/catcodes:

- 0 command names with start with an escape character.
- 3 math shift
- 4 alignment tabs
- 6 parameter, but this is unlikely.
- 7 superscript
- 8 subscript
- 11 letter
- 12 other
- 13 commands that are active characters.

After \HyPsd@CheckCatcodes the command \HyPsd@RemoveMask is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if \HyPsd@CheckCatcodes is called.

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

```
579 \let\HyPsd@SPACEOPTI\relax
580 {%
581 \let\HyPsd@String\@empty
582 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
583 \global\let#1\HyPsd@String
584}%
585 \expandafter\HyPsd@RemoveMask\expandafter
586 |\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.

```
587 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
588 \let\HyPsd@String\@empty
589 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
590 \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.

```
591 \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.

```
592 \ifHy@unicode
593 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
594 \HyPsd@SPACEOPTI#1%
595 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
596 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
597 {\HyPsd@SPACEOPTI\80\273}#1%
598 \else
599 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
600 \expandafter\HyPsd@Subst\expandafter{%
601 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
602 \string\273}{\HyPsd@SPACEOPTI\273}#1%
603 \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.

```
604 \ifHy@unicode
605 \HyPsd@StringSubst{\)}{\80\051}#1%
606 \HyPsd@Subst){\80\051}#1%
607 \let\HyPsd@empty\relax
608 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
609 {\HyPsd@empty\80\051}#1%
610 \else
611 \HyPsd@StringSubst{\)}{\051}#1%
612 \HyPsd@Subst){\051}#1%
613 \let\HyPsd@empty\relax
```

```

614 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
615 \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`.

```

616 \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
617 \ltx@ifundefined{@xspace}{%
618 }{%
619 \let\HyPsd@xspace\relax
620 \expandafter\HyPsd@Subst\expandafter
621 {\HyPsd@XSPACE}\HyPsd@xspace#1%
622 \let\HyPsd@xspace\HyPsd@doxspace
623 }%
624 \xdef#1{#1\HyPsd@empty}%

```

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

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

```

625 \HyPsd@Subst{---}\textemdash#1%
626 \HyPsd@Subst{--}\textendash#1%
627 % \HyPsd@Subst{fi}\textfi#1%
628 % \HyPsd@Subst{fl}\textfl#1%
629 \HyPsd@Subst{!'}\textexclamdown#1%
630 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

631 \let\HyPsd@empty\@empty

```

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

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

```

632 \ifHy@unicode
633 \HyPsd@StringSubst{\textparenleft#1%
634 \HyPsd@Subst(\textparenleft#1%
635 \else

```

```

636 \HyPsd@StringSubst\({\050}#1%
637 \HyPsd@Subst({\050}#1%
638 \HyPsd@StringSubst{\050}{\string\{ }#1%
639 \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.

```

640 \ifHy@unicode
641 \edef\HyPsd@SPACEOPTI{\80\040}%
642 \else
643 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
644 \fi
645 \xdef#1{#1\@empty}%
646 \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.

```

647 \endgroup
648 \begingroup
649 \ifHy@unicode
650 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

651 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
652 \ltx@ifundefined{StringEncodingConvertTest}{%
653 }{%
654 \EdefUnescapeString\HyPsd@temp#1%
655 \ifxetex
656 \let\HyPsd@UnescapedString\HyPsd@temp
657 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
658 {utf16be}{ascii-print}{%
659 \EdefEscapeString\HyPsd@temp\HyPsd@temp
660 \global\let#1\HyPsd@temp
661 \HyPsd@EscapeTeX#1%
662 \Hy@unicodedefalse
663 }{%
664 \HyPsd@ToBigChars#1%
665 }%
666 \else
667 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
668 {utf16be}{pdfdoc}{%
669 \EdefEscapeString\HyPsd@temp\HyPsd@temp
670 \global\let#1\HyPsd@temp
671 \HyPsd@EscapeTeX#1%
672 \Hy@unicodedefalse
673 }{%
674 \fi
675 }%
676 \fi
677 \fi
678 \HyPsd@XeTeXBigCharsfalse

```

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

```
679 \pdfstringdefPostHook#1%
680 \endgroup
681 }
```

`\Hy@pdfstringdef`

```
682 \def\Hy@pdfstringdef#1#2{%
683 \pdfstringdef\Hy@gtemp{#2}%
684 \let#1\Hy@gtemp
685 }
```

6.3 Encodings

6.3.1 Xe_{TeX}

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

```

727 \lccode\z@=\count@
728 \ifnum\count@=40 % (
729 \let\y\@backslashchar
730 \else
731 \ifnum\count@=41 % )
732 \let\y\@backslashchar
733 \else
734 \ifnum\count@=92 % backslash
735 \let\y\@backslashchar
736 \else
737 \ifnum\count@=10 % newline
738 \edef\y###1{\string\n}%
739 \else
740 \ifnum\count@=13 % carriage return
741 \edef\y###1{\string\r}%
742 \fi
743 \fi
744 \fi
745 \fi
746 \fi
747 \lowercase{%
748 \toks@\expandafter{%
749 \the\expandafter\toks@
750 \y
751 ^^@%
752 }%
753 }%
754 \fi
755 \x
756 }%
757 }
758 \Hy@temp

```

6.3.2 Workaround for package linguex

```

759 \@ifpackageloaded{linguex}{%
760 \let\HyLinguex@OrgB\b
761 \let\HyLinguex@OrgC\c
762 \let\HyLinguex@OrgD\d
763 \def\HyLinguex@Restore{%
764 \let\b\HyLinguex@OrgB
765 \let\c\HyLinguex@OrgC
766 \let\d\HyLinguex@OrgD
767 }%
768 \Hy@AtEndOfPackage{%
769 \pdfstringdefDisableCommands{%
770 \let\IfUndefined{oldb}{\let\b\oldb}%
771 \let\IfUndefined{oldc}{\let\c\oldc}%
772 \let\IfUndefined{oldd}{\let\d\oldd}%
773 }%
774 }%
775 }{%
776 \let\HyLinguex@Restore\relax
777 }%

```

6.3.3 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for 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.

```

778 \ifundefined{T@PD1}{%
779   \input{pdlenc.def}%
780   \HyLinguex@Restore
781 }{}
782 \DeclareFontFamily{PD1}{pdf}{}
783 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
784 \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.

```

785 \def\HyPsd@InitUnicode{%
786   \ifundefined{T@PU}{%
787     \input{puenc.def}%
788     \HyLinguex@Restore
789   }{}%
790   \DeclareFontFamily{PU}{pdf}{}%
791   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
792   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
793   \let\HyPsd@InitUnicode\relax
794 }

```

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.

```

795 \def\texorpdfstring{%
796   \ifHy@pdfstring
797     \expandafter\@secondoftwo
798   \else
799     \expandafter\@firstoftwo
800   \fi
801 }

```

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`.

```

802 \ifundefined{pdfstringdefPreHook}{%
803   \let\pdfstringdefPreHook\@empty
804 }{}

```

```

805 \@ifundefined{pdfstringdefPostHook}{%
806   \let\pdfstringdefPostHook\@gobble
807 }{}

```

`\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`.

```

808 \def\pdfstringdefDisableCommands{%
809   \begingroup
810   \makeatletter
811   \HyPsd@DisableCommands
812 }

```

`\HyPsd@DisableCommands`

```

813 \long\def\HyPsd@DisableCommands#1{%
814   \toks0=\expandafter{\pdfstringdefPreHook}%
815   \toks1={#1}%
816   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
817   \endgroup
818 }

```

`\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`.

```

819 \def\pdfstringdefWarn#1{%
820   \expandafter\noexpand\csname\<>-string#1\endcsname
821 }

```

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.

```

822 \begingroup

```

```

823 \catcode0=12 %
824 \def\x{\endgroup
825 \def\HyPsd@ignorespaces{%
826 \romannumeral\expandafter'\expandafter^^@%
827 \romannumeral'^^@%
828 }%
829 }%
830 \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`.

```

831 \def\HyPsd@BabelPatch{%
832 \let\HyOrg@languageshorthands\languageshorthands
833 \let\languageshorthands\HyPsd@LanguageShorthands
834 }
835 \RequirePackage{pdfcmds}[2009/04/10]
836 \begingroup\expandafter\expandafter\expandafter\endgroup
837 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
838 \let\HyPsd@langshort@system\@empty
839 \def\HyPsd@LanguageShorthands#1{%
840 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
841 \HyPsd@langshort@system
842 \expandafter\@gobble
843 \else
844 \expandafter\@firstofone
845 \fi
846 {%
847 \HyOrg@languageshorthands{#1}%
848 }%
849 }%
850 \else
851 \def\HyPsd@LanguageShorthands#1{%
852 \ifnum\pdf@strcmp{#1}{system}=\z@
853 \expandafter\@gobble
854 \else
855 \expandafter\@firstofone
856 \fi
857 {%
858 \HyOrg@languageshorthands{#1}%
859 }%
860 }%
861 \fi
862 \def\Hy@temp{%
863 \@ifpackageloaded{babel}{%
864 \@ifpackagelater{babel}{2008/03/16}{%
865 \let\Hy@temp\@empty
866 }{%

```



```

867 \def\HyPsd@BabelPatch{%
868 \let\HyOrg@languageshorthands\languageshorthands
869 }%
870 }%
871 }{}%
872 }
873 \Hy@temp
874 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
875 \newif\ifHy@next

Nothing to do for english.

876 \ltx@ifundefined{danish@sh@@"@sel}{-}{%
877 \def\HyPsd@babel@danish{%
878 \declare@shorthand{danish}{-}{-}%
879 \declare@shorthand{danish}{-}{-}%
880 }%
881 }
882 \ltx@ifundefined{dutch@sh@@"@sel}{-}{%
883 \def\HyPsd@babel@dutch{%
884 \declare@shorthand{dutch}{-}{-}%
885 \declare@shorthand{dutch}{-}{-}%
886 }%
887 }
888 \ltx@ifundefined{finnish@sh@@"@sel}{-}{%
889 \def\HyPsd@babel@finnish{%
890 \declare@shorthand{finnish}{-}{-}%
891 }%
892 }
893 \ltx@ifundefined{french@sh@@"@sel}{-}{%
894 \def\HyPsd@babel@frenchb{%
895 \def\guill@spacing{ }%
896 }%
897 }
898 \ltx@ifundefined{german@sh@@"@sel}{-}{%
899 \def\HyPsd@babel@german{%
900 \declare@shorthand{german}{f}{f}%
901 \declare@shorthand{german}{-}{-}%
902 \declare@shorthand{german}{-}{-}%
903 }%
904 }
905 \ltx@ifundefined{macedonian@sh@@"@sel}{-}{%
906 \def\HyPsd@babel@macedonian{%
907 \declare@shorthand{macedonian}{-}{-}%
908 \declare@shorthand{macedonian}{-}{-}%
909 }%
910 }{}
911 \ltx@ifundefined{ngerman@sh@@"@sel}{-}{%
912 \def\HyPsd@babel@ngerman{%
913 \declare@shorthand{ngerman}{-}{-}%
914 \declare@shorthand{ngerman}{-}{-}%
915 }%
916 }
917 \ltx@ifundefined{portuges@sh@@"@sel}{-}{%
918 \def\HyPsd@babel@portuges{%
919 \declare@shorthand{portuges}{-}{-}%
920 }%
921 }

```

```

922 \ltx@ifundefined{russian@sh@"@sel}{-}{%
923   \def\HyPsd@babel@russian{%
924     \declare@shorthand{russian}{-}{-}%
925     \declare@shorthand{russian}{-}{-}%
926   }%
927 }
928 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
929   \def\HyPsd@babel@slovene{%
930     \declare@shorthand{slovene}{-}{-}%
931   }%
932 }

```

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

```

933 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
934   \def\HyPsd@babel@spanish{%
935     \declare@shorthand{spanish}{<<}{\guillemotleft}%
936     \declare@shorthand{spanish}{>>}{\guillemotright}%
937     \declare@shorthand{spanish}{=}{-}%
938     \declare@shorthand{spanish}{~}{-}%
939     \declare@shorthand{spanish}{!}{\textexclamdown}%
940     \declare@shorthand{spanish}{?}{\textquestiondown}%
941   }%
942 }
943 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
944   \def\HyPsd@babel@swedish{%
945     \declare@shorthand{swedish}{-}{-}%
946     \declare@shorthand{swedish}{-}{-}%
947   }%
948 }
949 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
950   \def\HyPsd@babel@ukrainian{%
951     \declare@shorthand{ukrainian}{-}{-}%
952     \declare@shorthand{ukrainian}{-}{-}%
953   }%
954 }
955 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
956   \def\HyPsd@babel@usorbian{%
957     \declare@shorthand{usorbian}{f}{f}%
958     \declare@shorthand{usorbian}{-}{-}%
959   }%
960 }
961 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
962   \let\HyPsd@GreekPatch\@empty
963 }{%
964   \def\HyPsd@GreekPatch{%
965     \let\greeknumeral\HyPsd@greeknumeral
966     \let\Greeknatural\HyPsd@greeknumeral
967   }%
968 }
969 \def\HyPsd@greeknumeral#1{%
970   \HyPsd@GreekNum\@firstoftwo{#1}%
971 }
972 \def\HyPsd@Greeknumeral#1{%
973   \HyPsd@GreekNum\@secondoftwo{#1}%
974 }
975 \def\HyPsd@GreekNum#1#2{%
976   \ifHy@unicode
977     \ifnum#2<\@ne

```

```

978 \@arabic{#2}%
979 \else
980 \ifnum#2<1000000 %
981 \HyPsd@@GreekNum#1{#2}%
982 \else
983 \@arabic{#2}%
984 \fi
985 \fi
986 \else
987 \@arabic{#2}%
988 \fi
989 }
990 \def\HyPsd@@GreekNum#1#2{%
991 \ifnum#2<\@m
992 \ifnum#2<10 %
993 \expandafter\HyPsd@GreekNumI
994 \expandafter\@gobble\expandafter#1\number#2%
995 \else
996 \ifnum#2<100 %
997 \expandafter\HyPsd@GreekNumII
998 \expandafter\@gobble\expandafter#1\number#2%
999 \else
1000 \expandafter\HyPsd@GreekNumIII
1001 \expandafter\@gobble\expandafter#1\number#2%
1002 \fi
1003 \fi
1004 \ifnum#2>\z@
1005 \textnumeralsigngreek
1006 \fi
1007 \else
1008 \ifnum#2<\@M
1009 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1010 \else
1011 \ifnum#2<100000 %
1012 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1013 \else
1014 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1015 \fi
1016 \fi
1017 \fi
1018 }
1019 \def\HyPsd@GreekNumI#1#2#3{%
1020 #1{%
1021 \ifnum#3>\z@
1022 \textnumeralsignlowergreek
1023 \fi
1024 }%
1025 \expandafter#2%
1026 \ifcase#3 %
1027 {}{}%
1028 \or\textalpha\textAlpha
1029 \or\textbeta\textBeta
1030 \or\textgamma\textGamma
1031 \or\textdelta\textDelta
1032 \or\textepsilon\textEpsilon
1033 \or\textstigmagreek\textStigmagreek
1034 \or\textzeta\textZeta

```

```

1035 \or\texteta\textEta
1036 \or\texttheta\textTheta
1037 \else
1038   {}{}%
1039 \fi
1040 }
1041 \def\HyPsd@GreekNumII#1#2#3#4{%
1042   #1{%
1043     \ifnum#3>\z@
1044       \textnumeralsignlowergreek
1045       \fi
1046     }%
1047     \expandafter#2%
1048     \ifcase#3 %
1049       {}{}%
1050       \or\textiota\textIota
1051       \or\textkappa\textKappa
1052       \or\textlambda\textLambda
1053       \or\textmu\textMu
1054       \or\textnu\textNu
1055       \or\textxi\textXi
1056       \or\textomicron\textOmicron
1057       \or\textpi\textPi
1058       \or\textkoppagreek\textKoppagreek
1059       \else
1060         {}{}%
1061       \fi
1062     \HyPsd@GreekNumI#1#2#4%
1063   }
1064 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1065   #1{%
1066     \ifnum#3>\z@
1067       \textnumeralsignlowergreek
1068       \fi
1069     }%
1070     \expandafter#2%
1071     \ifcase#3 %
1072       {}{}%
1073       \or\textrho\textRho
1074       \or\textsigma\textSigma
1075       \or\texttau\textTau
1076       \or\textupsilon\textUpsilon
1077       \or\textphi\textPhi
1078       \or\textchi\textChi
1079       \or\textpsi\textPsi
1080       \or\textomega\textOmega
1081       \or\textsampigreek\textSampigreek
1082       \else
1083         {}{}%
1084       \fi
1085     \HyPsd@GreekNumII#1#2#4#5%
1086   }
1087 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1088   \HyPsd@GreekNumI\@firstofone#1#2%
1089   \HyPsd@@GreekNum#1{#3#4#5}%
1090 }
1091 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%

```

```

1092 \HyPsd@GreekNumII\@firstofone#1#2#3%
1093 \HyPsd@@GreekNum#1{#4#5#6}%
1094 }
1095 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1096 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1097 \HyPsd@@GreekNum#1{#5#6#7}%
1098 }

1099 \def\HyPsd@SpanishPatch{%
1100 \ltx@ifundefined{es@save@dot}{%
1101 }{%
1102 \let\.\es@save@dot
1103 }%
1104 }

```

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

```

1105 \def\HyPsd@RussianPatch{%
1106 \ltx@ifundefined{russian@sh@"@-@}{%
1107 }{%
1108 \@namedef{russian@sh@"@-@}{-}%
1109 }%
1110 }

```

6.5.3 CJK patch

```

1111 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1112 \def\HyPsd@CJKhook{%
1113 \ltx@ifpackageloaded{CJK}{%
1114 \let\CJK@kern\relax
1115 \let\CJKkern\relax
1116 \let\CJK@CJK\relax
1117 \ifHy@CJKbookmarks
1118 \HyPsd@CJKhook@bookmarks
1119 \fi
1120 \HyPsd@CJKhook@unicode
1121 }{%
1122 }

```

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).

```

1123 \begingroup
1124 \catcode"7F=\active
1125 \toks@{%
1126 \let\CJK@ignorespaces\empty
1127 \def\CJK@char#1{\@gobbletwo}%

```

```

1128 \let\CJK@charx\@gobblefour
1129 \let\CJK@punctchar\@gobblefour
1130 \def\CJK@punctcharx#1{\@gobblefour}%
1131 \catcode"7F=\active
1132 \def^^7f#1^^7f#2^^7f{%
1133   \string #1\HyPsd@DecimalToOctal{#2}%
1134 }%
1135 % ... ?
1136 \ifHy@unicode
1137   \def\Hy@cjkpu{\80}%
1138 \else
1139   \let\Hy@cjkpu\@empty
1140 \fi
1141 \HyPsd@CJKActiveChars
1142 }%
1143 \count@=127 %
1144 \@whilenum\count@<255 \do{%
1145   \advance\count@ by 1 %
1146   \lccode'\~=\count@
1147   \lowercase{%
1148     \toks@\expandafter{\the\toks@ ~}%
1149   }%
1150 }%
1151 \toks@\expandafter{\the\toks@ !}%
1152 \xdef\HyPsd@CJKhook@bookmarks{%
1153   \the\toks@
1154 }%
1155 \endgroup

```

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

```

1156 \def\HyPsd@CJKActiveChars#1{%
1157   \ifx#1!%
1158     \let\HyPsd@CJKActiveChars\relax
1159   \else
1160     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1161   \fi
1162   \HyPsd@CJKActiveChars
1163 }

```

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

```

1164 \def\HyPsd@DecimalToOctal#1{%
1165   \ifcase #1 %
1166     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1167     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1168     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1169     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1170     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1171     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1172     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1173     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1174     \or @\or A\or B\or C\or D\or E\or F\or G%
1175     \or H\or I\or J\or K\or L\or M\or N\or O%
1176     \or P\or Q\or R\or S\or T\or U\or V\or W%
1177     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1178     \or \140\or a\or b\or c\or d\or e\or f\or g%
1179     \or h\or i\or j\or k\or l\or m\or n\or o%

```

```

1180 \or p\or q\or r\or s\or t\or u\or v\or w%
1181 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1182 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1183 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1184 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1185 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1186 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1187 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1188 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1189 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1190 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1191 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1192 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1193 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1194 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1195 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1196 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1197 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1198 \fi
1199 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1200 \def\HyPsd@CJKhook@unicode{%
1201 \let\Unicode\HyPsd@CJK@Unicode
1202 \let\CJKnumber\HyPsd@CJKnumber
1203 \let\CJKdigits\HyPsd@CJKdigits
1204 }

```

\HyPsd@CJK@Unicode

```

1205 \def\HyPsd@CJK@Unicode#1#2{%
1206 \ifnum#1<256 %
1207 \HyPsd@DecimalToOctalFirst{#1}%
1208 \HyPsd@DecimalToOctalSecond{#2}%
1209 \else
1210 \933%
1211 \expandafter\expandafter\expandafter\HyPsd@HighA
1212 \intcalcDiv{#1}{4}!%
1213 \933%
1214 \ifcase\intcalcMod{#1}{4} %
1215 4\or 5\or 6\or 7%
1216 \fi
1217 \HyPsd@DecimalToOctalSecond{#2}%
1218 \fi
1219 }

1220 \def\HyPsd@HighA#1!{%
1221 \expandafter\expandafter\expandafter\HyPsd@HighB
1222 \IntCalcDiv#1!64!!%
1223 \expandafter\expandafter\expandafter\HyPsd@HighD
1224 \IntCalcMod#1!64!!%
1225 }
1226 \def\HyPsd@HighB#1!{%
1227 \expandafter\expandafter\expandafter\HyPsd@HighC
1228 \IntCalcDec#1!!%
1229 }

```

```

1230 \def\HyPsd@HighC#1!{%
1231   \IntCalcDiv#1!4!%
1232   \@backslashchar
1233   \IntCalcMod#1!4!%
1234 }
1235 \def\HyPsd@HighD#1!{%
1236   \ifcase\IntCalcDiv#1!8! %
1237     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1238   \fi
1239   \ifcase\IntCalcMod#1!8! %
1240     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1241   \fi
1242 }
1243 \def\HyPsd@DecimalToOctalFirst#1{%
1244   \9%
1245   \ifcase#1 %
1246     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1247     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1248     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1249     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1250     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1251     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1252     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1253     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1254     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1255     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1256     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1257     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1258     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1259     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1260     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1261     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1262     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1263     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1264     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1265     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1266     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1267     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1268     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1269     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1270     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1271     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1272     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1273     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1274     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1275     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1276     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1277     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1278   \fi
1279 }
1280 \def\HyPsd@DecimalToOctalSecond#1{%
1281   \ifcase #1 %
1282     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1283     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1284     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1285     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1286     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%

```



```

1287 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1288 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1289 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1290 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1291 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1292 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1293 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1294 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1295 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1296 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1297 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1298 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1299 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1300 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1301 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1302 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1303 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1304 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1305 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1306 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1307 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1308 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1309 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1310 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1311 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1312 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1313 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1314 \fi
1315 }

1316 \def\HyPsd@CJKNnumber#1{%
1317 \ifnum#1<\z@
1318 \CJk@minus
1319 \expandafter\HyPsd@@CJKNnumber\expandafter{\number-\number#1}%
1320 \else
1321 \expandafter\HyPsd@@CJKNnumber\expandafter{\number#1}%
1322 \fi
1323 }

1324 \def\HyPsd@@CJKNnumber#1{%
1325 \ifcase#1 %
1326 \CJk@zero\or\CJk@one\or\CJk@two\or\CJk@three\or\CJk@four\or
1327 \CJk@five\or\CJk@six\or\CJk@seven\or\CJk@eight\or\CJk@nine\or
1328 \CJk@ten\or\CJk@ten\CJk@one\or\CJk@ten\CJk@two\or
1329 \CJk@ten\CJk@three\or\CJk@ten\CJk@four\or\CJk@ten\CJk@five\or
1330 \CJk@ten\CJk@six\or\CJk@ten\CJk@seven\or\CJk@ten\CJk@eight\or
1331 \CJk@ten\CJk@nine
1332 \else
1333 \ifnum#1<10000 %
1334 \HyPsd@CJKNnumberFour#1!\@empty{20}%
1335 \@empty
1336 \else
1337 \ifnum#1<100000000 %
1338 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1339 \IntCalcDiv#1!10000!%
1340 !\@empty{20}%
1341 \CJk@tenthousand
1342 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1343 \IntCalcMod#1!10000!%

```

```

1344      !\CJK@zero{10}%
1345      \@empty
1346      \else
1347      \expandafter\HyPsd@CJKnumberLarge
1348      \number\IntCalcDiv#1!100000000!\expandafter!%
1349      \number\IntCalcMod#1!100000000!!%
1350      \fi
1351      \fi
1352      \fi
1353  }
1354  \def\HyPsd@CJKnumberLarge#1!#2!{%
1355  \HyPsd@CJKnumberFour#1!{}{20}%
1356  \CJK@hundredmillion
1357  \ifnum#2=\z@
1358  \else
1359  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1360  \IntCalcDiv#2!10000!%
1361  !\CJK@zero{10}%
1362  \CJK@tenthousand
1363  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1364  \IntCalcMod#2!10000!%
1365  !\CJK@zero{10}%
1366  \@empty
1367  \fi
1368  }
1369  \def\HyPsd@CJKnumberFour#1!#2#3{%
1370  \ifnum#1=\z@
1371  \expandafter\@gobble
1372  \else
1373  \ifnum#1<1000 %
1374  #2%
1375  \HyPsd@CJKnumberThree#1!{}{#3}%
1376  \else
1377  \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1378  \CJK@thousand
1379  \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1380  \IntCalcMod#1!1000!%
1381  !\CJK@zero{10}%
1382  \fi
1383  \fi
1384  }
1385  \def\HyPsd@CJKnumberThree#1!#2#3{%
1386  \ifnum#1=\z@
1387  \else
1388  \ifnum#1<100 %
1389  #2%
1390  \HyPsd@CJKnumberTwo#1!{}{#3}%
1391  \else
1392  \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1393  \CJK@hundred
1394  \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1395  \IntCalcMod#1!100!%
1396  !\CJK@zero{10}%
1397  \fi
1398  \fi
1399  }
1400  \def\HyPsd@CJKnumberTwo#1!#2#3{%

```

```

1401 \ifnum#1=\z@
1402 \else
1403 \ifnum#1<#3 %
1404   #2%
1405   \HyPsd@@CJKnumber{#1}%
1406 \else
1407 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1408 \CJK@ten
1409 \ifnum\IntCalcMod#1!10!=\z@
1410 \else
1411 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1412 \fi
1413 \fi
1414 \fi
1415 }

1416 \def\HyPsd@CJKdigits#1{%
1417 \ifx*#1\relax
1418 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1419 \else
1420 \HyPsd@@CJKdigits\CJK@null{#1}%
1421 \fi
1422 }

1423 \def\HyPsd@@CJKdigits#1#2{%
1424 \ifx\#2\%
1425 \else
1426 \HyPsd@@@CJKdigits#1#2\@nil
1427 \fi
1428 }%

1429 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1430 \HyPsd@CJKdigit#1{#2}%
1431 \ifx\#3\%
1432 \expandafter\@gobble
1433 \else
1434 \expandafter\@firstofone
1435 \fi
1436 {%
1437 \HyPsd@@@CJKdigits#1#3\@nil
1438 }%
1439 }

1440 \def\HyPsd@CJKdigit#1#2{%
1441 \ifcase#2 %
1442   #1\or
1443   \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1444   \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1445 \fi
1446 }

```

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}

1447 \def\HyPsd@inmathwarn#1#2{%
1448   \ifx#2\expandafter
1449     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1450       \HyPsd@GLYPHERR
1451       \expandafter\@gobble\string#1%
1452     >%
1453     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1454   \else
1455     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1456   \fi
1457 \else
1458   \expandafter#2%
1459 \fi
1460 }
1461 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1462 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent

1463 \def\HyPsd@add@accent#1#2{%
1464   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1465   #2%
1466 }%

```

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`.

```
1467 \def\HyPsd@LetUnexpandableSpace#1{%
1468   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1469 }
```

`\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.

```
1470 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1471 \edef\HyPsd@XSPACE{\string#\string X}
1472 \edef\HyPsd@ITALCORR{\string#\string I}
1473 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1474 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1475 \def\HyPsd@@hspace#1*#2\END{%
1476   \ifx\#2\%
1477     \HyPsd@hspacetest{#1}%
1478   \else
1479     \expandafter\HyPsd@hspacetest
1480   \fi
1481 }
```

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

```
1482 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1483 \ltx@ifundefined{tocsection}{%
1484   \let\HyPsd@AMSclassfix\relax
1485 }{%
1486   \def\HyPsd@AMSclassfix{%
1487     \let\tocpart\HyPsd@tocsection
1488     \let\tocchapter\HyPsd@tocsection
1489     \let\tocappendix\HyPsd@tocsection
```

```

1490 \let\tocsection\HyPsd@tocsection
1491 \let\tocsubsection\HyPsd@tocsection
1492 \let\tocsubsubsection\HyPsd@tocsection
1493 \let\tocparagraph\HyPsd@tocsection
1494 }%
1495 \def\HyPsd@tocsection#1#2#3{%
1496 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1497 #3%
1498 }%
1499 }

```

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.

```
1500 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```

1501 \def\HyPsd@@ref#1*#2\END{%
1502 \ifx\#2\%
1503 \HyPsd@@@ref{#1}%
1504 \else
1505 \expandafter\HyPsd@@@ref
1506 \fi
1507 }%

```

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

```

1508 \def\HyPsd@@@ref#1{%
1509 \expandafter\ifx\csname r@#1\endcsname\relax
1510 ??%
1511 \else
1512 \expandafter\expandafter\expandafter
1513 \@car\csname r@#1\endcsname\@nil
1514 \fi
1515 }

```

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

```
1516 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```

1517 \def\HyPsd@@pageref#1*#2\END{%
1518 \ifx\#2\%
1519 \HyPsd@@@pageref{#1}%
1520 \else
1521 \expandafter\HyPsd@@@pageref
1522 \fi
1523 }

```

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

```

1524 \def\HyPsd@@@pageref#1{%
1525 \expandafter\ifx\csname r@#1\endcsname\relax
1526 ??%
1527 \else
1528 \expandafter\expandafter\expandafter\expandafter
1529 \expandafter\expandafter\expandafter\@car
1530 \expandafter\expandafter\expandafter\@gobble

```

```

1531 \csname r@#1\endcsname{}\@nil
1532 \fi
1533 }

```

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

```

1534 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1535 \def\HyPsd@@nameref#1*#2\END{%
1536 \ifx\#2\%
1537 \HyPsd@@@nameref{#1}%
1538 \else
1539 \expandafter\HyPsd@@@nameref
1540 \fi
1541 }

```

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

```

1542 \def\HyPsd@@@nameref#1{%
1543 \expandafter\ifx\csname r@#1\endcsname\relax
1544 ??%
1545 \else
1546 \expandafter\expandafter\expandafter\expandafter
1547 \expandafter\expandafter\expandafter\@car
1548 \expandafter\expandafter\expandafter\@gobbletwo
1549 \csname r@#1\endcsname{}\}\@nil
1550 \fi
1551 }

```

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

```

1552 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1553 \def\HyPsd@@autoref#1*#2\END{%
1554 \ifx\#2\%
1555 \HyPsd@@@autoref{#1}%
1556 \else
1557 \expandafter\HyPsd@@@autoref
1558 \fi
1559 }

```

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

```

1560 \def\HyPsd@@@autoref#1{%
1561 \expandafter\ifx\csname r@#1\endcsname\relax
1562 ??%
1563 \else
1564 \expandafter\expandafter\expandafter\HyPsd@autorefname
1565 \csname r@#1\endcsname{}\}\}\@nil
1566 \expandafter\expandafter\expandafter
1567 \@car\csname r@#1\endcsname\@nil
1568 \fi
1569 }

```

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

```

1570 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%

```

```

1571 \ifx\#4\%
1572 \else
1573 \HyPsd@@autorefname#4.\@nil
1574 \fi
1575 }

```

\HyPsd@@autorefname

```

1576 \def\HyPsd@@autorefname#1.#2\@nil{%
1577 \ltx@ifundefined{#1autorefname}{%
1578 \ltx@ifundefined{#1name}{%
1579 }{%
1580 \csname#1name\endcsname\space
1581 }%
1582 }{%
1583 \csname#1autorefname\endcsname\space
1584 }%
1585 }

```

6.5.12 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would causes TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: \csname does the job, it defines the command to be \relax, if it has no meaning.

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of \relax). To avoid side effects this should be done in \pdfstringdef shortly before the \xdef job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. \pdfstringdef is slow enough, so this isn't done.

\HyPsd@DefCommand and \HyPsd@LetCommand expands to the commands \<def>-command and \<let>-command with the meaning of \def and \let. So it is detected by \HyPsd@CheckCatcodes and the command name \<def>-command or \<let>-command should indicate a forbidden definition command.

The command to be defined is converted to a string and back to a command name with the help of \csname. If the command is already defined, \noexpand prevents a further expansion, even though the command would expand to legal stuff. If the command don't have the meaning of \relax, \HyPsd@CheckCatcodes will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

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

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

\HyPsd@DefCommand

\HyPsd@LetCommand

```

1586 \begingroup
1587 \def\x#1#2{%
1588 \endgroup
1589 \let#1\def
1590 \def\HyPsd@DefCommand##1##2##{%
1591 #1%
1592 \expandafter\noexpand

```



```

1593     \csname\expandafter\@gobble\string##1\@empty\endcsname
1594     \@gobble
1595 }%
1596 \let#2\let
1597 \def\HyPsd@@LetCommand##1{%
1598     \expandafter\ifx\csname##1\expandafter\endcsname
1599         \csname iftrue\endcsname
1600         \pdfstringdefWarn\let
1601         \expandafter\@gobble
1602     \else
1603         \expandafter\ifx\csname##1\expandafter\endcsname
1604             \csname iffalse\endcsname
1605             \pdfstringdefWarn\let
1606             \expandafter\expandafter\expandafter\@gobble
1607         \else
1608             #2%
1609             \expandafter\noexpand
1610             \csname##1\expandafter\expandafter\expandafter\endcsname
1611         \fi
1612     \fi
1613 }%
1614 }%
1615 \expandafter\x\csname <def>-command\expandafter\endcsname
1616     \csname <let>-command\endcsname
1617 \def\HyPsd@LetCommand#1{%
1618     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1619     \expandafter\expandafter\expandafter{%
1620     \expandafter\@gobble\string#1\@empty
1621 }%
1622 }

```

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).

```

1623 \def\HyPsd@ifnextchar#1{%
1624     \pdfstringdefWarn#1%
1625     \expandafter\@gobbletwo\@gobble
1626 }

```

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`.

```

1627 \def\HyPsd@protected@testopt#1{%

```

```

1628 \pdfstringdefWarn#1%
1629 \@gobbletwo
1630 }

```

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:

```

1631 \def\HyPsd@Warning#1{%
1632   \begingroup
1633   \def\space{ }%
1634   \Hy@Warning{#1}%
1635   \endgroup
1636 }

```

6.6.2 Protecting spaces

```

1637 \RequirePackage{etexcmds}[2007/09/09]
1638 \ifetex@unexpanded
1639   \expandafter\@secondoftwo
1640 \else
1641   \expandafter\@firstoftwo
1642 \fi
1643 {%

```

`\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`.

```

1644 \def\HyPsd@ProtectSpaces#1{%
1645   \iftrue
1646     \expandafter\HyPsd@@ProtectSpacesFi
1647     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1648   \fi
1649 }%

```

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

```

1650 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1651   \fi
1652   \ifx\scrollmode#2\scrollmode
1653     \HyPsd@RemoveMask#1\HyPsd@End#3%
1654   \else
1655     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1656     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1657   \fi
1658 }%

```

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.

```

1659 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1660   \toks@\expandafter{#1}%
1661   \xdef#2{\the\toks@}%
1662 }%

```

```

1663 }{%
1664   \let\HyPsd@fi\fi
1665   \def\HyPsd@ProtectSpaces#1{%
1666     \xdef#1{%
1667       \iftrue
1668         \expandafter\HyPsd@@ProtectSpacesFi
1669         \expandafter|\expandafter\@empty#1| %
1670       \HyPsd@fi
1671     }%
1672     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1673   }%
1674   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1675     \fi
1676     \etex@unexpanded{#1}%
1677     \ifx\scrollmode#2\scrollmode
1678     \else
1679       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1680     \HyPsd@fi
1681   }%
1682   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1683     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1684   }%
1685 }

```

6.6.3 Remove grouping braces

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

```

1686 \def\HyPsd@RemoveBraces#1{%
1687   \ifx\scrollmode#1\scrollmode
1688   \else
1689     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1690   \fi
1691 }

```

`\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`.

```

1692 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1693   \fi
1694   \def\Hy@temp@A{#1#2}%
1695   \def\Hy@temp@B{#3}%
1696   \ifx\Hy@temp@A\Hy@temp@B
1697     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1698       \HyPsd@String#1%
1699     }%
1700   \ifx\scrollmode#2\scrollmode
1701   \else
1702     \Hy@ReturnAfterFiFiEnd{%
1703       \HyPsd@RemoveBraces{#2}%
1704     }%

```

```

1705 \fi
1706 \else
1707 \def\Hy@temp@A{#1}%
1708 \HyPsd@AppendItalcrr\HyPsd@String
1709 \ifx\Hy@temp@A\@empty
1710 \Hy@ReturnAfterElseFiFiEnd{%
1711 \HyPsd@RemoveBraces{#2}%
1712 }%
1713 \else
1714 \HyPsd@ProtectSpaces\Hy@temp@A
1715 \HyPsd@AppendItalcrr\Hy@temp@A
1716 \Hy@ReturnAfterFiFiEnd{%
1717 \expandafter\HyPsd@RemoveBraces\expandafter
1718 {\Hy@temp@A#2}%
1719 }%
1720 \fi
1721 \fi
1722 \Hy@ReturnEnd
1723 }

```

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

```

1724 \def\HyPsd@AppendItalcrr#1{%
1725 \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1}%
1726 }
1727 \def\HyPsd@@AppendItalcrr#1#2{%
1728 \expandafter\def\expandafter#2\expandafter{#2#1}%
1729 }

```

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).

```

1730 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1731 \global\let\HyPsd@Rest\relax
1732 \ifcat\relax\noexpand#1\relax
1733 \ifx#1\protect
1734 \else
1735 \ifx#1\penalty
1736 \setbox\z@=\hbox{%
1737 \afterassignment\HyPsd@AfterCountRemove
1738 \count@=#2\HyPsd@End
1739 }%
1740 \else
1741 \ifx#1\kern
1742 \setbox\z@=\hbox{%
1743 \afterassignment\HyPsd@AfterDimenRemove

```

```

1744         \dimen@=#2\HyPsd@End
1745     }%
1746 \else
1747     \ifx#1\hskip
1748         \setbox\z@=\hbox{%
1749             \afterassignment\HyPsd@AfterSkipRemove
1750             \skip@=#2\HyPsd@End
1751         }%
1752 \else
1753     \HyPsd@CatcodeWarning{#1}%
1754 \fi
1755 \fi
1756 \fi
1757 \fi
1758 \else
1759     \ifcat#1A% letter
1760         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1761             \HyPsd@String#1%
1762         }%
1763 \else
1764     \ifcat#1 % SPACE
1765         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1766             \HyPsd@String\HyPsd@SPACEOPTI
1767         }%
1768 \else
1769     \ifcat$#1%
1770         \HyPsd@CatcodeWarning{math shift}%
1771 \else
1772     \ifcat&#1%
1773         \HyPsd@CatcodeWarning{alignment tab}%
1774 \else
1775     \ifcat^#1%
1776         \HyPsd@CatcodeWarning{superscript}%
1777 \else
1778     \ifcat_#1%
1779         \HyPsd@CatcodeWarning{subscript}%
1780 \else
1781         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1782             \HyPsd@String#1%
1783         }%
1784     \fi
1785 \fi
1786 \fi
1787 \fi
1788 \fi
1789 \fi
1790 \fi
1791 \ifx\HyPsd@Rest\relax
1792     \ifx\scrollmode#2\scrollmode
1793 \else
1794     \Hy@ReturnAfterFiFiEnd{%
1795         \HyPsd@CheckCatcodes#2\HyPsd@End
1796     }%
1797 \fi
1798 \else
1799     \ifx\HyPsd@Rest\@empty
1800 \else

```

```

1801 \Hy@ReturnAfterFiFiEnd{%
1802 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1803 }%
1804 \fi
1805 \fi
1806 \Hy@ReturnEnd
1807 }

```

Remove counts, dimens, skips.

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

```

1808 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1809 \gdef\HyPsd@Rest{#1}%
1810 }

```

`\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.

```

1811 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1812 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1813 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1814 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1815 \else
1816 \ifdim\dimen@=\z@
1817 \else
1818 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1819 \fi
1820 \gdef\HyPsd@Rest{#1}%
1821 \fi
1822 }

```

`\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).

```

1823 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1824 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@\fi>1ex %
1825 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1826 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1827 \else
1828 \ifdim\skip@=\z@
1829 \else
1830 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1831 \fi
1832 \gdef\HyPsd@Rest{#1}%
1833 \fi
1834 }

```

Catcode warnings.

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

```

1835 \def\HyPsd@CatcodeWarning#1{%
1836 \HyPsd@Warning{%
1837 Token not allowed in a PDF string (%
1838 \ifHy@unicode
1839 Unicode%
1840 \else

```

```

1841     PDFDocEncoding%
1842     \fi
1843   }:%
1844   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1845 }%
1846 }
1847 \begingroup
1848 \catcode'\|=0 %
1849 \catcode'\|=12 %
1850 |gdef|HyPsd@RemoveCmdPrefix#1{%
1851   |expandafter|HyPsd@@RemoveCmdPrefix
1852   |string#1|@empty\<>-|@empty|@empty
1853 }%
1854 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1855 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1856 \def\HyPsd@RemoveSpaceWarning#1{%
1857   \HyPsd@Warning{%
1858     Token not allowed in a PDF string (%)
1859     \ifHy@unicode
1860       Unicode%
1861     \else
1862       PDFDocEncoding%
1863     \fi
1864   }:%
1865   \MessageBreak #1\MessageBreak
1866   removed%
1867 }%
1868 }

```

\HyPsd@ReplaceSpaceWarning

```

1869 \def\HyPsd@ReplaceSpaceWarning#1{%
1870   \HyPsd@Warning{%
1871     Token not allowed in a PDF string (%)
1872     \ifHy@unicode
1873       Unicode%
1874     \else
1875       PDFDocEncoding%
1876     \fi
1877   }:%
1878   \MessageBreak #1\MessageBreak
1879   replaced by space%
1880 }%
1881 }

```

6.6.5 Check for wrong glyphs

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

```

1882 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1883   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1884     \HyPsd@String#1%
1885   }%
1886   \ifx\\#2\\%
1887   \else
1888     \Hy@ReturnAfterFi{%

```

```

1889 \HyPsd@GlyphProcessWarning#2\@empty
1890 }%
1891 \fi
1892 }
1893 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1894 \HyPsd@@GlyphProcessWarning#1++>%
1895 \HyPsd@GlyphProcess#2\@empty
1896 }
1897 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1898 \ifx\#2\%
1899 \HyPsd@Warning{%
1900 Glyph not defined in %
1901 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1902 removing \@backslashchar#1'%
1903 }%
1904 \else
1905 \HyPsd@Warning{%
1906 Composite letter \@backslashchar#1+#2'\MessageBreak
1907 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1908 \MessageBreak
1909 removing \@backslashchar#1'%
1910 }%
1911 \fi
1912 }

```

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.

```

1913 \def\HyPsd@spaceopti#1{ % first space
1914 \ifx\HyPsd@spaceopti#1%
1915 \040%
1916 \else
1917 #1%
1918 \fi
1919 }%

```

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.

1920 \def\HyPsd@Subst#1#2#3{%
1921 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1922 \fi
1923 ##1%
1924 \ifx\scrollmode##2\scrollmode
1925 \else
1926 #2%
1927 \HyPsd@@ReplaceFi##2\END
1928 \fi
1929 }%

```



```

1930 \xdef#3{%
1931   \iftrue
1932     \expandafter\HyPsd@@ReplaceFi#3#1\END
1933   \fi
1934 }%
1935 }

```

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

```

1936 \def\HyPsd@StringSubst#1{%
1937   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1938 }

```

`\HyPsd@EscapeTeX`

```

1939 \begingroup
1940 \lccode'\!='\%%
1941 \lccode'\|=\'\%%
1942 \lccode'\(=\'\{%
1943 \lccode'\)='\}%
1944 \lccode'0=\ltx@zero
1945 \lccode'1=\ltx@zero
1946 \lccode'3=\ltx@zero
1947 \lccode'4=\ltx@zero
1948 \lccode'5=\ltx@zero
1949 \lccode'7=\ltx@zero
1950 \lowercase{\endgroup
1951 \def\HyPsd@EscapeTeX#1{%
1952   \HyPsd@Subst!{|045}#1%
1953   \HyPsd@Subst({|173}#1%
1954   \HyPsd@Subst){|175}#1%
1955 }%
1956 }

```

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.

```

1957 \def\HyPsd@doxspace#1{%
1958   \ifx#1\relax\else
1959     \ifx#1.\else
1960       \ifx#1:\else
1961         \ifx#1,\else
1962           \ifx#1;\else
1963             \ifx#1!\else
1964               \ifx#1?\else
1965                 \ifx#1/\else
1966                   \ifx#1-\else
1967                     \ifx#1'\else
1968                       \HyPsd@SPACEOPTI
1969                     \fi
1970                   \fi
1971                 \fi
1972               \fi
1973             \fi
1974           \fi

```

```

1975 \fi
1976 \fi
1977 \fi
1978 \fi
1979 #1%
1980 }%

```

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.

```

1981 \begingroup
1982 \catcode'\|=0 %
1983 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1984 |gdef|HyPsd@ConvertToUnicode#1{%
1985 |xdef#1{%
1986 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1987 }%
1988 |ifx#1|@empty
1989 |else
1990 |xdef#1{%
1991 \376\377%
1992 #1%
1993 }%
1994 |fi
1995 }%

```

\HyPsd@DoConvert

```

1996 |gdef|HyPsd@DoConvert#1{%
1997 |ifx#1|@empty
1998 |else
1999 |Hy@ReturnAfterFi{%
2000 |ifx#1\%%
2001 \%%
2002 |expandafter|HyPsd@DoEscape
2003 |else
2004 |HyPsd@Char{#1}%
2005 |expandafter|HyPsd@DoConvert
2006 |fi
2007 }%
2008 |fi
2009 }%

```

\HyPsd@DoEscape

```

2010 |gdef|HyPsd@DoEscape#1{%
2011 |ifx#19%
2012 |expandafter|HyPsd@GetTwoBytes
2013 |else
2014 |Hy@ReturnAfterFi{%
2015 |ifx#18%
2016 00%
2017 |expandafter|HyPsd@GetTwoBytes
2018 |else

```

```

2019      #1%
2020      |expandafter|HyPsd@GetOneByte
2021      |fi
2022      }%
2023      |fi
2024      }%

```

\HyPsd@GetTwoBytes

```

2025 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2026   #1\#2#3#4%
2027   |HyPsd@DoConvert
2028   }%

```

\HyPsd@GetOneByte

```

2029 |gdef|HyPsd@GetOneByte#1#2{%
2030   #1#2%
2031   |HyPsd@DoConvert
2032   }%
2033 |endgroup

```

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

```

2034 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2035   \xdef#4{#4#1#2}%
2036   \HyPsd@@ConvertToUnicode#3\END#4%
2037 }

```

\HyPsd@Char

```

2038 \begingroup
2039 \catcode0=9 %
2040 \catcode'\^=7 %
2041 \catcode'\^^=12 %
2042 \def\x{^^^0000}%
2043 \expandafter\endgroup
2044 \ifx\x\@empty
2045   \def\HyPsd@Char#1{%
2046     \ifnum'#1<128 %
2047       \@backslashchar 000#1%
2048     \else
2049       \ifnum'#1<65536 %
2050         \expandafter\HyPsd@CharTwoByte\number'#1!%
2051       \else
2052         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2053         \intcalcSub{'#1}{65536}!%
2054       \fi
2055     \fi
2056   }%
2057 \def\HyPsd@CharTwoByte#1!{%
2058   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2059   \IntCalcDiv#1!256!!%
2060   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2061   \IntCalcMod#1!256!!%
2062 }%
2063 \def\HyPsd@CharOctByte#1!{%
2064   \@backslashchar
2065   \IntCalcDiv#1!64!%
2066   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2067   \IntCalcMod#1!8!%

```

```

2068 }%
2069 \def\HyPsd@CharSurrogate#1!{%
2070 \@@backslashchar 33%
2071 \IntCalcDiv#1!262144!%
2072 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2073 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2074 \@@backslashchar 33%
2075 \expandafter\expandafter\expandafter\IntCalcAdd
2076 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2077 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2078 \IntCalcMod#1!256!!%
2079 }%
2080 \else
2081 \def\HyPsd@Char#1{%
2082 \@@backslashchar 000#1%
2083 }%
2084 \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`

```

2085 \begingroup\expandafter\expandafter\expandafter\endgroup
2086 \expandafter\ifx\csname numexpr\endcsname\relax
2087 \let\HyPsd@UTFviii\relax
2088 \else
2089 \begingroup
2090 \lccode'\~='^f4\relax
2091 \lowercase{\endgroup
2092 \def\HyPsd@UTFviii{%
2093 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2094 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2095 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2096 \ifx~\HyPsd@UTFviii@ccxliv@undef
2097 \let~\HyPsd@UTFviii@ccxliv@def
2098 \fi
2099 \let\unichar\HyPsd@unichar
2100 }%
2101 }%
2102 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2103 \edef\HyPsd@UTFviii@ccxliv@def{%
2104 \noexpand\UTFviii@four@octets\string ^f4%
2105 }%

```

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.

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

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

```

2106 \def\HyPsd@UTFviii@two#1#2{%
2107   \expandafter\HyPsd@UTFviii@@two
2108   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2109   \number'#1\expandafter| %
2110   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2111   \number'#2 \@nil
2112 }%
2113 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2114   \expandafter\8%
2115   \number\numexpr #1-48\expandafter\relax
2116   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2117   \number\numexpr #3-8*%
2118   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2119   \number\numexpr #4-8*#3\relax
2120 }%

```

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

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

```

2121 \def\HyPsd@UTFviii@three#1#2#3{%
2122   \expandafter\HyPsd@UTFviii@@three
2123   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2124   \number'#1\expandafter| %
2125   \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2126   \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2127   \number'#2\expandafter| %
2128   \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2129   \number'#3 \@nil
2130 }%
2131 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2132   \expandafter\9%
2133   \number\numexpr #1-56\expandafter\relax
2134   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2135   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2136   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2137   \number\numexpr #6-16\expandafter\relax
2138   \number\numexpr #7-8*#6\relax
2139 }%

```

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

```

```

2140 \def\HyPsd@UTFviii@four#1#2{%
2141 \expandafter\HyPsd@@UTFviii@four\number
2142 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2143 \expandafter|\number
2144 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2145 }%
2146 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2147 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2148 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2149 \ifodd#2 %
2150 \number\dimexpr(#2-1)/2\relax
2151 \else
2152 \number\dimexpr#2/2\relax
2153 \fi
2154 \number\dimexpr\ifodd#2 4+\fi
2155 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2156 \933%
2157 \expandafter\HyPsd@@@UTFviii@four\number
2158 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2159 }%
2160 \def\HyPsd@@@UTFviii@four#1|#2{%
2161 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2162 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2163 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2164 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2165 }%

```

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

```

2166 \def\HyPsd@unichar#1{%
2167 \ifHy@unicode
2168 \ifnum#1>"10FFFF %
2169 \HyPsd@UnicodeReplacementCharacter % illegal
2170 \else
2171 \ifnum#1>"FFFF %

```

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

```

2172 \expandafter\HyPsd@unichar\expandafter{%
2173 \number\dimexpr 55296+ %
2174 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2175 \relax\relax\relax
2176 }%

```

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

```

2177 \expandafter\HyPsd@unichar\expandafter{%
2178 \number\dimexpr#1-9216%
2179 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2180 \relax\relax\relax
2181 }%
2182 \else
2183 \ifnum#1>"7FF %
2184 \9%
2185 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2186 \number
2187 \dimexpr.00390625\dimexpr\number#1sp\relax\relax

```

```

2188     }%
2189     \else
2190     \8%
2191     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2192     \fi
2193     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2194     \number
2195     \numexpr#1-256*\number
2196     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2197     }%
2198     \fi
2199     \fi
2200     \else
2201     .% unsupported (Unicode -> PDF Doc Encoding)
2202     \fi
2203     }%
2204     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2205     \def\HyPsd@unichar@first@byte#1{%
2206     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2207     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2208     \number
2209     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2210     \relax\relax\relax
2211     }%
2212     }%
2213     \def\HyPsd@unichar@second@byte#1{%
2214     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2215     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2216     \number
2217     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2218     \relax\relax\relax
2219     }%
2220     }%
2221     \def\HyPsd@unichar@octtwo#1{%
2222     \number\dimexpr.125\dimexpr#1sp\relax\relax
2223     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2224     \relax\relax\relax
2225     }%
2226     \fi

```

7 Support of other packages

7.1 Class memoir

```

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

```

7.2 Package subfigure

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

```

2230 \@ifpackageloaded{subfigure}{%
2231   \ltx@ifundefined{sub@label}{%
2232     \Hy@hypertexnamesfalse
2233   }{%
2234     \renewcommand*{\sub@label}[1]{%
2235       \@bsphack

```

```

2236 \subfig@oldlabel{#1}%
2237 \if@filesw
2238 \begingroup
2239 \edef\@currentlabstr{%
2240 \expandafter\strip@prefix\meaning\@currentlabelname
2241 }%
2242 \protected@write\@auxout{}\@auxout{%
2243 \string\newlabel{sub@#1}{%
2244 {\@nameuse{@@thesub\@capttype}}%
2245 {\thepage}%
2246 {%
2247 \expandafter\strip@period\@currentlabstr
2248 \relax.\relax\@@@%
2249 }%
2250 {\@currentHref}%
2251 }%
2252 }%
2253 }%
2254 \endgroup
2255 \fi
2256 \@esphack
2257 }%
2258 \@ifpackagelater{subfigure}{2002/03/26}{\@auxout}{%
2259 \providecommand*\@toclevel@subfigure{1}%
2260 \providecommand*\@toclevel@subtable{1}%
2261 }%
2262 }%
2263 }{}

```

7.3 Package xr and xr-hyper

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

```

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

```

If reading external aux files check whether they have a non zero fourth field in \newlabel and if so, add the URL as the fifth field.

```

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

```

```

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

```

Providing dummy definitions.

```

2277 \let\literalps@out\@gobble
2278 \newcommand\pdfbookmark[3]{}
2279 \def\Acrobatmenu#1#2{\leavevmode#2}
2280 \def\Hy@writebookmark#1#2#3#4#5{}

```


8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

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

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

```
2283 \def\Hy@raisedlink#1{%
2284   \ifvmode
2285     #1%
2286   \else
2287     \penalty\@M
2288     \smash{%
2289       \begingroup
2290         \let\HyperRaiseLinkLength\@tempdima
2291         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2292         \HyperRaiseLinkHook
2293       \expandafter\endgroup
2294       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2295     }%
2296   \fi
2297 }
```

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

```
2298 \def\Hy@SaveLastskip{%
2299   \let\Hy@RestoreLastskip\relax
2300   \ifvmode
2301     \ifdim\lastskip=\z@
2302       \let\Hy@RestoreLastskip\nobreak
2303     \else
2304       \begingroup
2305         \skip@=-\lastskip
2306         \edef\x{%
2307           \endgroup
2308           \def\noexpand\Hy@RestoreLastskip{%
2309             \noexpand\ifvmode
2310               \noexpand\nobreak
2311               \vskip\the\skip@
2312               \vskip\the\lastskip\relax
2313             \noexpand\fi
2314           }%
2315         }%
2316       \x
2317     \fi
2318   \else
2319     \ifhmode
2320       \ifdim\lastskip=\z@
```

```

2321      \let\Hy@RestoreLastskip\nobreak
2322      \else
2323      \begingroup
2324      \skip@=-\lastskip
2325      \edef\x{%
2326      \endgroup
2327      \def\noexpand\Hy@RestoreLastskip{%
2328      \noexpand\ifhmode
2329      \noexpand\nobreak
2330      \hskip\the\skip@
2331      \hskip\the\lastskip\relax
2332      \noexpand\fi
2333      }%
2334      }%
2335      \x
2336      \fi
2337      \fi
2338      \fi
2339      }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2340 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2341 \def\Hy@@boolkey[#1]#2#3{%
2342   \edef\Hy@tempa{#3}%
2343   \lowercase\expandafter{%
2344     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2345   }%
2346   \ifx\Hy@tempa\@empty
2347     \let\Hy@tempa\Hy@true
2348   \fi
2349   \ifx\Hy@tempa\Hy@true
2350   \else
2351     \ifx\Hy@tempa\Hy@false
2352     \else
2353       \let\Hy@tempa\relax
2354     \fi
2355   \fi
2356   \ifx\Hy@tempa\relax
2357     \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2358   \else
2359     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2360     \csname Hy@#2\Hy@tempa\endcsname
2361   \fi
2362 }

```

\Hy@WarnOptionValue

```

2363 \def\Hy@WarnOptionValue#1#2#3{%
2364   \Hy@Warning{%
2365     Unexpected value ‘#1’\MessageBreak
2366     of option ‘#2’ instead of\MessageBreak
2367     #3%
2368   }%

```

2369 }

\Hy@DisableOption

```
2370 \def\Hy@DisableOption#1{%
2371   \ifundefined{KV@Hyp@#1@default}{%
2372     \define@key{Hyp}{#1}%
2373   }{%
2374     \define@key{Hyp}{#1}[]%
2375   }%
2376   {\Hy@WarnOptionDisabled{#1}}}%
2377 }
```

\Hy@WarnOptionDisabled

```
2378 \def\Hy@WarnOptionDisabled#1{%
2379   \Hy@Warning{%
2380     Option '#1' has already been used,\MessageBreak
2381     setting the option has no effect%
2382   }%
2383 }
```

\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.

```
2384 \def\Hy@CheckOptionValue#1#2#3{%
2385   \begingroup
2386   \edef\x{#1}%
2387   \@onelevel@sanitize\x
2388   \let\y=y%
2389   \def\do##1##2{%
2390     \def\z{##1}%
2391     \@onelevel@sanitize\z
2392     \ifx\x\z
2393       \let\y=n%
2394       \let\do\@gobbletwo
2395     \fi
2396   }%
2397   #3%
2398   \ifx\y y%
2399     \def\do##1##2{%
2400       * '#1'%
2401       \ifx\##2\\else\space(##2)\fi
2402       \MessageBreak
2403     }%
2404     \Hy@Warning{%
2405       Values of option '#2':\MessageBreak
2406       #3%
2407       * An empty value disables the option.\MessageBreak
2408       Unknown value '\x'%
2409     }%
2410   \fi
2411   \endgroup
2412 }
```

\Hy@DefNameKey #1: option name

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

```
2413 \def\Hy@DefNameKey#1{%
```

```

2414 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2415 }

```

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

```

2416 \def\Hy@@DefNameKey#1#2#3{%
2417   \define@key{Hyp}{#2}{%
2418     \edef#1{##1}%
2419     \ifx#1\@empty
2420     \else
2421       \Hy@CheckOptionValue{##1}{#2}{#3}%
2422     \fi
2423   }%
2424   \let#1\@empty
2425 }

```

\Hy@UseNameKey

```

2426 \def\Hy@UseNameKey#1#2{%
2427   \ifx#2\@empty
2428   \else
2429     /#1/#2%
2430   \fi
2431 }

```

9.2 Defining the options

```

2432 \define@key{Hyp}{implicit}[true]{%
2433   \Hy@boolkey{implicit}{#1}%
2434 }
2435 \define@key{Hyp}{draft}[true]{%
2436   \Hy@boolkey{draft}{#1}%
2437 }
2438 \define@key{Hyp}{final}[true]{%
2439   \Hy@boolkey{final}{#1}%
2440 }
2441 \let\KV@Hyp@nolinks\KV@Hyp@draft
2442 \def\Hy@ObsoletePaperOption#1{%
2443   \Hy@WarningNoLine{%
2444     Option ‘#1’ is no longer used%
2445   }%
2446   \define@key{Hyp}{#1}[true]{}%
2447 }
2448 \def\Hy@temp#1{%
2449   \define@key{Hyp}{#1}[true]{%
2450     \Hy@ObsoletePaperOption{#1}%
2451   }%
2452 }
2453 \Hy@temp{a4paper}
2454 \Hy@temp{a5paper}
2455 \Hy@temp{b5paper}
2456 \Hy@temp{letterpaper}
2457 \Hy@temp{legalpaper}
2458 \Hy@temp{executivepaper}
2459 \define@key{Hyp}{setpagesize}[true]{%
2460   \Hy@boolkey{setpagesize}{#1}%

```

```

2461 }
2462 \define@key{Hyp}{debug}[true]{%
2463   \Hy@boolkey[debug]{verbose}{#1}%
2464 }
2465 \define@key{Hyp}{linktocpage}[true]{%
2466   \Hy@boolkey[linktocpage]{#1}%
2467   \ifHy@linktocpage
2468     \let\Hy@linktoc\Hy@linktoc@page
2469   \else
2470     \let\Hy@linktoc\Hy@linktoc@section
2471   \fi
2472 }
2473 \chardef\Hy@linktoc@none=0 %
2474 \chardef\Hy@linktoc@section=1 %
2475 \chardef\Hy@linktoc@page=2 %
2476 \chardef\Hy@linktoc@all=3 %
2477 \ifHy@linktocpage
2478   \let\Hy@linktoc\Hy@linktoc@page
2479 \else
2480   \let\Hy@linktoc\Hy@linktoc@section
2481 \fi
2482 \define@key{Hyp}{linktoc}{%
2483   \@ifundefined{Hy@linktoc@#1}{%
2484     \Hy@Warning{%
2485       Unexpected value '#1' of\MessageBreak
2486       option 'linktoc' instead of 'none',\MessageBreak
2487       'section', 'page' or 'all'%
2488     }%
2489   }{%
2490     \expandafter\let\expandafter\Hy@linktoc
2491     \csname Hy@linktoc@#1\endcsname
2492   }%
2493 }
2494 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2495 \let\XR@ext\relax
2496 \define@key{Hyp}{verbose}[true]{%
2497   \Hy@boolkey[verbose]{#1}%
2498 }
2499 \define@key{Hyp}{typexml}[true]{%
2500   \Hy@boolkey[typexml]{#1}%
2501 }

```

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.

```

2502 \define@key{Hyp}{raiselinks}[true]{%
2503   \Hy@boolkey[raiselinks]{#1}%
2504 }

```

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

```

2505 \def\Hy@setbreaklinks#1{%
2506   \csname breaklinks#1\endcsname
2507 }
2508 \def\Hy@breaklinks@unsupported{%
2509   \ifx\Hy@setbreaklinks\@gobble
2510     \ifHy@breaklinks
2511       \Hy@WarningNoLine{%

```

```

2512      You have enabled option 'breaklinks'.\MessageBreak
2513      But driver '\Hy@driver.def' does not support this.\MessageBreak
2514      Expect trouble with the link areas of broken links%
2515  }%
2516  \fi
2517  \fi
2518 }

```

```

2519 \define@key{Hyp}{breaklinks}[true]{%
2520   \Hy@boolkey{breaklinks}{#1}%
2521   \let\Hy@setbreaklinks\@gobble
2522 }

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

```

Determines whether an automatic anchor is put on each page

```

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

```

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.

```

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

```

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

```

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

```

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

```

2535 \define@key{Hyp}{hypertextnames}[true]{%
2536   \Hy@boolkey{hypertextnames}{#1}%
2537 }

```

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

```

2538 \define@key{Hyp}{nesting}[true]{%
2539   \Hy@boolkey{nesting}{#1}%
2540 }

```

```

2541 \define@key{Hyp}{unicode}[true]{%
2542   \Hy@boolkey{unicode}{#1}%
2543   \ifHy@unicode
2544     \def\HyPsd@pdfencoding{unicode}%
2545     \HyPsd@LoadUnicode
2546   \else
2547     \def\HyPsd@pdfencoding{pdfdoc}%
2548   \fi
2549 }

2550 \def\HyPsd@LoadUnicode{%
2551   \@ifundefined{T@PU}{%
2552     \input{puenc.def}%
2553     \HyLinguex@Restore
2554   }{}%
2555   \DeclareFontFamily{PU}{pdf}{}%
2556   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2557   \DeclareFontSubstitution{PU}{pdf}{m}{n}%

```

```

2558 \global\let\HyPsd@LoadUnicode\relax
2559 }
2560 \Hy@AtBeginDocument{%
2561 \ifx\HyPsd@LoadUnicode\relax
2562 \else
2563 \def\HyPsd@LoadUnicode{%
2564 \PackageError{hyperref}{%
2565 Unicode support for bookmarks is not available.\MessageBreak
2566 Activate unicode support by using one of the options\MessageBreak
2567 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2568 in the preamble%
2569 }\@ehc
2570 \global\let\HyPsd@LoadUnicode\relax
2571 \global\Hy@unicodedefalse
2572 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2573 }%
2574 \fi
2575 }

2576 \define@key{Hyp}{pdfencoding}{%
2577 \edef\HyPsd@temp{#1}%
2578 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2579 \let\HyPsd@pdfencoding\HyPsd@temp
2580 \Hy@unicodedefalse
2581 \else
2582 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2583 \z@
2584 \else
2585 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2586 \z@
2587 \else
2588 \@ne
2589 \fi
2590 \fi
2591 \let\HyPsd@pdfencoding\HyPsd@temp
2592 \hypersetup{unicode}%
2593 \ifHy@unicode
2594 \def\HyPsd@pdfencoding{#1}%
2595 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2596 \HyPsd@LoadStringEncoding
2597 \fi
2598 \else
2599 \Hy@Warning{Cannot switch to unicode bookmarks}%
2600 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2601 \fi
2602 \else
2603 \@onelevel@sanitize\HyPsd@temp
2604 \Hy@Warning{%
2605 Values of option 'pdfencoding':\MessageBreak
2606 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2607 Ignoring unknown value '\HyPsd@temp'%
2608 }%
2609 \fi
2610 \fi
2611 }
2612 \def\HyPsd@pdfencoding@auto{auto}
2613 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2614 \def\HyPsd@pdfencoding@unicode{unicode}

```

```

2615 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2616 \def\HyPsd@LoadStringEnc{%
2617   \RequirePackage{stringenc}[2009/12/15]%
2618   \let\HyPsd@LoadStringEnc\relax
2619 }
2620 \Hy@AtBeginDocument{%
2621   \ifpackageloaded{stringenc}{%
2622     \let\HyPsd@LoadStringEnc\relax
2623   }{%
2624     \def\HyPsd@LoadStringEnc{%
2625       \Hy@WarningNoLine{%
2626         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2627         in the preamble or load the package there%
2628       }%
2629     }%
2630   }%
2631 }
2632 \def\hypersetup{\setkeys{Hyp}}
2633 \newif\ifHy@setpdfversion
2634 \define@key{Hyp}{pdfversion}{%
2635   \ifundefined{Hy@pdfversion@#1}{%
2636     \PackageWarning{hyperref}{%
2637       Unsupported PDF version '#1'\MessageBreak
2638       Valid values: 1.2 until 1.9%
2639     }%
2640   }{%
2641     \Hy@setpdfversiontrue
2642     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2643   }%
2644 }
2645 \@namedef{Hy@pdfversion@1.2}{2}%
2646 \@namedef{Hy@pdfversion@1.3}{3}%
2647 \@namedef{Hy@pdfversion@1.4}{4}%
2648 \@namedef{Hy@pdfversion@1.5}{5}%
2649 \@namedef{Hy@pdfversion@1.6}{6}%
2650 \@namedef{Hy@pdfversion@1.7}{7}%
2651 \@namedef{Hy@pdfversion@1.8}{8}%
2652 \@namedef{Hy@pdfversion@1.9}{9}%
2653 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2654 \define@key{Hyp}{hyperref}[true]{}
2655 \define@key{Hyp}{tex4ht}[true]{%
2656   \Hy@texhttrue
2657   \setkeys{Hyp}{colorlinks=true}%
2658   \def\BeforeTeXIVht{\usepackage{color}}}%
2659 \def\Hy@driver{htex4ht}%
2660 \def\MaybeStopEarly{%
2661   \typeout{Hyperref stopped early}%
2662   \Hy@AtBeginDocument{%
2663     \PDF@FinishDoc
2664     \gdef\PDF@FinishDoc{}%
2665   }%
2666   \endinput
2667 }%
2668 }

```



```

2669 \define@key{Hyp}{pdfetex}[true]{%
2670   \def\Hy@driver{hpdtex}%
2671 }
2672 \define@key{Hyp}{nativepdf}[true]{%
2673   \def\Hy@driver{hdvips}%
2674 }
2675 \define@key{Hyp}{dvipdfm}[true]{%
2676   \def\Hy@driver{hdvipdfm}%
2677 }
2678 \define@key{Hyp}{dvipdfmx}[true]{%
2679   \def\Hy@driver{hdvipdfm}%
2680 }
2681 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2682   \expandafter\ifx\csname if#1\expandafter\endcsname
2683     \csname iftrue\endcsname
2684     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2685   \else
2686     \chardef\SpecialDvipdfmxOutlineOpen\z@
2687   \fi
2688 }
2689 \define@key{Hyp}{xetex}[true]{%
2690   \def\Hy@driver{hxetex}%
2691 }
2692 \define@key{Hyp}{pdfmark}[true]{%
2693   \def\Hy@driver{hdvips}%
2694 }
2695 \define@key{Hyp}{dvips}[true]{%
2696   \def\Hy@driver{hdvips}%
2697 }
2698 \define@key{Hyp}{hypertex}[true]{%
2699   \def\Hy@driver{hypertex}%
2700 }
2701 \let\Hy@MaybeStopNow\relax
2702 \define@key{Hyp}{vtex}[true]{%
2703   \begingroup\expandafter\expandafter\expandafter\endgroup
2704   \expandafter\ifx\csname OpMode\endcsname\relax
2705     \@latex@error{Non-VTeX processor}{}%
2706     \global\let\Hy@MaybeStopNow\endinput
2707   \endinput
2708   \else
2709     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2710     \def\Hy@driver{hvtex}%
2711   \else
2712     \ifnum\OpMode=10\relax
2713     \def\Hy@driver{hvtexhtm}%
2714     \def\MaybeStopEarly{%
2715       \typeout{Hyperref stopped early}%
2716       \Hy@AtBeginDocument{%
2717         \PDF@FinishDoc
2718         \gdef\PDF@FinishDoc{}}%
2719     }%
2720     \endinput
2721   }%
2722   \else
2723     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2724     \global\let\Hy@MaybeStopNow\endinput
2725   \endinput

```

```

2726 \fi
2727 \fi
2728 \fi
2729 }
2730 \define@key{Hyp}{vtxpdfmark}[true]{%
2731 \begingroup\expandafter\expandafter\expandafter\endgroup
2732 \expandafter\ifx\csname OpMode\endcsname\relax
2733 \latexerror{Non-VTeX processor}{}%
2734 \let\Hy@MaybeStopNow\endinput
2735 \endinput
2736 \else
2737 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2738 \def\Hy@driver{hvtexmrk}%
2739 \else
2740 \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2741 \let\Hy@MaybeStopNow\endinput
2742 \endinput
2743 \fi
2744 \fi
2745 }
2746 \define@key{Hyp}{dviwindo}[true]{%
2747 \def\Hy@driver{hdviwind}%
2748 \setkeys{Hyp}{colorlinks}%
2749 \ifpdf
2750 \else
2751 \ifxetex
2752 \else
2753 \PassOptionsToPackage{dviwindo}{color}%
2754 \fi
2755 \fi
2756 }
2757 \define@key{Hyp}{dvipsone}[true]{%
2758 \def\Hy@driver{hdvipson}%
2759 }
2760 \define@key{Hyp}{textures}[true]{%
2761 \def\Hy@driver{htexture}%
2762 }
2763 \define@key{Hyp}{latex2html}[true]{%
2764 \Hy@AtBeginDocument{\@@@texttohtmlX}%
2765 }

```

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

```

2766 \define@key{Hyp}{ps2pdf}[true]{%
2767 \def\Hy@driver{hdvips}%
2768 \providecommand*\@pdfborder{0 0 1}%
2769 }

```

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.

```

2770 \define@key{Hyp}{hyperfigures}[true]{%
2771 \Hy@boolkey[hyperfigures]{figures}{#1}%
2772 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2773 \define@key{Hyp}{hyperfootnotes}[true]{%
2774 \Hy@boolkey[hyperfootnotes]{#1}%

```

2775 }

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

```
2776 \def\back@none{none}
2777 \def\back@section{section}
2778 \def\back@page{page}
2779 \def\back@slide{slide}
2780 \define@key{Hyp}{backref}[section]{%
2781   \lowercase{\def\Hy@tempa{#1}}}%
2782   \ifx\Hy@tempa\@empty
2783     \let\Hy@tempa\back@section
2784   \fi
2785   \ifx\Hy@tempa\Hy@false
2786     \let\Hy@tempa\back@none
2787   \fi
2788   \ifx\Hy@tempa\back@slide
2789     \let\Hy@tempa\back@section
2790   \fi
2791   \ifx\Hy@tempa\back@page
2792     \PassOptionsToPackage{hyperpageref}{backref}%
2793     \Hy@backreftrue
2794   \else
2795     \ifx\Hy@tempa\back@section
2796       \PassOptionsToPackage{hyperref}{backref}%
2797       \Hy@backreftrue
2798     \else
2799       \ifx\Hy@tempa\back@none
2800         \Hy@backreffalse
2801       \else
2802         \Hy@WarnOptionValue{#1}{backref}{%
2803           'section', 'slide', 'page', 'none',\MessageBreak
2804           or 'false'}%
2805       \fi
2806     \fi
2807   \fi
2808 }
2809 \define@key{Hyp}{pagebackref}[true]{%
2810   \edef\Hy@tempa{#1}%
2811   \lowercase\expandafter{%
2812     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2813   }%
2814   \ifx\Hy@tempa\@empty
2815     \let\Hy@tempa\Hy@true
2816   \fi
2817   \ifx\Hy@tempa\Hy@true
2818     \PassOptionsToPackage{hyperpageref}{backref}%
2819     \Hy@backreftrue
2820   \else
2821     \ifx\Hy@tempa\Hy@false
2822       \Hy@backreffalse
2823     \else
2824       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2825     \fi
2826   \fi
2827 }
```

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

```

2828 \define@key{Hyp}{hyperindex}[true]{%
2829   \Hy@boolkey{hyperindex}{#1}%
2830 }

```

Configuration of encap char.

```

2831 \define@key{Hyp}{encap}[|]{%
2832   \def\HyInd@EncapChar{#1}%
2833 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2834 \def\HyLang@afrikaans{%
2835   \def\equationautorefname{Vergelyking}%
2836   \def\footnoteautorefname{Voetnota}%
2837   \def\itemautorefname{Item}%
2838   \def\figureautorefname{Figuur}%
2839   \def\tableautorefname{Tabel}%
2840   \def\partautorefname{Deel}%
2841   \def\appendixautorefname{Bylae}%
2842   \def\chapterautorefname{Hoofstuk}%
2843   \def\sectionautorefname{Afdeling}%
2844   \def\subsectionautorefname{Subafdeling}%
2845   \def\subsubsectionautorefname{Subsubafdeling}%
2846   \def\paragraphautorefname{Paragraaf}%
2847   \def\subparagraphautorefname{Subparagraaf}%
2848   \def\FancyVerbLineautorefname{Lyn}%
2849   \def\theoremautorefname{Teorema}%
2850   \def\pageautorefname{Bladsy}%
2851 }
2852 \def\HyLang@english{%
2853   \def\equationautorefname{Equation}%
2854   \def\footnoteautorefname{footnote}%
2855   \def\itemautorefname{item}%
2856   \def\figureautorefname{Figure}%
2857   \def\tableautorefname{Table}%
2858   \def\partautorefname{Part}%
2859   \def\appendixautorefname{Appendix}%
2860   \def\chapterautorefname{chapter}%
2861   \def\sectionautorefname{section}%
2862   \def\subsectionautorefname{subsection}%
2863   \def\subsubsectionautorefname{subsubsection}%
2864   \def\paragraphautorefname{paragraph}%
2865   \def\subparagraphautorefname{subparagraph}%
2866   \def\FancyVerbLineautorefname{line}%
2867   \def\theoremautorefname{Theorem}%
2868   \def\pageautorefname{page}%
2869 }
2870 \def\HyLang@french{%
2871   \def\equationautorefname{'Equation}%
2872   \def\footnoteautorefname{note}%
2873   \def\itemautorefname{item}%
2874   \def\figureautorefname{Figure}%
2875   \def\tableautorefname{Tableau}%
2876   \def\partautorefname{Partie}%
2877   \def\appendixautorefname{Appendice}%
2878   \def\chapterautorefname{chapitre}%

```

```

2879 \def\sectionautorefname{section}%
2880 \def\subsectionautorefname{sous-section}%
2881 \def\subsubsectionautorefname{sous-sous-section}%
2882 \def\paragraphautorefname{paragraphe}%
2883 \def\subparagraphautorefname{sous-paragraphe}%
2884 \def\FancyVerbLineautorefname{ligne}%
2885 \def\theoremautorefname{Th\'eor\'eme}%
2886 \def\pageautorefname{page}%
2887 }
2888 \def\HyLang@german{%
2889 \def\equationautorefname{Gleichung}%
2890 \def\footnoteautorefname{Fu\ss note}%
2891 \def\itemautorefname{Punkt}%
2892 \def\figureautorefname{Abbildung}%
2893 \def\tableautorefname{Tabelle}%
2894 \def\partautorefname{Teil}%
2895 \def\appendixautorefname{Anhang}%
2896 \def\chapterautorefname{Kapitel}%
2897 \def\sectionautorefname{Abschnitt}%
2898 \def\subsectionautorefname{Unterabschnitt}%
2899 \def\subsubsectionautorefname{Unterunterabschnitt}%
2900 \def\paragraphautorefname{Absatz}%
2901 \def\subparagraphautorefname{Unterabsatz}%
2902 \def\FancyVerbLineautorefname{Zeile}%
2903 \def\theoremautorefname{Theorem}%
2904 \def\pageautorefname{Seite}%
2905 }
2906 \def\HyLang@italian{%
2907 \def\equationautorefname{Equazione}%
2908 \def\footnoteautorefname{nota}%
2909 \def\itemautorefname{punto}%
2910 \def\figureautorefname{Figura}%
2911 \def\tableautorefname{Tabella}%
2912 \def\partautorefname{Parte}%
2913 \def\appendixautorefname{Appendice}%
2914 \def\chapterautorefname{Capitolo}%
2915 \def\sectionautorefname{sezione}%
2916 \def\subsectionautorefname{sottosezione}%
2917 \def\subsubsectionautorefname{sottosottosezione}%
2918 \def\paragraphautorefname{paragrafo}%
2919 \def\subparagraphautorefname{sottoparagrafo}%
2920 \def\FancyVerbLineautorefname{linea}%
2921 \def\theoremautorefname{Teorema}%
2922 \def\pageautorefname{Pag.\@}%
2923 }
2924 \def\HyLang@magyar{%
2925 \def\equationautorefname{Egyenlet}%
2926 \def\footnoteautorefname{l\'abjegyzet}%
2927 \def\itemautorefname{Elem}%
2928 \def\figureautorefname{'Abra}%
2929 \def\tableautorefname{T\'abl\'azat}%
2930 \def\partautorefname{R\'esz}%
2931 \def\appendixautorefname{F\'uggel\'ek}%
2932 \def\chapterautorefname{fejezet}%
2933 \def\sectionautorefname{szakasz}%
2934 \def\subsectionautorefname{alszakasz}%
2935 \def\subsubsectionautorefname{alalszakasz}%

```


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

```
2972 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2973 % \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.

```
2974 \def\itemautorefname{\cyr\cyrp.}%
2975 % \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.

```
2976 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2977 \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.

```
2978 \def\partautorefname{\cyr\cyrch.}%
2979 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2980 \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.

```
2981 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2982 % \def\appendixautorefname{%
2983 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2984 % }%
```

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.

```
2985 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2986 \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.

```
2987 \def\paragraphautorefname{\cyr\cyrp.}%
2988 \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.

```
2989 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2990 % \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.

```
2991 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2992 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2993 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2994 % \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 . . .

```
2995 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2996 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2997 % \def\Accttheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2998 \def\pageautorefname{\cyr\cyrs.}%
```

```
2999 }
```

```
3000 \def\HyLang@spanish{%
```

```
3001 \def\equationautorefname{Ecuaci\'on}%
```

```
3002 \def\footnoteautorefname{Nota a pie de p\'agina}%
```

```
3003 \def\itemautorefname{Elemento}%
```

```
3004 \def\figureautorefname{Figura}%
```

```
3005 \def\tableautorefname{Tabla}%
```

```
3006 \def\partautorefname{Parte}%
```

```
3007 \def\appendixautorefname{Ap\'endice}%
```

```
3008 \def\chapterautorefname{Cap\'itulo}%
```

```
3009 \def\sectionautorefname{Secci\'on}%
```

```
3010 \def\subsectionautorefname{Subsecci\'on}%
```

```
3011 \def\subsubsectionautorefname{Subsubsecci\'on}%
```

```
3012 \def\paragraphautorefname{P\'arrafo}%
```

```
3013 \def\subparagraphautorefname{Subp\'arrafo}%
```

```
3014 \def\FancyVerbLineautorefname{L\'inea}%
```

```
3015 \def\theoremautorefname{Teorema}%
```

```
3016 \def\pageautorefname{P\'agina}%
```

```
3017 }
```

```
3018 \def\HyLang@vietnamese{%
```

```
3019 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr\'inh}%
```

```
3020 \def\footnoteautorefname{Ch\'u th\'ich}%
```

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

```
3022 \def\figureautorefname{H\'inh}%
```

```
3023 \def\tableautorefname{B\h{a}ng}%
```

```
3024 \def\partautorefname{Ph\'acircumflex{}n}%
```

```
3025 \def\appendixautorefname{Ph\{d\{u\}l\{d\{u\}c}%
```

```
3026 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
```

```
3027 \def\sectionautorefname{m\{d\{u\}c}%
```

```
3028 \def\subsectionautorefname{m\{d\{u\}c}%
```

```
3029 \def\subsubsectionautorefname{m\{d\{u\}c}%
```

```
3030 \def\paragraphautorefname{\dj{}o\{d\{a\}n}%
```

```
3031 \def\subparagraphautorefname{\dj{}o\{d\{a\}n}%
```

```
3032 \def\FancyVerbLineautorefname{d\'ong}%
```

```
3033 \def\theoremautorefname{\DJ{}\{d\{i\}nh l\'y}%
```

```
3034 \def\pageautorefname{Trang}%
```

```
3035 }
```

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

```
3036 \def\HyLang@addto#1#2{%
```

```
3037 #2%
```

```
3038 \@temptokena{#2}%
```



```

3039 \ifx#1\relax
3040 \let#1\@empty
3041 \fi
3042 \ifx#1\@undefined
3043 \edef#1{\the\@temptokena}%
3044 \else
3045 \toks@\expandafter{#1}%
3046 \edef#1{\the\toks@\the\@temptokena}%
3047 \fi
3048 \@temptokena{}\toks@\@temptokena
3049 }

3050 \def\HyLang@DeclareLang#1#2#3{%
3051 \@ifpackagewith{babel}{#1}{%
3052 \expandafter\HyLang@addto
3053 \csname extras#1\expandafter\endcsname
3054 \csname HyLang@#2\endcsname
3055 \begingroup
3056 \edef\x{\endgroup
3057 #3%
3058 }%
3059 \x
3060 \@namedef{HyLang@#1@done}{}%
3061 }{}%
3062 \begingroup
3063 \edef\x##1##2{%
3064 \noexpand\ifx##2\relax
3065 \errmessage{No definitions for language #2' found!}%
3066 \noexpand\fi
3067 \endgroup
3068 \noexpand\define@key{Hyp}{#1}[]{%
3069 \noexpand\@ifundefined{HyLang@#1@done}{%
3070 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3071 #3%
3072 \noexpand\@namedef{HyLang@#1@done}{}%
3073 }{}%
3074 }%
3075 }%
3076 \expandafter\x\csname extras#1\expandafter\endcsname
3077 \csname HyLang@#2\endcsname
3078 }

3079 \HyLang@DeclareLang{english}{english}{}
3080 \HyLang@DeclareLang{UKenglish}{english}{}
3081 \HyLang@DeclareLang{british}{english}{}
3082 \HyLang@DeclareLang{USenglish}{english}{}
3083 \HyLang@DeclareLang{american}{english}{}
3084 \HyLang@DeclareLang{german}{german}{}
3085 \HyLang@DeclareLang{austrian}{german}{}
3086 \HyLang@DeclareLang{ngerman}{german}{}
3087 \HyLang@DeclareLang{naustrian}{german}{}
3088 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3089 \HyLang@DeclareLang{brazil}{portuges}{}
3090 \HyLang@DeclareLang{brazilian}{portuges}{}
3091 \HyLang@DeclareLang{portuguese}{portuges}{}
3092 \HyLang@DeclareLang{spanish}{spanish}{}
3093 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3094 \HyLang@DeclareLang{french}{french}{}
3095 \HyLang@DeclareLang{frenchb}{french}{}

```

```

3096 \HyLang@DeclareLang{francais}{french}{}
3097 \HyLang@DeclareLang{acadian}{french}{}
3098 \HyLang@DeclareLang{canadien}{french}{}
3099 \HyLang@DeclareLang{italian}{italian}{}
3100 \HyLang@DeclareLang{magyar}{magyar}{}
3101 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3102 \define@key{Hyp}{vietnamese}[]{}%
3103 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3104 \Hy@AtEndOfPackage{%
3105   \ifundefined{T@PU}{}{}%
3106   \input{puvnenc.def}%
3107 }%
3108 }%
3109 }
3110 \define@key{Hyp}{vietnam}[]{}%
3111 \HyLang@addto\extravietnam\HyLang@vietnamese
3112 \Hy@AtEndOfPackage{%
3113   \ifundefined{T@PU}{}{}%
3114   \input{puvnenc.def}%
3115 }%
3116 }%
3117 }

```

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

```

3118 \define@key{Hyp}{arabic}[]{}%
3119 \Hy@AtEndOfPackage{%
3120   \ifundefined{T@PU}{}{}%
3121   \input{puarenc.def}%
3122 }%
3123 }%
3124 }

```

13 Options to change appearance of links

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

```

3125 \define@key{Hyp}{colorlinks}[true]{}%
3126 \Hy@boolkey{colorlinks}{#1}%
3127 }
3128 \define@key{Hyp}{ocgcolorlinks}[true]{}%
3129 \Hy@boolkey{ocgcolorlinks}{#1}%
3130 }
3131 \Hy@AtBeginDocument{%
3132 \begingroup
3133   \ifundefined{OBJ@OCG@view}{}%
3134   \ifHy@ocgcolorlinks
3135     \Hy@Warning{%
3136       Driver does not support ‘ocgcolorlinks’,\MessageBreak
3137       using ‘colorlinks’ instead%
3138     }%
3139   \fi
3140 }{}%
3141 \endgroup
3142 }
3143 \define@key{Hyp}{frenchlinks}[true]{}%
3144 \Hy@boolkey{frenchlinks}{#1}%

```

3145 }

14 Bookmarking

```

3146 \begingroup\expandafter\expandafter\expandafter\endgroup
3147 \expandafter\ifx\csname chapter\endcsname\relax
3148   \def\toclevel@part{0}%
3149 \else
3150   \def\toclevel@part{-1}%
3151 \fi
3152 \def\toclevel@chapter{0}
3153 \def\toclevel@section{1}
3154 \def\toclevel@subsection{2}
3155 \def\toclevel@subsubsection{3}
3156 \def\toclevel@paragraph{4}
3157 \def\toclevel@subparagraph{5}
3158 \def\toclevel@figure{0}
3159 \def\toclevel@table{0}
3160 \@ifpackageloaded{listings}{%
3161   \providecommand*\theHlstlisting{\thelstlisting}%
3162   \providecommand*\toclevel@lstlisting{0}%
3163 }{}
3164 \@ifpackageloaded{listing}{%
3165   \providecommand*\theHlisting{\thelisting}%
3166   \providecommand*\toclevel@listing{0}%
3167 }{}

3168 \define@key{Hyp}{bookmarks}[true]{%
3169   \Hy@boolkey{bookmarks}{#1}%
3170 }

3171 \define@key{Hyp}{bookmarksopen}[true]{%
3172   \Hy@boolkey{bookmarksopen}{#1}%
3173 }
```

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.

```

3174 \let\Hy@bookmarksdepth\c@tocdepth
3175 \define@key{Hyp}{bookmarksdepth}[]{%
3176   \begingroup
3177     \edef\x{#1}%
3178     \ifx\x\empty
3179       \global\let\Hy@bookmarksdepth\c@tocdepth
3180     \else
3181       \@ifundefined{toclevel@\x}{%
3182         \@onelevel@sanitize\x
3183         \edef\y{\expandafter\@car\x\@nil}%
3184         \ifcase 0\expandafter\ifx\y-1\fi
3185           \expandafter\ifnum\expandafter\y>47 %
```

```

3186         \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3187         \Hy@Warning{Unknown document division name (\x)}%
3188     \else
3189         \setbox\z@=\hbox{%
3190             \count@=\x
3191             \xdef\Hy@bookmarksdepth{\the\count@}%
3192         }%
3193     \fi
3194 }{%
3195     \setbox\z@=\hbox{%
3196         \count@=\csname toclevel@\x\endcsname
3197         \xdef\Hy@bookmarksdepth{\the\count@}%
3198     }%
3199 }%
3200 \fi
3201 \endgroup
3202 }

```

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

```

3203 \define@key{Hyp}{bookmarksopenlevel}{%
3204   \def\@bookmarksopenlevel{#1}%
3205 }
3206 \def\@bookmarksopenlevel{\maxdimen}
3207 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3208 \define@key{Hyp}{bookmarkstype}{%
3209   \def\Hy@bookmarkstype{#1}%
3210 }
3211 \def\Hy@bookmarkstype{toc}

```

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

```

3212 \define@key{Hyp}{bookmarksnumbered}[true]{%
3213   \Hy@boolkey{bookmarksnumbered}{#1}%
3214 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3215 \define@key{Hyp}{CJKbookmarks}[true]{%
3216   \Hy@boolkey{CJKbookmarks}{#1}%
3217 }
3218 \def\Hy@temp#1{%
3219   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3220 }
3221 \def\Hy@@temp#1#2#3{%
3222   \define@key{Hyp}{#2color}{%
3223     \HyColor@HyperrefColor{##1}#1%
3224   }%
3225   \def#1{#3}%
3226 }
3227 \Hy@temp{link}{red}
3228 \Hy@temp{anchor}{black}
3229 \Hy@temp{cite}{green}
3230 \Hy@temp{file}{cyan}
3231 \Hy@temp{url}{magenta}
3232 \Hy@temp{menu}{red}
3233 \Hy@temp{run}{\@filecolor}
3234 \define@key{Hyp}{pagecolor}{%
3235   \Hy@WarningPageColor
3236 }

```

```

3237 \def\Hy@WarningPageColor{%
3238   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3239   \global\let\Hy@WarningPageColor\relax
3240 }

3241 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3242 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3243 \let\@baseurl\@empty
3244 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3245 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3246 \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.

```

3247 \let\@pdfpagetransition\relax
3248 \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.

```

3249 \let\@pdfpageduration\relax
3250 \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.

```

3251 \newif\ifHy@useHidKey
3252 \Hy@useHidKeyfalse
3253 \define@key{Hyp}{pdfpagehidden}[true]{%
3254   \Hy@boolkey{pdfpagehidden}{#1}%
3255   \ifHy@pdfpagehidden
3256     \global\Hy@useHidKeytrue
3257   \fi
3258 }

```

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).

```

3259 \def\Hy@ColorList{cite,file,link,menu,run,url}
3260 \@for\Hy@temp:=\Hy@ColorList\do{%
3261   \edef\Hy@temp{%
3262     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3263       \noexpand\HyColor@HyperrefBorderColor
3264       {##1}%
3265       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3266       {hyperref}%
3267       {\Hy@temp bordercolor}%
3268     }%
3269   }%

```

```

3270 \Hy@temp
3271 }
3272 \define@key{Hyp}{pagebordercolor}{%
3273 \Hy@WarningPageBorderColor
3274 }
3275 \def\Hy@WarningPageBorderColor{%
3276 \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3277 \global\let\Hy@WarningPageBorderColor\relax
3278 }

3279 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3280 \Hy@DefNameKey{pdfhighlight}{%
3281 \do{/I}{Invert}%
3282 \do{/N}{None}%
3283 \do{/O}{Outline}%
3284 \do{/P}{Push}%
3285 }
3286 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3287 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3288 \def\Hy@setpdfborder{%
3289 \ifx\@pdfborder\@empty
3290 \else
3291 /Border[\@pdfborder]%
3292 \fi
3293 \ifx\@pdfborderstyle\@empty
3294 \else
3295 /BS<<\@pdfborderstyle>>%
3296 \fi
3297 }
3298 \Hy@DefNameKey{pdfpagemode}{%
3299 \do{UseNone}{}%
3300 \do{UseOutlines}{}%
3301 \do{UseThumbs}{}%
3302 \do{FullScreen}{}%
3303 \do{UseOC}{PDF 1.5}%
3304 \do{UseAttachments}{PDF 1.6}%
3305 }
3306 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3307 \do{UseNone}{}%
3308 \do{UseOutlines}{}%
3309 \do{UseThumbs}{}%
3310 \do{FullScreen}{}%
3311 \do{UseOC}{PDF 1.5}%
3312 \do{UseAttachments}{PDF 1.6}%
3313 }
3314 \Hy@DefNameKey{pdfdirection}{%
3315 \do{L2R}{Left to right}%
3316 \do{R2L}{Right to left}%
3317 }
3318 \Hy@DefNameKey{pdfviewarea}{%
3319 \do{MediaBox}{}%
3320 \do{CropBox}{}%
3321 \do{BleedBox}{}%
3322 \do{TrimBox}{}%
3323 \do{ArtBox}{}%
3324 }
3325 \Hy@DefNameKey{pdfviewclip}{%
3326 \do{MediaBox}{}%

```

```

3327 \do{CropBox}{}%
3328 \do{BleedBox}{}%
3329 \do{TrimBox}{}%
3330 \do{ArtBox}{}%
3331 }
3332 \Hy@DefNameKey{pdfprintarea}{%
3333 \do{MediaBox}{}%
3334 \do{CropBox}{}%
3335 \do{BleedBox}{}%
3336 \do{TrimBox}{}%
3337 \do{ArtBox}{}%
3338 }
3339 \Hy@DefNameKey{pdfprintclip}{%
3340 \do{MediaBox}{}%
3341 \do{CropBox}{}%
3342 \do{BleedBox}{}%
3343 \do{TrimBox}{}%
3344 \do{ArtBox}{}%
3345 }
3346 \Hy@DefNameKey{pdfprintscaling}{%
3347 \do{AppDefault}{}%
3348 \do{None}{}%
3349 }
3350 \Hy@DefNameKey{pdfduplex}{%
3351 \do{Simplex}{}%
3352 \do{DuplexFlipShortEdge}{}%
3353 \do{DuplexFlipLongEdge}{}%
3354 }
3355 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3356 \do{true}{}%
3357 \do{false}{}%
3358 }
3359 \define@key{Hyp}{pdfprintpagerange}{%
3360 \def\@pdfprintpagerange{#1}%
3361 }
3362 \Hy@DefNameKey{pdfnumcopies}{%
3363 \do{2}{two copies}%
3364 \do{3}{three copies}%
3365 \do{4}{four copies}%
3366 \do{5}{five copies}%
3367 }
3368 \define@key{Hyp}{pdfusetitle}[true]{%
3369 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3370 }
3371 \def\HyXeTeX@CheckUnicode{%
3372 \ifxetex
3373 \ifHy@unicode
3374 \else
3375 \Hy@WarningNoLine{%
3376 XeTeX driver only supports unicode.\MessageBreak
3377 Enabling option 'unicode'%
3378 }%
3379 \setkeys{Hyp}{unicode}%
3380 \fi
3381 \else
3382 \let\HyXeTeX@CheckUnicode\relax
3383 \fi

```

```

3384 }
3385 \def\HyPsd@PrerenderUnicode#1{%
3386   \begingroup
3387   \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3388   \else
3389     \sbox0{%
3390       \let\GenericInfo\@gobbletwo
3391       \let\GenericWarning\@gobbletwo
3392       \let\GenericError\@gobblefour
3393       \PrerenderUnicode{#1}%
3394     }%
3395   \fi
3396 \endgroup
3397 }
3398 \define@key{Hyp}{pdftitle}{%
3399   \HyXeTeX@CheckUnicode
3400   \HyPsd@XeTeXBigCharstrue
3401   \HyPsd@PrerenderUnicode{#1}%
3402   \pdfstringdef\@pdftitle{#1}%
3403 }
3404 \define@key{Hyp}{pdfauthor}{%
3405   \HyXeTeX@CheckUnicode
3406   \HyPsd@XeTeXBigCharstrue
3407   \HyPsd@PrerenderUnicode{#1}%
3408   \pdfstringdef\@pdfauthor{#1}%
3409 }
3410 \define@key{Hyp}{pdfproducer}{%
3411   \HyXeTeX@CheckUnicode
3412   \HyPsd@XeTeXBigCharstrue
3413   \HyPsd@PrerenderUnicode{#1}%
3414   \pdfstringdef\@pdfproducer{#1}%
3415 }
3416 \define@key{Hyp}{pdfcreator}{%
3417   \HyXeTeX@CheckUnicode
3418   \HyPsd@XeTeXBigCharstrue
3419   \HyPsd@PrerenderUnicode{#1}%
3420   \pdfstringdef\@pdfcreator{#1}%
3421 }
3422 \define@key{Hyp}{pdfcreationdate}{%
3423   \begingroup
3424   \Hy@unicodedefalse
3425   \pdfstringdef\@pdfcreationdate{#1}%
3426 \endgroup
3427 }
3428 \define@key{Hyp}{pdfmoddate}{%
3429   \begingroup
3430   \Hy@unicodedefalse
3431   \pdfstringdef\@pdfmoddate{#1}%
3432 \endgroup
3433 }
3434 \define@key{Hyp}{pdfsubject}{%
3435   \HyXeTeX@CheckUnicode
3436   \HyPsd@XeTeXBigCharstrue
3437   \HyPsd@PrerenderUnicode{#1}%
3438   \pdfstringdef\@pdfsubject{#1}%
3439 }
3440 \define@key{Hyp}{pdfkeywords}{%

```



```

3441 \HyXeTeX@CheckUnicode
3442 \HyPsd@XeTeXBigCharstrue
3443 \HyPsd@PrerenderUnicode{#1}%
3444 \pdfstringdef\@pdfkeywords{#1}%
3445 }
3446 \define@key{Hyp}{pdftrapped}{%
3447 \lowercase{\edef\Hy@temp{#1}}%
3448 \ifx\Hy@temp\HyInfo@trapped@true
3449 \def\@pdftrapped{True}%
3450 \else
3451 \ifx\Hy@temp\HyInfo@trapped@false
3452 \def\@pdftrapped{False}%
3453 \else
3454 \ifx\Hy@temp\HyInfo@trapped@unknown
3455 \def\@pdftrapped{Unknown}%
3456 \else
3457 \ifx\Hy@temp\@empty
3458 \else
3459 \Hy@Warning{%
3460 Unsupported value '#1'\MessageBreak
3461 for option 'pdftrapped'%
3462 }%
3463 \fi
3464 \def\@pdftrapped{}%
3465 \fi
3466 \fi
3467 \fi
3468 }
3469 \def\HyInfo@trapped@true{true}
3470 \def\HyInfo@trapped@false{false}
3471 \def\HyInfo@trapped@unknown{unknown}
3472 \def\HyInfo@TrappedUnsupported{%
3473 \ifx\@pdftrapped\@empty
3474 \else
3475 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3476 \gdef\HyInfo@TrappedUnsupported{}%
3477 \fi
3478 }
3479 \define@key{Hyp}{pdfinfo}{%
3480 \kvsetkeys{pdfinfo}{#1}%
3481 }
3482 \def\Hy@temp#1{%
3483 \lowercase{\Hy@temp@A{#1}}{#1}%
3484 }
3485 \def\Hy@temp@A#1#2{%
3486 \define@key{pdfinfo}{#2}{%
3487 \hypersetup{pdf#1={##1}}%
3488 }%
3489 }
3490 \Hy@temp{Title}
3491 \Hy@temp{Author}
3492 \Hy@temp{Keywords}
3493 \Hy@temp{Subject}
3494 \Hy@temp{Creator}
3495 \Hy@temp{Producer}
3496 \Hy@temp{CreationDate}
3497 \Hy@temp{ModDate}

```

```

3498 \Hy@temp{Trapped}
3499 \newif\ifHyInfo@AddonUnsupported
3500 \kv@set@family@handler{pdfinfo}{%
3501   \HyInfo@AddonHandler{#1}{#2}%
3502 }
3503 \let\HyInfo@do\relax
3504 \def\HyInfo@AddonHandler#1#2{%
3505   \ifx\kv@value\relax
3506     \Hy@Warning{%
3507       Option 'pdfinfo': ignoring key '\kv@key' without value%
3508     }%
3509   \else
3510     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3511     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3512     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3513       \ifHyInfo@AddonUnsupported
3514         \Hy@Warning{%
3515           This driver does not support additional\MessageBreak
3516           information entries, therefore\MessageBreak
3517           '\kv@key' is ignored%
3518         }%
3519       \else
3520         \define@key{pdfinfo}{\HyInfo@Key}{%
3521           \HyXeTeX@CheckUnicode
3522           \HyPsd@XeTeXBigCharstrue
3523           \HyPsd@PrerenderUnicode{##1}%
3524           \pdfstringdef\HyInfo@Value{##1}%
3525           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3526             \HyInfo@Value
3527         }%
3528         \edef\HyInfo@AddonList{%
3529           \HyInfo@AddonList
3530           \HyInfo@do{\HyInfo@Key}%
3531         }%
3532         \kv@parse@normalized{%
3533           \HyInfo@Key={#2}%
3534         }{%
3535           \kv@processor@default{pdfinfo}%
3536         }%
3537       \fi
3538     \else
3539       \kv@parse@normalized{%
3540         \HyInfo@Key={#2}%
3541       }{%
3542         \kv@processor@default{pdfinfo}%
3543       }%
3544     \fi
3545   \fi
3546 }
3547 \def\HyInfo@GenerateAddons{%
3548   \ifHyInfo@AddonUnsupported
3549     \def\HyInfo@Addons{}%
3550   \else
3551     \begingroup
3552     \toks@{}%
3553     \def\HyInfo@do##1{%
3554       \EdefEscapeName\HyInfo@Key{##1}%

```

```

3555     \edef\x{%
3556         \toks@{%
3557             \the\toks@
3558             /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3559         }%
3560     }%
3561     \x
3562 }%
3563 \HyInfo@AddonList
3564 \edef\x{\endgroup
3565     \def\noexpand\HyInfo@Addons{\the\toks@}%
3566 }%
3567 \x
3568 \fi
3569 }
3570 \def\HyInfo@AddonList{}

3571 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3572 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3573 \let\setpdfinkmargin\@gobble
3574 \def\calculate@pdfview#1 #2\{%
3575     \def\@pdfview{#1}%
3576     \ifx\#2\%
3577         \def\@pdfviewparams{ -32768}%
3578     \else
3579         \def\@pdfviewparams{ #2}%
3580     \fi
3581 }

3582 \begingroup\expandafter\expandafter\expandafter\endgroup
3583 \expandafter\ifx\csname numexpr\endcsname\relax
3584     \def\Hy@number#1{%
3585         \expandafter\@firstofone\expandafter{\number#1}%
3586     }%
3587 \else
3588     \def\Hy@number#1{%
3589         \the\numexpr#1\relax
3590     }%
3591 \fi

3592 \define@key{Hyp}{pdfstartpage}{%
3593     \ifx\#1\%
3594         \def\@pdfstartpage{}%
3595     \else
3596         \edef\@pdfstartpage{\Hy@number{#1}}%
3597     \fi
3598 }%

3599 \define@key{Hyp}{pdfstartview}{%
3600     \ifx\#1\%
3601         \def\@pdfstartview{}%
3602     \else
3603         \hypercalcbpdef\@pdfstartview{ /#1 }%
3604     \fi
3605 }

3606 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3607 \define@key{Hyp}{pdftoolbar}[true]{%
3608     \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3609 }

3610 \define@key{Hyp}{pdfmenubar}[true]{%
3611     \Hy@boolkey[pdfmenubar]{menubar}{#1}%

```

```

3612 }
3613 \define@key{Hyp}{pdfwindowui}[true]{%
3614   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3615 }
3616 \define@key{Hyp}{pdffitwindow}[true]{%
3617   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3618 }
3619 \define@key{Hyp}{pdfcenterwindow}[true]{%
3620   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3621 }
3622 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3623   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3624 }
3625 \define@key{Hyp}{pdfa}[true]{%
3626   \Hy@boolkey[pdfa]{#1}%
3627 }
3628 \define@key{Hyp}{pdfnewwindow}[true]{%
3629   \def\Hy@temp{#1}%
3630   \ifx\Hy@temp\@empty
3631     \Hy@newwindowsetfalse
3632   \else
3633     \Hy@newwindowsettrue
3634     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3635   \fi
3636 }
3637 \def\Hy@SetNewWindow{%
3638   \ifHy@newwindowset
3639     /NewWindow %
3640     \ifHy@newwindow true\else false\fi
3641   \fi
3642 }
3643 \Hy@DefNameKey{pdfpagelayout}{%
3644   \do{SinglePage}{}%
3645   \do{OneColumn}{}%
3646   \do{TwoColumnLeft}{}%
3647   \do{TwoColumnRight}{}%
3648   \do{TwoPageLeft}{PDF 1.5}%
3649   \do{TwoPageRight}{PDF 1.5}%
3650 }
3651 \define@key{Hyp}{pdflang}{%
3652   \def\@pdflang{#1}%
3653 }
3654 \define@key{Hyp}{pdfpagelabels}[true]{%
3655   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3656 }
3657 \define@key{Hyp}{pdfescapeform}[true]{%
3658   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3659 }

```

Default values:

```

3660 \def\@linkbordercolor{1 0 0}
3661 \def\@urlbordercolor{0 1 1}
3662 \def\@menubordercolor{1 0 0}
3663 \def\@filebordercolor{0 .5 .5}
3664 \def\@runbordercolor{0 .7 .7}
3665 \def\@citebordercolor{0 1 0}
3666 \def\@pdfhighlight{/I}
3667 \def\@pdftitle{}

```

```

3668 \def\@pdfauthor{}
3669 \let\@pdfproducer\relax
3670 \def\@pdfcreator{LaTeX with hyperref package}
3671 \def\@pdfcreationdate{}
3672 \def\@pdfmoddate{}
3673 \def\@pdfsubject{}
3674 \def\@pdfkeywords{}
3675 \def\@pdftrapped{}
3676 \def\@pdfpagescrop{}
3677 \def\@pdfstartview{ /Fit }
3678 \def\@pdfstartpage{1}
3679 \def\@pdfprintpagerange{}
3680 \def\@pdflang{}
3681 \let\PDF@SetupDoc\@empty
3682 \let\PDF@FinishDoc\@empty
3683 \let\phantomsection\@empty
3684 \let\special@paper\@empty
3685 \def\HyperDestNameFilter#1{#1}
3686 \Hy@AtBeginDocument{%
3687   \begingroup
3688     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3689     \dimen@=\x\relax
3690     \ifdim\dimen@>\z@
3691       \else
3692         \dimen@=11in\relax
3693         \Hy@WarningNoLine{%
3694           Height of page (\expandafter\string\x) %
3695           is invalid (\the\x),\MessageBreak
3696           using 11in%
3697         }%
3698       \fi
3699       \dimen@=0.99626401\dimen@
3700       \xdef\Hy@pageheight{\strip@pt\dimen@}%
3701     \endgroup
3702 }
3703 \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.

```

3704 \let\hyper@normalise\ExecuteOptions
3705 \let\ExecuteOptions\hypersetup
3706 \Hy@RestoreCatcodes
3707 \InputIfFileExists{hyperref.cfg}{-}{}
3708 \Hy@SetCatcodes
3709 \let\ExecuteOptions\hyper@normalise
3710 \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`.

```

3711 \RequirePackage{kvoptions}[2009/07/21]
3712 \SetupKeyvalOptions{family=Hyp}
3713 \DeclareLocalOptions{%
3714   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3715 }

```

Add option tex4ht if package tex4ht is loaded.

```

3716 \ifpackageloaded{tex4ht}{%
3717   \ifpackagewith{hyperref}{tex4ht}{}%
3718   \PassOptionsToPackage{tex4ht}{hyperref}%
3719 }%
3720 {}

3721 \let\ReadBookmarks\relax
3722 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3723 \Hy@AtBeginDocument{%
3724   \ifHy@draft
3725     \let\hyper@@anchor\@gobble
3726     \gdef\hyper@link#1#2#3{#3}%
3727     \let\hyper@anchorstart\@gobble
3728     \let\hyper@anchorend\@empty
3729     \let\hyper@linkstart\@gobbletwo
3730     \let\hyper@linkend\@empty
3731     \def\hyper@linkurl#1#2{#1}%
3732     \def\hyper@linkfile#1#2#3{#1}%
3733     \def\hyper@link@{#1}#2#3{}%
3734     \def\Acrobatmenu#1#2{\leavevmode#2}%
3735     \let\PDF@SetupDoc\@empty
3736     \let\PDF@FinishDoc\@empty
3737     \let\@fifthoffive\@secondoftwo
3738     \let\@secondoffive\@secondoftwo
3739     \let\ReadBookmarks\relax
3740     \let\WriteBookmarks\relax
3741     \Hy@WarningNoLine{ draft mode on}%
3742   \fi
3743   \Hy@DisableOption{draft}%
3744   \Hy@DisableOption{nolinks}%
3745   \Hy@DisableOption{final}%
3746 }

```

15.1 PDF/A

```

3747 \Hy@DisableOption{pdfa}

3748 \ifHy@pdfa
3749   \setkeys{Hyp}{pdfversion=1.4}%
3750   \def\Hy@Acrobatmenu#1#2{%
3751     \leavevmode
3752     \begingroup
3753     \edef\x{#1}%
3754     \@onelevel@sanitize\x
3755     \ifx\x\Hy@NextPage
3756       \let\y=Y%
3757     \else
3758       \ifx\x\Hy@PrevPage
3759         \let\y=Y%
3760       \else
3761         \ifx\x\Hy@FirstPage
3762           \let\y=Y%
3763         \else
3764           \ifx\x\Hy@LastPage
3765             \let\y=Y%

```

```

3766         \else
3767         \let\y=N%
3768         \fi
3769     \fi
3770 \fi
3771 \fi
3772 \expandafter\endgroup
3773 \ifx\y Y%
3774 \else
3775 \PackageError{hyperref}{%
3776     PDF/A: Named action '#1' is not permitted%
3777 } \@ehc
3778 {#2}%
3779 \expandafter\@gobble
3780 \fi
3781 }%
3782 \def\Hy@temp#1{%
3783     \expandafter\def\csname Hy@#1\endcsname{#1}%
3784     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3785 }%
3786 \Hy@temp{NextPage}%
3787 \Hy@temp{PrevPage}%
3788 \Hy@temp{FirstPage}%
3789 \Hy@temp{LastPage}%
3790 \else
3791 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3792 \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.

```

3793 \Hy@nextfalse
3794 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
3795 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
3796 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}
3797 \ifHy@next
3798 \let\texttilde\~%
3799 \fi

3800 \ifHy@figures
3801 \Hy@Info{Hyper figures ON}%
3802 \else
3803 \Hy@Info{Hyper figures OFF}%
3804 \fi

3805 \ifHy@nesting
3806 \Hy@Info{Link nesting ON}%
3807 \else
3808 \Hy@Info{Link nesting OFF}%
3809 \fi

3810 \ifHy@hyperindex
3811 \Hy@Info{Hyper index ON}%
3812 \else
3813 \Hy@Info{Hyper index OFF}%
3814 \fi

3815 \ifHy@plainpages
3816 \Hy@Info{Plain pages ON}%
3817 \else

```

```

3818 \Hy@Info{Plain pages OFF}%
3819 \fi
3820 \ifHy@backref
3821 \Hy@Info{Backreferencing ON}%
3822 \else
3823 \Hy@Info{Backreferencing OFF}%
3824 \fi
3825 \ifHy@typexml
3826 \Hy@AtEndOfPackage{%
3827 \RequirePackage{color}%
3828 \RequirePackage{nameref}%
3829 }%
3830 \fi
3831 \Hy@DisableOption{typexml}
3832 \ifHy@implicit
3833 \typeout{Implicit mode ON; LaTeX internals redefined}%
3834 \else
3835 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3836 \def\MaybeStopEarly{%
3837 \typeout{Hyperref stopped early}%
3838 \Hy@AtBeginDocument{%
3839 \PDF@FinishDoc
3840 \gdef\PDF@FinishDoc{}%
3841 }%
3842 \endinput
3843 }%
3844 \Hy@AtBeginDocument{%
3845 \let\autoref\ref
3846 \let\autopageref\pageref
3847 \ifx\@pdfpagemode\@empty
3848 \gdef\@pdfpagemode{UseNone}%
3849 \fi
3850 \global\Hy@backreffalse
3851 }%
3852 \Hy@AtEndOfPackage{%
3853 \global\let\ReadBookmarks\relax
3854 \global\let\WriteBookmarks\relax
3855 }%
3856 \fi
3857 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3858 \Hy@AtEndOfPackage{%
3859 \@ifpackageloaded{tex4ht}{%
3860 \def\Hy@driver{htex4ht}%
3861 \Hy@texhttrue
3862 }{}%

```

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.

```

3863 \ifx\Hy@driver\@empty
3864 \else
3865 \def\Hy@temp{hpdftex}%
3866 \ifpdf
3867 \ifx\Hy@driver\Hy@temp
3868 \else
3869 \Hy@WarningNoLine{%

```



```

3870      Wrong driver '\Hy@driver.def';\MessageBreak
3871      pdfTeX is running in PDF mode.\MessageBreak
3872      Forcing driver '\Hy@temp.def'%
3873  }%
3874  \let\Hy@driver\Hy@temp
3875 \fi
3876 \else
3877  \ifx\Hy@driver\Hy@temp
3878    \Hy@WarningNoLine{%
3879      Wrong driver '\Hy@driver.def';\MessageBreak
3880      pdfTeX is not running in PDF mode.\MessageBreak
3881      Using default driver%
3882    }%
3883    \let\Hy@driver\@empty
3884  \fi
3885 \fi
3886 \fi
3887 \ifx\Hy@driver\@empty
3888 \else
3889  \def\Hy@temp{hxdetex}%
3890  \ifxdetex
3891    \ifx\Hy@driver\Hy@temp
3892    \else
3893      \Hy@WarningNoLine{%
3894        Wrong driver '\Hy@driver.def';\MessageBreak
3895        XeTeX is running.\MessageBreak
3896        Forcing driver '\Hy@temp.def' for XeTeX%
3897      }%
3898      \let\Hy@driver\Hy@temp
3899    \fi
3900  \fi
3901 \fi
3902 \ifx\Hy@driver\@empty
3903 \else
3904  \def\Hy@temp{hvtexhtm}%
3905  \ifvtexhtml
3906    \ifx\Hy@driver\Hy@temp
3907    \else
3908      \Hy@WarningNoLine{%
3909        Wrong driver '\Hy@driver.def';\MessageBreak
3910        VTeX is running in HTML mode.\MessageBreak
3911        Forcing driver '\Hy@temp.def'%
3912      }%
3913      \let\Hy@driver\Hy@temp
3914    \fi
3915  \else
3916    \ifx\Hy@driver\Hy@temp
3917      \Hy@WarningNoLine{%
3918        Wrong driver '\Hy@driver.def';\MessageBreak
3919        VTeX is not running in HTML mode.\MessageBreak
3920        Using default driver%
3921      }%
3922      \let\Hy@driver\@empty
3923    \fi
3924  \fi
3925 \fi

```

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

```

3926 \ifx\Hy@driver\@empty
3927 \providecommand*{\Hy@defaultdriver}{hypertex}%
3928 \ifpdf
3929 \def\Hy@driver{hpdftex}%
3930 \else
3931 \ifxetex
3932 \def\Hy@driver{hxetex}%
3933 \else
3934 \ifvtexhtml
3935 \def\Hy@driver{hvtexhtm}%
3936 \def\MaybeStopEarly{%
3937 \typeout{Hyperref stopped early}%
3938 \Hy@AtBeginDocument{%
3939 \PDF@FinishDoc
3940 \gdef\PDF@FinishDoc{}}%
3941 }%
3942 \endinput
3943 }%
3944 \else
3945 \ifvtexpdf
3946 \def\Hy@driver{hvtex}%
3947 \else
3948 \ifvtexps
3949 \def\Hy@driver{hvtex}%
3950 \else
3951 \let\Hy@driver\Hy@defaultdriver
3952 \fi
3953 \fi
3954 \fi
3955 \fi
3956 \fi
3957 \ifx\Hy@driver\Hy@defaultdriver
3958 \def\Hy@temp{hdvwind}%
3959 \ifx\Hy@temp\Hy@driver
3960 \setkeys{Hyp}{colorlinks}%
3961 \PassOptionsToPackage{dviwindo}{color}%
3962 \fi
3963 \fi
3964 \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3965 \else
3966 \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3967 \fi
3968 \input{\Hy@driver.def}%
3969 \let\@unprocessedoptions\relax
3970 \Hy@RestoreCatcodes
3971 }

```

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.

```

3972 \newif\ifHy@DvipdfmxOutlineOpen
3973 \ifxetex
3974 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3975 \else
3976 \Hy@DvipdfmxOutlineOpentruer
3977 \fi
3978 \fi
3979 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

3980 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3981 \else
3982   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3983     \Hy@DvipdfmxOutlineOpentruetrue
3984   \fi
3985 \fi
3986 \Hy@DisableOption{tex4ht}
3987 \Hy@DisableOption{pdftex}
3988 \Hy@DisableOption{nativepdf}
3989 \Hy@DisableOption{dvipdfm}
3990 \Hy@DisableOption{dvipdfmx}
3991 \Hy@DisableOption{dvipdfmx-outline-open}
3992 \Hy@DisableOption{pdfmark}
3993 \Hy@DisableOption{dvips}
3994 \Hy@DisableOption{hypertex}
3995 \Hy@DisableOption{vtex}
3996 \Hy@DisableOption{vtexpdfmark}
3997 \Hy@DisableOption{dviwindo}
3998 \Hy@DisableOption{dvipsone}
3999 \Hy@DisableOption{textures}
4000 \Hy@DisableOption{latex2html}
4001 \Hy@DisableOption{ps2pdf}
4002 \Hy@DisableOption{xetex}
4003 \Hy@AtEndOfPackage{%
4004   \Hy@DisableOption{pdfversion}%
4005 }

```

15.2.2 Bookmarks

```

4006 \def\WriteBookmarks{0}
4007 \def\@bookmarkopenstatus#1{%
4008   \ifHy@bookmarksopen

```

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

```

4009   \ifnum#1<\expandafter\@firstofone\expandafter
4010     {\number\@bookmarksopenlevel} % explicit space
4011   \else
4012     -%
4013   \fi
4014 \else
4015   -%
4016 \fi
4017 }
4018 \ifHy@bookmarks
4019   \Hy@Info{Bookmarks ON}%
4020   \ifx\@pdfpagemode\@empty
4021     \def\@pdfpagemode{UseOutlines}%
4022   \fi
4023 \else
4024   \def\@bookmarkopenstatus#1{%
4025     \Hy@Info{Bookmarks OFF}%
4026     \Hy@AtEndOfPackage{%
4027       \global\let\ReadBookmarks\relax
4028       \global\let\WriteBookmarks\relax
4029     }%
4030     \ifx\@pdfpagemode\@empty
4031       \def\@pdfpagemode{UseNone}%
4032     \fi

```

```

4033 \fi
4034 \Hy@DisableOption{bookmarks}

```

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

```

4035 \def\Hy@CatcodeWrapper#1{%
4036   \def\Hy@endWrap{%
4037     \def\TMP@EnsureCode##1##2{%
4038       \edef\Hy@endWrap{%
4039         \Hy@endWrap
4040         \catcode##1 \the\catcode##1\relax
4041       }%
4042       \catcode##1 ##2\relax
4043     }%
4044     \TMP@EnsureCode{10}{12}% ^^J
4045     \TMP@EnsureCode{33}{12}% !
4046     \TMP@EnsureCode{34}{12}% "
4047     \TMP@EnsureCode{36}{3}% $ (math)
4048     \TMP@EnsureCode{38}{4}% & (alignment)
4049     \TMP@EnsureCode{39}{12}% '
4050     \TMP@EnsureCode{40}{12}% (
4051     \TMP@EnsureCode{41}{12}% )
4052     \TMP@EnsureCode{42}{12}% *
4053     \TMP@EnsureCode{43}{12}% +
4054     \TMP@EnsureCode{44}{12}% ,
4055     \TMP@EnsureCode{45}{12}% -
4056     \TMP@EnsureCode{46}{12}% .
4057     \TMP@EnsureCode{47}{12}% /
4058     \TMP@EnsureCode{58}{12}% :
4059     \TMP@EnsureCode{59}{12}% ;
4060     \TMP@EnsureCode{60}{12}% <
4061     \TMP@EnsureCode{61}{12}% =
4062     \TMP@EnsureCode{62}{12}% >
4063     \TMP@EnsureCode{63}{12}% ?
4064     \TMP@EnsureCode{91}{12}% [
4065     \TMP@EnsureCode{93}{12}% ]
4066     \TMP@EnsureCode{94}{7}% ^ (superscript)
4067     \TMP@EnsureCode{95}{8}% _ (subscript)
4068     \TMP@EnsureCode{96}{12}% '
4069     \TMP@EnsureCode{124}{12}% |
4070     \TMP@EnsureCode{126}{13}% ~ (active)
4071     ##1\relax
4072   \Hy@endWrap
4073 }

```

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

```

4074 \Hy@AtBeginDocument{%
4075   \ifHy@ocgcolorlinks
4076     \setkeys{Hyp}{colorlinks}%
4077     \ifHy@pdfa
4078       \Hy@Warning{%
4079         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4080         using 'colorlinks' instead of 'ocgcolorlinks'%
4081       }%
4082     \Hy@ocgcolorlinksfalse
4083   \fi
4084 \fi
4085 \ifHy@ocgcolorlinks
4086 \else

```

```

4087 \Hy@DisableOption{ocgcolorlinks}%
4088 \fi
4089 \ifHy@colorlinks
4090 \def\@pdfborder{0 0 0}%
4091 \let\@pdfborderstyle\@empty
4092 \ifHy@typexml
4093 \else
4094 \Hy@CatcodeWrapper{%
4095 \RequirePackage{color}%
4096 }%
4097 \fi
4098 \def\Hy@colorlink#1{%
4099 \begingroup
4100 \HyColor@UseColor#1%
4101 }%
4102 \def\Hy@endcolorlink{\endgroup}%
4103 \Hy@Info{Link coloring ON}%
4104 \else
4105 \ifHy@frenchlinks
4106 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4107 \def\Hy@endcolorlink{\endgroup}%
4108 \Hy@Info{French linking ON}%
4109 \else
for grouping consistency:
4110 \def\Hy@colorlink#1{\begingroup}%
4111 \def\Hy@endcolorlink{\endgroup}%
4112 \Hy@Info{Link coloring OFF}%
4113 \fi
4114 \fi
4115 \Hy@DisableOption{colorlinks}%
4116 \Hy@DisableOption{frenchlinks}%
4117 \ifHy@texht
4118 \long\def\@firstoffive#1#2#3#4#5{#1}%
4119 \long\def\@secondoffive#1#2#3#4#5{#2}%
4120 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4121 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4122 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4123 \providecommand*\@safe@activestruel{}%
4124 \providecommand*\@safe@activesfalse{}%
4125 \def\T@ref#1{%
4126 \Hy@safe@activestruel
4127 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4128 \Hy@safe@activesfalse
4129 }%
4130 \def\T@pageref#1{%
4131 \Hy@safe@activestruel
4132 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4133 \Hy@safe@activesfalse
4134 }%
4135 \else
4136 \ifHy@typexml
4137 \else
4138 \Hy@CatcodeWrapper{%
4139 \RequirePackage{nameref}%
4140 }%
4141 \fi
4142 \fi

```

```

4143 \DeclareRobustCommand\ref{%
4144   \@ifstar\@refstar\T@ref
4145 }%
4146 \DeclareRobustCommand\pageref{%
4147   \@ifstar\@pagerefstar\T@pageref
4148 }%
4149 % \@ifclassloaded{memoir}{%
4150 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4151 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4152 %   }%
4153 % } \ltx@secondoftwo
4154 % {%
4155 %   \DeclareRobustCommand*{\nameref}{%
4156 %     \@ifstar\@mem@titlerefno link\@mem@titleref
4157 %   }%
4158 % }{%
4159   \DeclareRobustCommand*{\nameref}{%
4160     \@ifstar\@namerefstar\T@nameref
4161   }%
4162 % }%
4163 }
4164 \Hy@AtBeginDocument{%
4165   \ifHy@texht
4166   \else
4167     \Hy@CatcodeWrapper{%
4168       \ReadBookmarks
4169     }%
4170   \fi
4171 }
4172 \ifHy@backref
4173   \RequirePackage{backref}%
4174 \else
4175   \let\Hy@backout\@gobble
4176 \fi
4177 \Hy@DisableOption{backref}
4178 \Hy@DisableOption{pagebackref}
4179 \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`.

```

4180 \begingroup
4181   \endlinechar=-1 %
4182   \catcode'\^^A=14 %
4183   \catcode'\^^M\active
4184   \catcode'\%\active
4185   \catcode'\#\active
4186   \catcode'\_\active
4187   \catcode'\$\active
4188   \catcode'\&\active
4189   \gdef\hyper@normalise{^^A

```

```

4190 \begingroup
4191 \catcode'\^^M\active
4192 \def^^M{ }^^A
4193 \catcode'\%\active
4194 \let%\@percentchar
4195 \let%\@percentchar
4196 \catcode'\#\active
4197 \def#{\hyper@hash}^^A
4198 \def\#{\hyper@hash}^^A
4199 \@makeoother\&^^A
4200 \edef&{\string&}^^A
4201 \edef&{\string&}^^A
4202 \edef\textunderscore{\string_}^^A
4203 \let\_ \textunderscore
4204 \catcode'\_ \active
4205 \let\_ \textunderscore
4206 \let~\hyper@tilde
4207 \let~\hyper@tilde
4208 \let\textasciitilde\hyper@tilde
4209 \let\\ \@backslashchar
4210 \edef${\string$}^^A
4211 \Hy@safe@activetrue
4212 \hyper@n@rmalise
4213 }^^A
4214 \catcode'\#=6 ^^A
4215 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4216 \gdef\hyper@n@rmalise#1#2{^^A
4217 \def\Hy@tempa{#2}^^A
4218 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4219 \Hy@ReturnAfterElseFi{^^A
4220 \hyper@@normalise{#1}^^A
4221 }^^A
4222 \else
4223 \Hy@ReturnAfterFi{^^A
4224 \hyper@@normalise{#1}{#2}^^A
4225 }^^A
4226 \fi
4227 }^^A
4228 \gdef\hyper@@normalise#1#2{^^A
4229 \edef\Hy@tempa{^^A
4230 \endgroup
4231 \noexpand#1{\Hy@RemovePercentCr#2%\nil}^^A
4232 }^^A
4233 \Hy@tempa
4234 }^^A
4235 \gdef\Hy@RemovePercentCr#1%\nil{^^A
4236 #1^^A
4237 \ifx\limits#2\limits
4238 \else
4239 \Hy@ReturnAfterFi{^^A
4240 \Hy@RemovePercentCr #2\@nil
4241 }^^A
4242 \fi
4243 }^^A
4244 \endgroup
4245 \providecommand*\hyper@chars{%
4246 \let\#\hyper@hash

```

```

4247 \let\%\@percentchar
4248 \Hy@safe@activetrue
4249 }

4250 \def\hyperlink#1#2{%
4251   \hyper@link{#1}{#2}%
4252 }

4253 \def\Hy@VerboseLinkStart#1#2{%
4254   \ifHy@verbose
4255     \begingroup
4256       \Hy@safe@activetrue
4257       \xdef\Hy@VerboseGlobalTemp{(#1 '#2')%
4258       \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4259       \xdef\Hy@VerboseGlobalTemp{%
4260         \Hy@VerboseGlobalTemp, %
4261         line \the\inputlineno
4262       }%
4263     \endgroup
4264     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4265     \@onelevel@sanitize\Hy@VerboseLinkInfo
4266   \fi
4267 }

4268 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4269 \def\Hy@VerboseLinkStop{%
4270   \ifHy@verbose
4271     \begingroup
4272     \edef\x{\endgroup
4273       \write\m@ne{%
4274         Package 'hyperref' Info: %
4275         End of reference \Hy@VerboseLinkInfo.%
4276       }%
4277     }%
4278   \x
4279   \fi
4280 }

4281 \def\Hy@VerboseAnchor#1{%
4282   \ifHy@verbose
4283     \begingroup
4284       \Hy@safe@activetrue
4285       \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4286     \endgroup
4287   \fi
4288 }

4289 \def\Hy@AllowHyphens{%
4290   \relax
4291   \ifhmode
4292     \penalty\@M
4293     \hskip\z@skip
4294   \fi
4295 }

4296 \DeclareRobustCommand*\href{#1}{%
4297   \@ifnextchar\bgrouphyper@normalise\href@}%
4298 }
4299 \def\Hy@href#1{%
4300   \hyper@normalise\href@
4301 }

```



```

4302 \begingroup
4303   \catcode'\$=6 %
4304   \catcode'\#=12 %
4305   \gdef\href@#1{\expandafter\href@split$1##\}%
4306   \gdef\href@split$1#$2#$3\{\%
4307     \hyper@@link{#1}{#2}%
4308   }%
4309 \endgroup

```

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

```

4310 \RequirePackage{url}
4311 \let\HyOrg@url\url
4312 \def\Hurl{\begingroup \Url}
4313 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4314 \def\nolinkurl@#1{\Hurl{#1}}
4315 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4316 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4317 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4318 \providecommand\hyper@image[2]{#2}

4319 \def\hypertarget#1#2{%
4320   \ifHy@nesting
4321     \hyper@@anchor{#1}{#2}%
4322   \else
4323     \hyper@@anchor{#1}{\relax}#2%
4324   \fi
4325 }

```

\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.

```

4326 \DeclareRobustCommand*\hyperref{\%
4327   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4328 }
4329 \def\Hy@babelnormalise#1[#2]{%
4330   \begingroup
4331     \Hy@safe@activetrue
4332     \edef\Hy@tempa{%
4333       \endgroup
4334       \noexpand#1[#2]}%
4335   }%
4336   \Hy@tempa
4337 }
4338 \def\@hyperref{\hyper@normalise\@hyperref}
4339 \def\@hyperref#1#2#3{%
4340   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4341   \expandafter\tryhyper@link\ref@one\{#1}%
4342 }
4343 \def\tryhyper@link#1\#2{%
4344   \hyper@@link{#2}{#1}%
4345 }

4346 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
4347 \def\@hyperdef#1#2#3{%, category, name, text
4348   \ifx\#1\%

```

```

4349 \def\Hy@AnchorName{#2}%
4350 \else
4351 \def\Hy@AnchorName{#1.#2}%
4352 \fi
4353 \ifHy@nesting
4354 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4355 \else
4356 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4357 \fi
4358 }

```

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.

```

4359 \def\label@hyperref[#1]{%
4360 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4361 }%
4362 \def\label@@hyperref#1#2#3{%
4363 \ifx#1\relax
4364 \protect\G@refundefinedtrue
4365 \@latex@warning{%
4366 Hyper reference ‘#2’ on page \thepage \space undefined%
4367 }%
4368 \hyper@@link{}{??}{#3}%
4369 \else
4370 \hyper@@link{\expandafter\@fifthoffive#1}%
4371 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4372 \fi
4373 }
4374 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4375 % anchor text
4376 \@bsphack
4377 \ifx\#2\%
4378 \def\Hy@AnchorName{#3}%
4379 \else
4380 \def\Hy@AnchorName{#2.#3}%
4381 \fi
4382 \if@filesw
4383 \protected@write\@auxout{}{%
4384 \string\newlabel{#1}{\{}{}\}\{\Hy@AnchorName\}}%
4385 }%
4386 \fi
4387 \@esphack
4388 \ifHy@nesting
4389 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4390 \else
4391 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4392 \fi
4393 }

```

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.

```

4394 \def\hyper@@link{\let\Hy@reserved@a\relax

```

```

4395 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
4396 }
4397 \def\hyper@link@{#1}#2#3#4{%
4398 \begingroup
4399 \protected@edef\Hy@tempa{#2}%
4400 \Hy@safe@activetrue
4401 \edef\x{#3}%
4402 \ifx\Hy@tempa\@empty
4403 \toks0{\hyper@link{#1}}%
4404 \else
4405 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4406 \fi
4407 \toks2{%
4408 \Hy@safe@activesfalse
4409 #4%
4410 }%
4411 \edef\Hy@tempa{\the\toks2}%
4412 \edef\x{\endgroup
4413 \ifx\Hy@tempa\@empty
4414 \noexpand\Hy@Warning{Suppressing empty link}%
4415 \else
4416 \the\toks0 {\x}{\the\toks2}}%
4417 \fi
4418 }%
4419 \x
4420 }

```

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.

```

4421 \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.

```

4422 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4423 }

```

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

```

4424 \def\@pdftempwordfile{file}%
4425 \def\@pdftempwordrun{run}%
4426 \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:

```

4427 \ifx\\#6\\%
4428 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4429 \else
4430 \ifx\\#4\\%
4431 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4432 \else

```

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

```

4433 \def\@pdftempa{#4}%
4434 \ifx\@pdftempa\@pdftempwordfile
4435 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
4436 \else

```

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

```

4437 \ifx\@pdftempa\@pdftempwordrun
4438 \ifHy@pdfa
4439 \PackageError{hyperref}{%
4440 PDF/A: Launch action is prohibited%
4441 }\@ehc
4442 \begingroup
4443 \leavevmode
4444 #2%
4445 \endgroup
4446 \else
4447 \expandafter\@hyper@launch#7\\{#3}{#2}%
4448 \fi
4449 \else

```

otherwise its a URL

```

4450 \hyper@linkurl{#3}{#7\ifx\\#2\\%
4451 \fi
4452 \fi
4453 \fi
4454 \fi
4455 }

```

By default, turn run: into file:

```

4456 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
4457 \hyper@linkurl{#2}{%
4458 \Hy@linkfileprefix
4459 #1%
4460 \ifx\\#3\\%
4461 \else
4462 \hyper@hash
4463 #3%
4464 \fi
4465 }%
4466 }

```

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

```

4467 \def\@hyper@linkfile file:#1\\#2#3{%
4468 %file url,link string, name
4469 \filename@parse{#1}%
4470 \ifx\filename@ext\relax
4471 \edef\filename@ext{\XR@ext}%
4472 \fi
4473 \def\use@file{\filename@area\filename@base.\filename@ext}%
4474 \Hy@IfStringEndsWith\filename@ext\XR@ext{%

```

```

4475 \hyper@linkfile{#2}{\use@file}{#3}%
4476 }{%
4477 \ifx\@baseurl\@empty
4478 \hyper@linkurl{#2}{%
4479 \Hy@linkfileprefix\use@file\ifx\\#3\\else\hyper@hash#3\fi
4480 }%
4481 \else
4482 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4483 \fi
4484 }%
4485 }

4486 \def\Hy@IfStringEndsWith#1#2{%
4487 \begingroup
4488 \edef\x{#1}%
4489 \@onelevel@sanitize\x
4490 \edef\x{.\x}%
4491 \edef\y{#2}%
4492 \@onelevel@sanitize\y
4493 \edef\y{.\y}%
4494 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4495 \endgroup
4496 \ifx\relax##2\relax
4497 \expandafter\let\@secondoftwo
4498 \else
4499 \expandafter\let\@firstoftwo
4500 \fi
4501 }%
4502 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4503 }

```

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.

```

4504 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4505 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4506 \ifx\\#1\\%
4507 #2\Hy@Warning{Ignoring empty anchor}%
4508 \else
4509 \def\anchor@spot{#2#3}%
4510 \let\put@me@back\@empty
4511 \ifx\relax#2\relax
4512 \else
4513 \ifHy@nesting
4514 \else
4515 \ifcat a\noexpand#2\relax
4516 \else
4517 \ifcat 0\noexpand#2 \relax
4518 \else
4519 % \typeout{Anchor start is not alphanumeric %
4520 % on input line\the\inputlineno%
4521 % }%
4522 \let\anchor@spot\@empty
4523 \def\put@me@back{#2#3}%

```

```

4524     \fi
4525     \fi
4526     \fi
4527     \fi
4528     \ifHy@activeanchor
4529     \anchor@spot
4530     \else
4531     \hyper@anchor{#1}%
4532     \fi
4533     \expandafter\put@me@back
4534     \fi
4535     \let\anchor@spot\@empty
4536 }

```

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.

```

4537 \let\htmladding\hyperimage
4538 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4539 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4540 \def\htmlref#1#2{% anchor text, label
4541   \label@hyperref[{#2}]{#1}%
4542 }

```

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.

```

4543 \def\@latextohtmlX{%
4544   \let\hhyperref\hyperref
4545   \def\hyperref##1##2##3##4{% anchor text for HTML
4546     % text to print before label in print
4547     % label
4548     % post-label text in print
4549     ##2\ref{##4}##3%
4550   }%
4551 }

```

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.

```

4552 \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
 4553 \def\HyField@NewFlag#1#2{%
 4554 \lowercase{\HyField@NewOption{#2}}%
 4555 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
 4556 }

\HyField@NewFlagOnly
 4557 \def\HyField@NewFlagOnly#1#2{%
 4558 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
 4559 }

\HyField@NewOption #1: option name
 4560 \def\HyField@NewOption#1{%
 4561 \expandafter\newif\csname ifFld@#1\endcsname
 4562 \define@key{Field}{#1}[true]{%
 4563 \lowercase{\Field@boolkey{##1}}{#1}%
 4564 }%
 4565 }

\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
 4566 \def\HyField@NewBitsetFlag#1#2#3#4{%
 4567 \begingroup
 4568 \count@=#4\relax
 4569 \advance\count@\m@ne
 4570 \def\x##1{%
 4571 \endgroup
 4572 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
 4573 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
 4574 \expandafter\edef\csname HyField@#3@##1\endcsname{%
 4575 (\number#4) #2%
 4576 }%
 4577 \else
 4578 \expandafter\edef\csname HyField@#3@##1\endcsname{%
 4579 \csname HyField@#3@##1\endcsname
 4580 /#2%
 4581 }%
 4582 \fi
 4583 }%
 4584 \expandafter\x\expandafter{\the\count@}%
 4585 }

\HyField@UseFlag The bit set is HyField@#1
 4586 \def\HyField@UseFlag#1#2{%
 4587 \lowercase{\HyField@UseFlag{#2}}{#1}%
 4588 }

\HyField@@UseFlag

```
4589 \def\HyField@@UseFlag#1#2{%
4590   \bitsetSetValue{HyField@#2}{%
4591     \csname HyField@#2@#1\endcsname
4592   }{%
4593     \csname ifFld@#1\endcsname 1\else 0\fi
4594   }%
4595 }
```

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

```
4596 \def\HyField@SetFlag#1#2{%
4597   \lowercase{\HyField@@SetFlag{#2}}{#1}%
4598 }
```

\HyField@@SetFlag

```
4599 \def\HyField@@SetFlag#1#2{%
4600   \bitsetSetValue{HyField@#2}{%
4601     \csname HyField@#2@#1\endcsname
4602   }{1}%
4603 }
```

\HyField@PrintFlags

```
4604 \def\HyField@PrintFlags#1#2{%
4605   \ifHy@verbose
4606     \begingroup
4607       \let\Hy@temp\@empty
4608       \let\MessageBreak\relax
4609       \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4610       \bitsetGetSetBitList{HyField@#1}\do{%
4611         \edef\Hy@temp{%
4612           \Hy@temp
4613           \csname HyField@#1@\x\endcsname\MessageBreak
4614         }%
4615       }%
4616     \edef\x{\endgroup
4617       \noexpand\Hy@Info{%
4618         Field flags: %
4619         \expandafter\ifx\@car#1\@nil S\else/\fi
4620         #1 %
4621         \bitsetGetDec{HyField@#1} %
4622         (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4623         \Hy@temp
4624         for #2%
4625       }%
4626     }\x
4627   \fi
4628 }
```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
4629 \HyField@NewFlag{Ff}{ReadOnly}{1}
4630 \HyField@NewFlag{Ff}{Required}{2}
4631 \HyField@NewFlag{Ff}{NoExport}{3}
```


“Table 8.75 Field flags specific to button fields”

```
4632 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4633 \HyField@NewFlag{Ff}{Radio}{16}
4634 \HyField@NewFlag{Ff}{Pushbutton}{17}
4635 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
4636 \HyField@NewFlag{Ff}{Multiline}{13}
4637 \HyField@NewFlag{Ff}{Password}{14}
4638 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4639 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4640 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4641 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4642 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
4643 \HyField@NewFlag{Ff}{Combo}{18}
4644 \HyField@NewFlag{Ff}{Edit}{19}
4645 \HyField@NewFlag{Ff}{Sort}{20}
4646 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4647 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4648 \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.

```
4649 \newif\ifFld@popdown
4650 \define@key{Field}{popdown}[true]{%
4651   \lowercase{\Field@boolkey{#1}}{popdown}%
4652 }
```

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.

```
4653 \HyField@NewFlag{F}{Invisible}{1}
4654 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4655 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4656 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4657 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4658 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4659 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4660 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4661 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4662 \ifHy@pdfa
4663   \def\HyField@PDFAFldWarning#1#2{%
4664     \Hy@Warning{%
4665       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4666       be set to ‘#2’%
4667     }%
4668   }%
4669   \Fld@invisiblefalse
4670   \def\Fld@invisibletrue{%
4671     \HyField@PDFAFldWarning{invisible}{false}%
4672   }%
4673   \Fld@hiddenfalse
4674   \def\Fld@hiddentrue{%
```

```

4675 \HyField@PDFAFIWarning{hidden}{false}%
4676 }%
4677 \Fld@printtrue
4678 \def\Fld@printfalse{%
4679 \HyField@PDFAFIWarning{print}{true}%
4680 }%
4681 \Fld@nozoomtrue
4682 \def\Fld@nozoomfalse{%
4683 \HyField@PDFAFIWarning{nozoom}{true}%
4684 }%
4685 \Fld@norotatetrue
4686 \def\Fld@norotatefalse{%
4687 \HyField@PDFAFIWarning{norotate}{true}%
4688 }%
4689 \Fld@noviewfalse
4690 \def\Fld@noviewtrue{%
4691 \HyField@PDFAFIWarning{noview}{false}%
4692 }%
4693 \fi

```

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

```

4694 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4695 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4696 \HyField@NewFlag{Submit}{GetMethod}{4}
4697 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4698 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4699 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4700 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4701 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4702 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4703 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4704 \HyField@NewFlag{Submit}{ExclFKey}{12}
4705 \HyField@NewFlag{Submit}{EmbedForm}{14}

4706 \define@key{Field}{export}{%
4707 \lowercase{\def\Hy@temp{#1}}%
4708 \@ifundefined{Fld@export@Hy@temp}{%
4709 \onelevel@sanitize\Hy@temp
4710 \PackageError{hyperref}{%
4711 Unknown export format '\Hy@temp'.\MessageBreak
4712 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4713 } \@ehc
4714 }{%
4715 \let\Fld@export\Hy@temp
4716 }%
4717 }
4718 \def\Fld@export{fdf}
4719 \@namedef{Fld@export@fdf}{0}%
4720 \@namedef{Fld@export@html}{1}%
4721 \@namedef{Fld@export@xfdf}{2}%
4722 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4723 \def\HyField@FlagsSubmit{%
4724 \bitsetReset{HyField@Submit}%
4725 \ifcase\@nameuse{Fld@export@Fld@export} %

```

```

4726 % FDF
4727 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4728 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4729 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4730 \HyField@UseFlag{Submit}{IncludeAnnotations}%
4731 \HyField@UseFlag{Submit}{CanonicalFormat}%
4732 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4733 \HyField@UseFlag{Submit}{ExclFKey}%
4734 \HyField@UseFlag{Submit}{EmbedForm}%
4735 \or % HTML
4736 \HyField@SetFlag{Submit}{ExportFormat}%
4737 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4738 \HyField@UseFlag{Submit}{GetMethod}%
4739 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4740 \HyField@UseFlag{Submit}{CanonicalFormat}%
4741 \or % XFDF
4742 \HyField@SetFlag{Submit}{XFDF}%
4743 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4744 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4745 \HyField@UseFlag{Submit}{CanonicalFormat}%
4746 \or % PDF
4747 \HyField@SetFlag{Submit}{SubmitPDF}%
4748 \HyField@UseFlag{Submit}{GetMethod}%
4749 \fi
4750 \HyField@PrintFlags{Submit}{submit button field}%
4751 \bitsetIsEmpty{HyField@Submit}{%
4752 \def\Fld@submitflags{%
4753 }{%
4754 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4755 }%
4756 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4757 \def\HyField@FlagsAnnot#1{%
4758 \bitsetReset{HyField@F}%
4759 \HyField@UseFlag{F}{Invisible}%
4760 \HyField@UseFlag{F}{Hidden}%
4761 \HyField@UseFlag{F}{Print}%
4762 \HyField@UseFlag{F}{NoZoom}%
4763 \HyField@UseFlag{F}{NoRotate}%
4764 \HyField@UseFlag{F}{NoView}%
4765 \HyField@UseFlag{F}{Locked}%
4766 \HyField@UseFlag{F}{ToggleNoView}%
4767 \HyField@UseFlag{F}{LockedContents}%
4768 \HyField@PrintFlags{F}{#1}%
4769 \bitsetIsEmpty{HyField@F}{%
4770 \def\Fld@annotflags{%
4771 }{%
4772 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4773 }%
4774 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```
4775 \def\HyField@FlagsPushButton{%
4776   \HyField@FlagsAnnot{push button field}%
4777   \bitsetReset{HyField@Ff}%
4778   \HyField@UseFlag{Ff}{ReadOnly}%
4779   \HyField@UseFlag{Ff}{Required}%
4780   \HyField@UseFlag{Ff}{NoExport}%
4781   \HyField@SetFlag{Ff}{Pushbutton}%
4782   \HyField@PrintFlags{Ff}{push button field}%
4783   \bitsetIsEmpty{HyField@Ff}{}%
4784   \def\Fld@flags{%
4785     }{%
4786     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4787   }%
4788 }
```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
4789 \def\HyField@FlagsCheckBox{%
4790   \HyField@FlagsAnnot{check box field}%
4791   \bitsetReset{HyField@Ff}%
4792   \HyField@UseFlag{Ff}{ReadOnly}%
4793   \HyField@UseFlag{Ff}{Required}%
4794   \HyField@UseFlag{Ff}{NoExport}%
4795   \HyField@PrintFlags{Ff}{check box field}%
4796   \bitsetIsEmpty{HyField@Ff}{}%
4797   \def\Fld@flags{%
4798     }{%
4799     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4800   }%
4801 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4802 \def\HyField@FlagsRadioButton{%
4803   \HyField@FlagsAnnot{radio button field}%
4804   \bitsetReset{HyField@Ff}%
4805   \HyField@UseFlag{Ff}{ReadOnly}%
4806   \HyField@UseFlag{Ff}{Required}%
4807   \HyField@UseFlag{Ff}{NoExport}%
4808   \HyField@UseFlag{Ff}{NoToggleToOff}%
4809   \HyField@SetFlag{Ff}{Radio}%
4810   \HyField@UseFlag{Ff}{RadiosInUnison}%
4811   \HyField@PrintFlags{Ff}{radio button field}%
4812   \bitsetIsEmpty{HyField@Ff}{}%
4813   \def\Fld@flags{%
4814     }{%
4815     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4816   }%
4817 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4818 \def\HyField@FlagsText{%
4819   \HyField@FlagsAnnot{text field}%
4820   \bitsetReset{HyField@Ff}%
4821   \HyField@UseFlag{Ff}{ReadOnly}%
4822   \HyField@UseFlag{Ff}{Required}%
4823   \HyField@UseFlag{Ff}{NoExport}%
4824   \HyField@UseFlag{Ff}{Multiline}%
4825   \HyField@UseFlag{Ff}{Password}%
4826   \HyField@UseFlag{Ff}{FileSelect}%
4827   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4828   \HyField@UseFlag{Ff}{DoNotScroll}%
4829   \ifFld@comb
4830     \ifcase0\ifFld@multiline
4831       \else\ifFld@password
4832       \else\ifFld@fileselect
4833       \else 1\fi\fi\fi\relax
4834     \PackageError{hyperref}{%
4835       Field option 'comb' cannot used together with\MessageBreak
4836       'multiline', 'password', or 'fileselect'%
4837     }\@ehc
4838   \else
4839     \HyField@UseFlag{Ff}{Comb}%
4840   \fi
4841 \fi
4842 \HyField@UseFlag{Ff}{RichText}%
4843 \HyField@PrintFlags{Ff}{text field}%
4844 \bitsetIsEmpty{HyField@Ff}{%
4845   \def\Fld@flags{}%
4846 }{%
4847   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4848 }%
4849 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
4850 \def\HyField@FlagsChoice{%
4851   \HyField@FlagsAnnot{choice field}%
4852   \bitsetReset{HyField@Ff}%
4853   \HyField@UseFlag{Ff}{ReadOnly}%
4854   \HyField@UseFlag{Ff}{Required}%
4855   \HyField@UseFlag{Ff}{NoExport}%
4856   \HyField@UseFlag{Ff}{Combo}%
4857   \ifFld@combo
4858     \HyField@UseFlag{Ff}{Edit}%
4859   \fi
4860   \HyField@UseFlag{Ff}{Sort}%
4861   \HyField@UseFlag{Ff}{MultiSelect}%
4862   \ifFld@combo
4863     \ifFld@edit
4864       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4865     \fi
4866   \fi
4867   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```

```

4868 \HyField@PrintFlags{Ff}{choice field}%
4869 \bitsetIsEmpty{HyField@Ff}{%
4870   \def\Fld@flags{}%
4871 }{%
4872   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4873 }%
4874 }

```

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.

```

4875 \def\HyField@PDFChoices#1{%
4876   \begingroup
4877   \gdef\Fld@choices{}%
4878   \def\HyTmp@optlist{}%
4879   \let\HyTmp@optitem\relax
4880   \count@=0 %
4881   \kv@parse{#1}{%
4882     \Hy@pdfstringdef\kv@key\kv@key
4883     \ifx\kv@value\relax
4884       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4885         \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4886       \else
4887         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4888       \fi
4889     \else
4890       \Hy@pdfstringdef\kv@value\kv@value
4891       \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4892     \fi
4893     \edef\HyTmp@optlist{%
4894       \HyTmp@optlist
4895       \HyTmp@optitem{\the\count@}{\kv@key}0%
4896     }%
4897     \advance\count@ by 1 %
4898     \@gobbletwo
4899   }%
4900   \xdef\Fld@choices{/Opt[\Fld@choices]}%
4901   \ifFld@multiselect
4902     \HyField@@PDFChoices{DV}\Fld@default
4903     \HyField@@PDFChoices{V}\Fld@value
4904   \else
4905     \ifx\Fld@default\relax
4906     \else
4907       \pdfstringdef\Hy@gtemp\Fld@default
4908       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4909     \fi
4910     \ifx\Fld@value\relax
4911     \else
4912       \pdfstringdef\Hy@gtemp\Fld@value
4913       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4914     \fi
4915   \fi
4916   \endgroup
4917 }

```

\HyField@@PDFChoices

```
4918 \def\HyField@@PDFChoices#1#2{%
4919   \ifx#2\relax
4920   \else
4921     \count@=0 %
4922     \def\HyTmp@optitem##1##2##3{%
4923       \def\HyTmp@key{##2}%
4924       \ifx\HyTmp@key\Hy@gtemp
4925         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4926           \HyTmp@optlist
4927           \HyTmp@optitem{##1}{##2}1%
4928         }%
4929         \let\HyTmp@found=Y%
4930       \else
4931         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4932           \HyTmp@optlist
4933           \HyTmp@optitem{##1}{##2}##3%
4934         }%
4935       \fi
4936     }%
4937     \expandafter\comma@parse\expandafter{#2}{%
4938       \pdfstringdef\Hy@gtemp\comma@entry
4939       \let\HyTmp@found=N %
4940       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4941       \HyTmp@optlist
4942       \ifx\HyTmp@found Y%
4943         \advance\count@ by 1 %
4944       \else
4945         \@onelevel@sanitize\comma@entry
4946         \PackageWarning{hyperref}{%
4947           \string\ChoiceBox: Ignoring value '\comma@entry',%
4948           \MessageBreak
4949           it cannot be found in the choices%
4950         }%
4951       \fi
4952       \@gobble
4953     }%
4954     \def\HyTmp@optitem##1##2##3{%
4955       \ifnum##3=1 %
4956         (##2)%
4957       \fi
4958     }%
4959     \ifcase\count@
4960     \or
4961       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4962     \else
4963       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4964       \ifx#1V%
4965         \def\HyTmp@optitem##1##2##3{%
4966           \ifnum##3=1 %
4967             \@firstofone{ ##1}%
4968           \fi
4969         }%
4970       \edef\HyTmp@optlist{\HyTmp@optlist}%
4971       \xdef\Fld@choices{%
4972         \Fld@choices
4973         /I[\expandafter\@firstofone\HyTmp@optlist]%

```

```

4974     }%
4975     \fi
4976     \fi
4977     \fi
4978 }

```

19.3 Forms

\HyField@SetKeys

```

4979 \def\HyField@SetKeys{%
4980   \setkeys{Field}%
4981 }

4982 \newif\ifFld@checked
4983 \newif\ifFld@disabled
4984 \Fld@checkedfalse
4985 \Fld@disabledfalse
4986 \newcount\Fld@menulength
4987 \newdimen\Fld@Width
4988 \newdimen\Fld@charsize
4989 \Fld@charsize=10\p@
4990 \def\Fld@maxlen{0}
4991 \def\Fld@align{0}
4992 \def\Fld@color{0 0 0 rg}
4993 \def\Fld@bcolor{1 1 1}
4994 \def\Fld@bordercolor{1 0 0}
4995 \def\Fld@bordersep{1\p@}
4996 \def\Fld@borderwidth{1}
4997 \def\Fld@borderstyle{S}
4998 \def\Fld@cbsymbol{4}
4999 \def\Fld@radiosymbol{H}
5000 \def\Fld@rotation{0}
5001 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5002 \def\endForm{\@endForm}
5003 \newif\ifForm@html
5004 \Form@htmlfalse
5005 \def\Form@boolkey#1#2{%
5006   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5007 }
5008 \define@key{Form}{action}{%
5009   \hyper@normalise\Hy@DefFormAction{#1}%
5010 }
5011 \def\Hy@DefFormAction{\def\Form@action}
5012 \def\enc@html{html}
5013 \define@key{Form}{encoding}{%
5014   \def\Hy@tempa{#1}%
5015   \ifx\Hy@tempa\enc@html
5016     \Form@htmltrue
5017     \def\Fld@export{html}%
5018   \else
5019     \Hy@Warning{%
5020       Form 'encoding' key with \MessageBreak
5021       unknown value '#1'%
5022     }%
5023     \Form@htmlfalse
5024   \fi
5025 }

```



```

5026 \define@key{Form}{method}{%
5027   \lowercase{\def\Hy@temp{#1}}}%
5028   \@ifundefined{Form@method@\Hy@temp}{%
5029     \@onelevel@sanitize\Hy@temp
5030     \PackageError{hyperref}{%
5031       Unknown method '\Hy@temp'.\MessageBreak
5032       Known values are 'post' and 'get'%
5033     }\@ehc
5034   }{%
5035     \let\Form@method\Hy@temp
5036     \ifcase\@nameuse{Form@method@\Hy@temp} %
5037       \Fld@getmethodfalse
5038     \else
5039       \Fld@getmethodtrue
5040     \fi
5041   }%
5042 }
5043 \def\Form@method{}
5044 \@namedef{Form@method@post}{0}
5045 \@namedef{Form@method@get}{1}
5046 \def\Fld@boolkey#1#2{%
5047   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5048 }
5049 \newtoks\Fld@toks
5050 \Fld@toks={ }%
5051 \def\Fld@addtoks#1#2{%
5052   \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5053   \@processme
5054 }
5055 \def\Fld@checkequals#1=#2=#3\{%
5056   \def\@currDisplay{#1}%
5057   \ifx\@#2\%
5058     \def\@currValue{#1}%
5059   \else
5060     \def\@currValue{#2}%
5061   \fi
5062 }
5063 \define@key{Field}{loc}{%
5064   \def\Fld@loc{#1}%
5065 }
5066 \define@key{Field}{checked}[true]{%
5067   \lowercase{\Field@boolkey{#1}}{checked}%
5068 }
5069 \define@key{Field}{disabled}[true]{%
5070   \lowercase{\Field@boolkey{#1}}{disabled}%
5071 }
5072 \define@key{Field}{accesskey}{%
5073   \Field@addtoks{accesskey}{#1}%
5074 }
5075 \define@key{Field}{tabkey}{%
5076   \Field@addtoks{tabkey}{#1}%
5077 }
5078 \define@key{Field}{name}{%
5079   \def\Fld@name{#1}%
5080 }
5081 \define@key{Field}{width}{%
5082   \def\Fld@width{#1}%

```

```

5083 \Field@Width#1\setbox0=\hbox{m}%
5084 }
5085 \define@key{Field}{maxlen}{%
5086 \def\Fld@maxlen{#1}%
5087 }
5088 \define@key{Field}{menulength}{%
5089 \Fld@menulength=#1\relax
5090 }
5091 \define@key{Field}{height}{%
5092 \def\Fld@height{#1}%
5093 }
5094 \define@key{Field}{charsize}{%
5095 \Fld@charsize=#1%
5096 }
5097 \define@key{Field}{borderwidth}{%
5098 \def\Fld@borderwidth{#1}%
5099 }
5100 \define@key{Field}{borderstyle}{%
5101 \def\Fld@borderstyle{#1}%
5102 }
5103 \define@key{Field}{bordersep}{%
5104 \def\Fld@bordersep{#1}%
5105 }
5106 \define@key{Field}{default}{%
5107 \def\Fld@default{#1}%
5108 }
5109 \define@key{Field}{align}{%
5110 \def\Fld@align{#1}%
5111 }
5112 \define@key{Field}{value}{%
5113 \def\Fld@value{#1}%
5114 }
5115 \define@key{Field}{checkboxsymbol}{%
5116 \Fld@DingDef\Fld@cbsymbol{#1}%
5117 }
5118 \define@key{Field}{radiosymbol}{%
5119 \Fld@DingDef\Fld@radiosymbol{#1}%
5120 }
5121 \def\Fld@DingDef#1#2{%
5122 \def\Fld@temp{}%
5123 \Fld@@DingDef#2\ding{}\@nil
5124 \let#1\Fld@temp
5125 }
5126 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5127 \expandafter\def\expandafter\Fld@temp\expandafter{%
5128 \Fld@temp
5129 #1%
5130 }%
5131 \ifx\\#3\\%
5132 \expandafter\@gobble
5133 \else
5134 \begingroup
5135 \lcode'0=#2\relax
5136 \lowercase{\endgroup
5137 \expandafter\def\expandafter\Fld@temp\expandafter{%
5138 \Fld@temp
5139 0%

```

```

5140 }%
5141 }%
5142 \expandafter\@firstofone
5143 \fi
5144 {%
5145 \Fld@@DingDef#3\@nil
5146 }%
5147 }

5148 \define@key{Field}{rotation}{%
5149 \def\Fld@rotation{#1}%
5150 }

5151 \define@key{Field}{backgroundcolor}{%
5152 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5153 }
5154 \define@key{Field}{bordercolor}{%
5155 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5156 }
5157 \define@key{Field}{color}{%
5158 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5159 }

5160 \def\Fld@onclick@code{}
5161 \def\Fld@format@code{}
5162 \def\Fld@validate@code{}
5163 \def\Fld@calculate@code{}
5164 \def\Fld@keystroke@code{}
5165 \def\Fld@onfocus@code{}
5166 \def\Fld@onblur@code{}
5167 \def\Fld@onmousedown@code{}
5168 \def\Fld@onmouseup@code{}
5169 \def\Fld@onenter@code{}
5170 \def\Fld@onexit@code{}
5171 \def\Hy@temp#1{%
5172 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5173 }
5174 \def\Hy@@temp#1#2{%
5175 \ifHy@pdfa
5176 \define@key{Field}{#2}{%
5177 \PackageError{hyperref}{%
5178 PDF/A: Additional action ‘#2’ is prohibited%
5179 }\@ehc
5180 }%
5181 \else
5182 \define@key{Field}{#2}{%
5183 \def#1{##1}%
5184 }%
5185 \fi
5186 }
5187 \Hy@temp{keystroke}
5188 \Hy@temp{format}
5189 \Hy@temp{validate}
5190 \Hy@temp{calculate}
5191 \Hy@temp{onfocus}
5192 \Hy@temp{onblur}
5193 \Hy@temp{onenter}
5194 \Hy@temp{onexit}
5195 \def\Hy@temp#1{%

```

```

5196 \define@key{Field}{#1}{%
5197   \Field@addtoks{#1}{##1}%
5198 }%
5199 }
5200 \Hy@temp{onselect}
5201 \Hy@temp{onchange}
5202 \Hy@temp{ondblclick}
5203 \Hy@temp{onmousedown}
5204 \Hy@temp{onmouseup}
5205 \Hy@temp{onmouseover}
5206 \Hy@temp{onmousemove}
5207 \Hy@temp{onmouseout}
5208 \Hy@temp{onkeypress}
5209 \Hy@temp{onkeydown}
5210 \Hy@temp{onkeyup}
5211 \ifHy@pdfa
5212 \define@key{Field}{onclick}{%
5213   \PackageError{hyperref}{%
5214     PDF/A: Action 'onclick' is prohibited%
5215   }\@ehc
5216 }%
5217 \else
5218 \define@key{Field}{onclick}{%
5219   \def\Fld@onclick@code{#1}%
5220   \Field@addtoks{onclick}{#1}%
5221 }%
5222 \fi

5223 \DeclareRobustCommand\TextField{%
5224   \@ifnextchar[{\@TextField}{\@TextField[]}%
5225 }
5226 \DeclareRobustCommand\ChoiceMenu{%
5227   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5228 }
5229 \DeclareRobustCommand\CheckBox{%
5230   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5231 }
5232 \DeclareRobustCommand\PushButton{%
5233   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5234 }
5235 \DeclareRobustCommand\Gauge{%
5236   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5237 }
5238 \DeclareRobustCommand\Submit{%
5239   \@ifnextchar[{\@Submit}{\@Submit[]}%
5240 }
5241 \DeclareRobustCommand\Reset{%
5242   \@ifnextchar[{\@Reset}{\@Reset[]}%
5243 }
5244 \def\LayoutTextField#1#2{% label, field
5245   #1 #2%
5246 }
5247 \def\LayoutChoiceField#1#2{% label, field
5248   #1 #2%
5249 }
5250 \def\LayoutCheckField#1#2{% label, field
5251   #1 #2%
5252 }

```

```

5253 \def\LayoutPushButtonField#1{% button
5254   #1%
5255 }
5256 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5257 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5258 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5259 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5260 \def\MakeButtonField#1{%
5261   \sbox0{%
5262     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5263   }%
5264   \@tempdima\ht0 %
5265   \advance\@tempdima by \Fld@borderwidth bp %
5266   \advance\@tempdima by \Fld@borderwidth bp %
5267   \ht0\@tempdima
5268   \@tempdima\dp0 %
5269   \advance\@tempdima by \Fld@borderwidth bp %
5270   \advance\@tempdima by \Fld@borderwidth bp %
5271   \dp0\@tempdima
5272   \box0\relax
5273 }
5274 \def\DefaultHeightofSubmit{14pt}
5275 \def\DefaultWidthofSubmit{2cm}
5276 \def\DefaultHeightofReset{14pt}
5277 \def\DefaultWidthofReset{2cm}
5278 \def\DefaultHeightofCheckBox{\baselineskip}
5279 \def\DefaultWidthofCheckBox{\baselineskip}
5280 \def\DefaultHeightofChoiceMenu{\baselineskip}
5281 \def\DefaultWidthofChoiceMenu{\baselineskip}
5282 \def\DefaultHeightofText{\baselineskip}
5283 \def\DefaultHeightofTextMultiline{4\baselineskip}
5284 \def\DefaultWidthofText{3cm}
5285 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5286 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5287 \def\DefaultOptionsofPushButton{print}
5288 \def\DefaultOptionsofCheckBox{print}
5289 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5290 \def\DefaultOptionsofListBox{print}
5291 \def\DefaultOptionsofComboBox{print,edit,sort}
5292 \def\DefaultOptionsofPopdownBox{print}
5293 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5294 \ifHy@figures
5295   \Hy@Info{Hyper figures ON}%
5296 \else
5297   \Hy@Info{Hyper figures OFF}%
5298 \fi
5299 \ifHy@nesting
5300   \Hy@Info{Link nesting ON}%
5301 \else
5302   \Hy@Info{Link nesting OFF}%
5303 \fi
5304 \ifHy@hyperindex

```

```

5305 \Hy@Info{Hyper index ON}%
5306 \else
5307 \Hy@Info{Hyper index OFF}%
5308 \fi
5309 \ifHy@backref
5310 \Hy@Info{backreferencing ON}%
5311 \else
5312 \Hy@Info{backreferencing OFF}%
5313 \fi
5314 \ifHy@colorlinks
5315 \Hy@Info{Link coloring ON}%
5316 \else
5317 \Hy@Info{Link coloring OFF}%
5318 \fi
5319 \ifHy@ocgcolorlinks
5320 \Hy@Info{Link coloring with OCG ON}%
5321 \else
5322 \Hy@Info{Link coloring with OCG OFF}%
5323 \fi
5324 \ifHy@pdfa
5325 \Hy@Info{PDF/A mode ON}%
5326 \else
5327 \Hy@Info{PDF/A mode OFF}%
5328 \fi

```

21 Low-level utility macros

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

```

5329 \edef\hyper@hash{\string#}
5330 \edef\hyper@tilde{\string~}
5331 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5332 \def\@currentHref{Doc-Start}
5333 \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.

```

5334 \Hy@AtBeginDocument{%
5335 \Hy@pdfstringtrue
5336 \PDF@SetupDoc
5337 \let\PDF@SetupDoc\@empty
5338 \Hy@DisableOption{pdfpagescrop}%
5339 \Hy@DisableOption{pdfpagemode}%
5340 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5341 \Hy@DisableOption{pdfdirection}%
5342 \Hy@DisableOption{pdfviewarea}%
5343 \Hy@DisableOption{pdfviewclip}%
5344 \Hy@DisableOption{pdfprintarea}%
5345 \Hy@DisableOption{pdfprintclip}%
5346 \Hy@DisableOption{pdfprintscaling}%
5347 \Hy@DisableOption{pdfduplex}%
5348 \Hy@DisableOption{pdfpicktraybypdfsize}%
5349 \Hy@DisableOption{pdfprintpagerange}%
5350 \Hy@DisableOption{pdfnumcopies}%
5351 \Hy@DisableOption{pdfstartview}%
5352 \Hy@DisableOption{pdfstartpage}%
5353 \Hy@DisableOption{pdftoolbar}%

```

```

5354 \Hy@DisableOption{pdfmenubar}%
5355 \Hy@DisableOption{pdfwindowui}%
5356 \Hy@DisableOption{pdffitwindow}%
5357 \Hy@DisableOption{pdfcenterwindow}%
5358 \Hy@DisableOption{pdfdisplaydoctitle}%
5359 \Hy@DisableOption{pdfpagelayout}%
5360 \Hy@DisableOption{pdflang}%
5361 \Hy@DisableOption{baseurl}%
5362 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5363 \Hy@pdfstringfalse
5364 }

```

Ignore star from referencing macros:

```

5365 \LetLtxMacro\NoHy@OrgRef\ref
5366 \DeclareRobustCommand*{\ref}{%
5367 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5368 }
5369 \LetLtxMacro\NoHy@OrgPageRef\pageref
5370 \DeclareRobustCommand*{\pageref}{%
5371 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5372 }

```

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.

```

5373 \def\NoHyper{%
5374 \def\hyper@link@{##1}##2##3##4{##4}%
5375 \def\hyper@@anchor##1{}%
5376 \global\let\hyper@livelink\hyper@link
5377 \gdef\hyper@link##1##2##3{##3}%
5378 \def\hyper@anchor##1{}%
5379 \def\hyper@anchorstart##1{}%
5380 \let\hyper@anchorend\@empty
5381 \def\hyper@linkstart##1##2{}%
5382 \let\hyper@linkend\@empty
5383 \def\hyper@linkurl##1##2{##1}%
5384 \def\hyper@linkfile##1##2##3{##1}%
5385 \def\hyper@link@{##1}##2##3{}%
5386 \let\Hy@backout\@gobble
5387 }
5388 \def@stop@hyper{%
5389 \def\hyper@link@{##1}##2##3##4{##4}%
5390 \let\Hy@backout\@gobble
5391 \def\hyper@@anchor##1{}%
5392 \def\hyper@link##1##2##3{##3}%
5393 \def\hyper@anchor##1{}%
5394 \def\hyper@anchorstart##1{}%
5395 \let\hyper@anchorend\@empty
5396 \def\hyper@linkstart##1##2{}%
5397 \let\hyper@linkend\@empty
5398 \def\hyper@linkurl##1##2{##1}%
5399 \def\hyper@linkfile##1##2##3{##1}%
5400 \def\hyper@link@{##1}##2##3{}%

```

```

5401 }
5402 \def\endNoHyper{%
5403   \global\let\hyper@link\hyper@livelink
5404 }
5405 \</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:

```

5406 (*nohyperref)
5407 \RequirePackage{letltxmacro}[2008/06/13]
5408 \let\hyper@@anchor\@gobble
5409 \def\hyper@link#1#2#3{#3}%
5410 \let\hyper@anchorstart\@gobble
5411 \let\hyper@anchorend\@empty
5412 \let\hyper@linkstart\@gobbletwo
5413 \let\hyper@linkend\@empty
5414 \def\hyper@linkurl#1#2{#1}%
5415 \def\hyper@linkfile#1#2#3{#1}%
5416 \def\hyper@link@{#1}#2#3{#1}%
5417 \let\PDF@SetupDoc\@empty
5418 \let\PDF@FinishDoc\@empty
5419 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5420 \def\Acrobatmenu#1#2{\leavevmode#2}
5421 \let\pdfstringdefDisableCommands\@gobbletwo
5422 \let\texorpdfstring\@firstoftwo
5423 \let\pdfbookmark\@undefined
5424 \newcommand\pdfbookmark[3]{}{}
5425 \let\phantomsection\@empty
5426 \let\hypersetup\@gobble
5427 \let\hyperbaseurl\@gobble
5428 \let\href\@gobble
5429 \let\hyperdef\@gobbletwo
5430 \let\hyperlink\@gobble
5431 \let\hypertarget\@gobble
5432 \def\hyperref{%
5433   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5434 }
5435 \long\def\@gobbleopt[#1]{#1}
5436 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5437 \LetLtxMacro\NoHy@OrgRef\ref
5438 \DeclareRobustCommand*\ref{#1}{%
5439   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5440 }
5441 \LetLtxMacro\NoHy@OrgPageRef\pageref
5442 \DeclareRobustCommand*\pageref{#1}{%
5443   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef

```



```

5444 }
5445 \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}`

```

5446 \*package
5447 \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.

```

5448 \if@filesw
5449 \ifHy@typexml
5450 \immediate\closeout\@mainaux
5451 \immediate\openout\@mainaux\jobname.aux\relax
5452 \immediate\write\@auxout{<relaxxml>\relax}%
5453 \fi
5454 \immediate\write\@auxout{%
5455 \string\providecommand\string\HyperFirstAtBeginDocument{%
5456 \string\AtBeginDocument}^^J%
5457 \string\HyperFirstAtBeginDocument{%
5458 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5459 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5460 \string\gdef\string\contentsline%
5461 \string#1\string#2\string#3\string#4{%
5462 \string\oldcontentsline%
5463 {\string#1}{\string#2}{\string#3}^^J%
5464 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5465 \string\gdef\string\newlabel\string#1\string#2{%
5466 \string\newlabelxx{\string#1}\string#2}^^J%
5467 \string\gdef\string\newlabelxx%
5468 \string#1\string#2\string#3\string#4\string#5\string#6{%
5469 \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.

```

5470 \string\AtEndDocument{%
5471 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5472 \string\let\string\contentsline\string\oldcontentsline^^J%
5473 \string\let\string\newlabel\string\oldnewlabel^^J%
5474 \string\fi%
5475 }^^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.

```

5476 \string\fi%
5477 }^^J%
5478 \string\global\string\let\string\hyper@last\relax^^J%
5479 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5480 }%
5481 \fi
5482 \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.

```

5483 \ifx\hyper@last\@undefined
5484 \def\@starttoc#1{%
5485 \begingroup
5486 \makeatletter
5487 \IfFileExists{\jobname.#1}{%
5488 \Hy@WarningNoLine{%
5489 old #1 file detected, not used; run LaTeX again%
5490 }%
5491 }{}%
5492 \if@filesw
5493 \expandafter\newwrite\csname tf@#1\endcsname
5494 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5495 \fi
5496 \@nobreakfalse
5497 \endgroup
5498 }%
5499 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5500 \fi
5501 }

```

25 Title strings

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

```

5502 \ifHy@usetitle
5503 \let\HyOrg@title\title
5504 \let\HyOrg@author\author
5505 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5506 \def\Hy@scanopttitle[#1]{%
5507 \gdef\Hy@title{#1}%
5508 \HyOrg@title{#1}%
5509 }%
5510 \def\Hy@scantitle#1{%
5511 \gdef\Hy@title{#1}%
5512 \HyOrg@title{#1}%
5513 }%
5514 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5515 \def\Hy@scanoptauthor[#1]{%
5516 \gdef\Hy@author{#1}%
5517 \HyOrg@author{#1}%
5518 }%
5519 \def\Hy@scanauthor#1{%
5520 \gdef\Hy@author{#1}%
5521 \HyOrg@author{#1}%
5522 }%

```

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.

```

5523 \begingroup
5524 \def\process@me#1\@nil#2{%
5525 \expandafter\let\expandafter\x\csname @#2\endcsname
5526 \edef\y{\expandafter\strip@prefix\meaning\x}%
5527 \def\c##1#1##2\@nil{%

```

```

5528     \ifx\\##1\\%
5529     \else
5530     \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5531     \expandafter{\x}%
5532     \fi
5533   }%
5534   \expandafter\c\y\relax#1\@nil
5535 }%
5536 \expandafter\process@me\string\@latex@\@nil{title}%
5537 \expandafter\process@me\string\@latex@\@nil{author}%
5538 \endgroup
5539 \fi
5540 \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.

```

5541 \def\Hy@UseMaketitleString#1{%
5542   \ltx@ifundefined{Hy@#1}{-}{%
5543     \begingroup
5544     \let\Hy@saved@hook\pdfstringdefPreHook
5545     \pdfstringdefDisableCommands{%
5546       \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5547       \let\newline\\%
5548     }%
5549     \expandafter\ifx\csname @pdf#1\endcsname\@empty
5550     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5551       \csname Hy@#1\endcsname\@empty
5552     }%
5553     \fi
5554     \global\let\pdfstringdefPreHook\Hy@saved@hook
5555   \endgroup
5556 }%
5557 }
5558 \def\Hy@newline@title#1{ #1}
5559 \def\Hy@newline@author#1{, #1}
5560 \def\Hy@UseMaketitleInfos{%
5561   \Hy@UseMaketitleString{title}%
5562   \Hy@UseMaketitleString{author}%
5563 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5564 \RequirePackage{atbegshi}[2007/09/09]
5565 \def\Hy@EveryPageHook{}

```

```

5566 \def\Hy@EveryPageBoxHook{}
5567 \def\Hy@FirstPageHook{}
5568 \AtBeginShipout{%
5569   \Hy@EveryPageHook
5570   \ifx\Hy@EveryPageBoxHook\empty
5571   \else
5572     \setbox\AtBeginShipoutBox=\vbox{%
5573       \offinterlineskip
5574       \Hy@EveryPageBoxHook
5575       \box\AtBeginShipoutBox
5576     }%
5577   \fi
5578 }
5579 \AtBeginShipoutFirst{%
5580   \Hy@FirstPageHook
5581 }
5582 \g@addto@macro\Hy@FirstPageHook{%
5583   \PDF@FinishDoc
5584   \gdef\PDF@FinishDoc{}%
5585 }

```

27.1 PDF /PageLabels

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

```

5586 \ifHy@pagelabels
5587   \begingroup\expandafter\expandafter\expandafter\endgroup
5588   \expandafter\ifx\csname thepage\endcsname\relax
5589     \Hy@pagelabelsfalse
5590     \Hy@WarningNoLine{%
5591       Option 'pdfpagelabels' is turned off\MessageBreak
5592       because \string\thepage\space is undefined%
5593     }%
5594     \csname fi\endcsname
5595     \csname iffalse\expandafter\endcsname
5596   \fi

```

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

```

5597 \def\thispdfpagelabel#1{%
5598   \gdef\HyPL@thisLabel{#1}%
5599 }%
5600 \global\let\HyPL@thisLabel\relax

```

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

```

5601 \def\HyPL@Labels{}%

```

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

```

5602 \newcount\Hy@abspage
5603 \Hy@abspage=0 %

```

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

```

5604 \def\HyPL@LastType{init}%
5605 \def\HyPL@LastNumber{0}%
5606 \def\HyPL@LastPrefix{}%

```

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

```

5607 \def\HyPL@arabic{D}%

```

```

5608 \def\HyPL@Roman{R}%
5609 \def\HyPL@roman{r}%
5610 \def\HyPL@Alph{A}%
5611 \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.

```

5612 \def\HyPL@EveryPage{%
5613   \begingroup
5614   \ifx\HyPL@thisLabel\relax
5615     \let\HyPL@page\thepage
5616   \else
5617     \let\HyPL@page\HyPL@thisLabel
5618     \global\let\HyPL@thisLabel\relax
5619   \fi
5620   \let\HyPL@Type\relax
5621   \ifnum\the\c@page>0 %
5622     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5623   \fi
5624   \let\Hy@temp Y%
5625   \ifx\HyPL@Type\HyPL@LastType
5626   \else
5627     \let\Hy@temp N%
5628   \fi
5629   \ifx\HyPL@Type\relax
5630     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5631   \else
5632     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5633   \fi
5634   \ifx\HyPL@Prefix\HyPL@LastPrefix
5635   \else
5636     \let\Hy@temp N%
5637   \fi
5638   \if Y\Hy@temp
5639     \advance\c@page by -1 %
5640     \ifnum\HyPL@LastNumber=\the\c@page\relax
5641     \else
5642       \let\Hy@temp N%
5643     \fi
5644     \Hy@StepCount\c@page
5645   \fi
5646   \if N\Hy@temp
5647     \ifx\HyPL@Type\relax
5648       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5649     \else
5650       \HyPL@StorePageLabel{%
5651         \ifx\HyPL@Prefix\@empty
5652         \else
5653           /P(\HyPL@Prefix)%
5654         \fi
5655         /S/\csname HyPL\HyPL@Type\endcsname
5656         \ifnum\the\c@page=1 %
5657         \else
5658           \space/St \the\c@page
5659         \fi
5660       }%
5661     \fi

```

```

5662 \fi
5663 \xdef\HyPL@LastNumber{\the\c@page}%
5664 \global\let\HyPL@LastType\HyPL@Type
5665 \global\let\HyPL@LastPrefix\HyPL@Prefix
5666 \endgroup
5667 \Hy@GlobalStepCount\Hy@abspage
5668 }%

```

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

```

5669 \def\HyPL@CheckThePage#1\@nil{%
5670 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5671 }%

```

`\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`.

```

5672 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5673 \def\Hy@tempa{#4}%
5674 \def\Hy@tempb{\csname\endcsname\c@page}%
5675 \ifx\Hy@tempa\Hy@tempb
5676 \expandafter\ifx\csname HyPL#3\endcsname\relax
5677 \else
5678 \def\HyPL@Type{#3}%
5679 \def\HyPL@Prefix{#2}%
5680 \fi
5681 \else
5682 \begingroup
5683 \let\Hy@next\endgroup
5684 \let\HyPL@found\@undefined
5685 \def\arabic{\HyPL@Format{arabic}}%
5686 \def\Roman{\HyPL@Format{Roman}}%
5687 \def\roman{\HyPL@Format{roman}}%
5688 \def\Alph{\HyPL@Format{Alph}}%
5689 \def\alph{\HyPL@Format{alph}}%
5690 \protected@edef\Hy@temp{#1}%
5691 \ifx\HyPL@found\relax
5692 \toks@\expandafter{\Hy@temp}%
5693 \edef\Hy@next{\endgroup
5694 \noexpand\HyPL@@CheckThePage\the\toks@
5695 \noexpand\HyPL@found\relax\noexpand\@nil
5696 }%
5697 \fi
5698 \Hy@next
5699 \fi
5700 }%

```

`\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`.

```

5701 \def\HyPL@Format#1#2{%
5702 \ifx\HyPL@found\@undefined
5703 \expandafter\ifx\csname c@#2\endcsname\c@page
5704 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5705 \else

```

```

5706     \expandafter\noexpand\csname#1\endcsname{#2}%
5707     \fi
5708   \else
5709     \expandafter\noexpand\csname#1\endcsname{#2}%
5710     \fi
5711   }%

```

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

```

5712 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5713   \def\Hy@tempa{#3}%
5714   \def\Hy@tempb{\HyPL@found\relax}%
5715   \ifx\Hy@tempa\Hy@tempb
5716     \def\HyPL@Type{#2}%
5717     \def\HyPL@Prefix{#1}%
5718   \fi
5719 }%

```

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

```

5720 \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`.

```

5721 \def\HyPL@Useless{0<</S/D>>}%
5722 \@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.

```

5723 \def\HyPL@SetPageLabels{%
5724   \@onelevel@sanitize\HyPL@Labels
5725   \ifx\HyPL@Labels\@empty
5726   \else
5727     \ifx\HyPL@Labels\HyPL@Useless
5728     \else
5729       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5730     \fi
5731   \fi
5732 }%

```

```

5733 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5734 \fi

```

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

```

5735 \Hy@DisableOption{pdfpagelabels}
5736 </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`

```

5737 <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.

```

5738 < *vtex>
5739 \providecommand*{\XR@ext}{pdf}
5740 \edef\Hy@VTeXversion{%
5741   \ifx\VTeXversion\@undefined
5742     \z@
5743   \else
5744     \ifx\VTeXversion\relax
5745       \z@
5746     \else
5747       \VTeXversion
5748     \fi
5749   \fi
5750 }
5751 \begingroup
5752   \ifnum\Hy@VTeXversion<660 %
5753     \gdef\Hy@PutCatalog#1{%
5754       \Hy@WarningNoLine{%
5755         VTeX 6.59g or above required for pdfpagelabels%
5756       }%
5757     }%
5758   \else
5759     \gdef\Hy@PutCatalog#1{%
5760       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5761     }%
5762     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5763       \ifx\#2\%
5764         \else
5765           \immediate\special{!pdfpagelabels #2}%
5766         \fi
5767       }%
5768     \fi
5769   \endgroup
5770 < /vtex>

5771 < *pdfTeX | vtex>

```

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

```

5772 \ifHy@pagelabels
5773   \def\HyPL@StorePageLabel#1{%
5774     \toks@\expandafter{\HyPL@Labels}%
5775     \xdef\HyPL@Labels{%
5776       \the\toks@
5777       \the\Hy@abspage<<#1>>%
5778     }%
5779   }%

```

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.

```

5780 \RequirePackage{atveryend}[2009/12/07]%
5781 \AtVeryEndDocument{%
5782   \HyPL@SetPageLabels
5783 }%

```



```

5784 \fi
5785 </pdfTEX | vTeX>

```

27.1.2 xetex

```

5786 <*xetex>
5787 \HyPsd@LoadUnicode
5788 \Hy@unicodetrue
5789 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5790 \else
5791 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5792 \fi
5793 \HyPsd@LoadStringEncoding
5794 \define@key{Hyp}{unicode}[true]{%
5795 \Hy@boolkey{unicode}{#1}%
5796 \ifHy@unicode
5797 \else
5798 \Hy@Warning{%
5799 XeTeX driver only supports 'unicode=true'.\MessageBreak
5800 Ignoring option setting 'unicode=false'%
5801 }%
5802 \Hy@unicodetrue
5803 \fi
5804 }
5805 \define@key{Hyp}{pdfencoding}{%
5806 \edef\HyPsd@temp{#1}%
5807 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5808 \let\HyPsd@pdfencoding\HyPsd@temp
5809 \else
5810 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5811 \let\HyPsd@pdfencoding\HyPsd@temp
5812 \else
5813 \Hy@Warning{%
5814 XeTeX driver only supports\MessageBreak
5815 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5816 setting 'pdfencoding=\HyPsd@temp'%
5817 }%
5818 \fi
5819 \fi
5820 }
5821 \let\HyXeTeX@CheckUnicode\relax
5822 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5823 <*pdfmarkbase>
5824 \beginngroup
5825 \@ifundefined{headerps@out}{%
5826 \toks@\expandafter{\Hy@FirstPageHook}%
5827 \xdef\Hy@FirstPageHook{%
5828 \noexpand\headerps@out{%
5829 systemdict /pdfmark known%
5830 {%
5831 userdict /?pdfmark systemdict /exec get put%
5832 }{%
5833 userdict /?pdfmark systemdict /pop get put %
5834 userdict /pdfmark systemdict /cleartomark get put%
5835 }%

```

```

5836     ifelse%
5837     }%
5838     \the\toks@
5839     }%
5840 }%
5841 \endgroup
5842 \pdfmarkbase>

```

\Hy@PutCatalog

```

5843 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\pdfmark{docview << #1 >>}}
5844 <*pdfmarkbase>
5845 \def\Hy@PutCatalog#1{%
5846   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5847 }
5848 \pdfmarkbase>

5849 <*pdfmarkbase | dvipdfm | xetex>
5850 \ifHy@pagelabels

```

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

```

5851 \def\HyPL@StorePageLabel#1{%
5852   \if@filesw
5853   \begingroup
5854     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5855     \immediate\write\@mainaux{%
5856       \string\HyPL@Entry{\Hy@tempa}%
5857     }%
5858   \endgroup
5859   \fi
5860 }%

```

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.

```

5861 \Hy@AtBeginDocument{%
5862   \if@filesw
5863     \immediate\write\@mainaux{%
5864       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5865     }%
5866   \fi
5867   \ifx\HyPL@Labels\@empty
5868     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5869   \else
5870     \HyPL@SetPageLabels
5871   \fi
5872   \let\HyPL@Entry\@gobble
5873 }%

```

\HyPL@Entry

```

5874 \def\HyPL@Entry#1{%
5875   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5876     \HyPL@Labels
5877     #1%
5878   }%
5879 }%

5880 \fi
5881 \pdfmarkbase | dvipdfm | xetex>

```

```

5882 <*package>
5883 \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

```

5884 \def\Hy@CounterExists#1{%
5885   \begingroup\expandafter\expandafter\expandafter\endgroup
5886   \expandafter\ifx\csname c@#1\endcsname\relax
5887     \expandafter\@gobble
5888   \else
5889     \begingroup\expandafter\expandafter\expandafter\endgroup
5890     \expandafter\ifx\csname the#1\endcsname\relax
5891       \expandafter\expandafter\expandafter\@gobble
5892     \else
5893       \expandafter\expandafter\expandafter\@firstofone
5894     \fi
5895   \fi
5896 }
5897 \Hy@CounterExists{section}{%
5898   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5899 }
5900 \Hy@CounterExists{part}{%
5901   \newcommand\theHpart{\arabic{part}}}%
5902 }
5903 \ltx@ifundefined{thechapter}{%
5904   \newcommand\theHsection   {\arabic{section}}}%
5905   \newcommand\theHfigure    {\arabic{figure}}}%
5906   \newcommand\theHtable     {\arabic{table}}}%
5907 }{%
5908   \newcommand\theHchapter   {\arabic{chapter}}}%
5909   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
5910   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
5911   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
5912 }
5913 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5914 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5915 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5916 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}

```

```

5917 \newcommand\theHtheorem    {\theHsection.\arabic{theorem}}
5918 \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.

```

5919 \let\H@item\item
5920 \newcounter{Item}
5921 \def\theHItem{\arabic{Item}}
5922 \def\item{%
5923   \@hyper@itemfalse
5924   \if@nmbrlist\@hyper@itemtrue\fi
5925   \H@item
5926 }

5927 \newcommand\theHenumi    {\theHItem}
5928 \newcommand\theHenumii   {\theHItem}
5929 \newcommand\theHenumiii  {\theHItem}
5930 \newcommand\theHenumiv   {\theHItem}
5931 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5932 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5933 \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.

```

5934 \let\H@refstepcounter\refstepcounter
5935 \edef\name@of@eq{equation}%
5936 \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.

```

5937 \newif\if@hyper@item
5938 \newif\if@skiphyperref
5939 \@hyper@itemfalse
5940 \@skiphyperreffalse
5941 \def\refstepcounter#1{%
5942   \ifHy@pdfstring
5943   \else
5944     \H@refstepcounter{#1}%
5945     \edef\This@name{#1}%
5946     \ifx\This@name\name@of@slide
5947     \else
5948       \if@skiphyperref
5949       \else
5950         \if@hyper@item
5951           \stepcounter{Item}%
5952           \hyper@refstepcounter{Item}%
5953           \@hyper@itemfalse
5954         \else
5955           \hyper@refstepcounter{#1}%
5956         \fi
5957       \fi
5958     \fi
5959   \fi
5960 }

```

AMST_{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.

```
5961 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
5962 \def\hyper@refstepcounter#1{%
5963   \edef\This@name{#1}%
5964   \ifx\This@name\name@of@eq
5965     \ifundefined{theHequation}{%
5966       \make@stripped@name{\theequation}%
5967       \let\theHequation\newname
5968     }{}%
5969   \fi
5970   \ifundefined{theH#1}{%
5971     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5972   }{}%
5973   \hyper@makecurrent{#1}%
5974   \ifmeasuring@
5975   \else
5976     \Hy@raisedlink{%
5977       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5978     }%
5979   \fi
5980 }
```

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`.

```
5981 \begingroup\expandafter\expandafter\expandafter\endgroup
5982 \expandafter\ifx\csname chapter\endcsname\relax
5983   \def\Hy@chapterstring{section}%
5984 \else
5985   \def\Hy@chapterstring{chapter}%
5986 \fi
5987 \def\Hy@appendixstring{appendix}
5988 \def\Hy@chapapp{\Hy@chapterstring}
5989 \let\HyOrg@appendix\appendix
5990 \def\appendix{%
5991   \ltx@ifundefined{chapter}%
5992     {\gdef\theHsection{\Alph{section}}}%
5993     {\gdef\theHchapter{\Alph{chapter}}}%
5994   \xdef\Hy@chapapp{\Hy@appendixstring}%
5995   \HyOrg@appendix
5996 }
```

`\Hy@Test@alph`

```
5997 \def\Hy@Test@alph#1{%
5998   \ifcase#1\or
5999     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6000     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6001     u\or v\or w\or x\or y\or z%
6002   \else
6003     \@ctrerr
```

```

6004 \fi
6005 }

```

\Hy@Test@Alph

```

6006 \def\Hy@Test@Alph#1{%
6007 \ifcase#1\or
6008   A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6009   K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6010   U\or V\or W\or X\or Y\or Z%
6011 \else
6012   \@ctrerr
6013 \fi
6014 }

```

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

```

6015 \def\hyper@makecurrent#1{%
6016 \begingroup
6017 \edef\Hy@param{#1}%
6018 \ifx\Hy@param\Hy@chapterstring
6019   \let\Hy@param\Hy@chapapp
6020 \fi
6021 \ifHy@hypertextnames
6022   \let\@number\@firstofone
6023   \def\@fnsymbol##1{fnsymbol\number##1}%
6024   \ifx\@alph\Hy@Test@alph
6025     \else
6026       \def\@alph{alph\number}%
6027     \fi
6028   \ifx\@Alph\Hy@Test@Alph
6029     \else
6030       \def\@Alph{Alph\number}%
6031     \fi
6032   \ifHy@naturalnames
6033     \let\textlatin\@firstofone
6034     \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6035   \else
6036     \xdef\HyperGlobalCurrentHref{%
6037       \csname
6038         the%
6039         \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6040         #1%
6041       \endcsname
6042     }%
6043   \fi
6044   \xdef\HyperGlobalCurrentHref{%
6045     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6046   }%
6047   \else
6048     \Hy@GlobalStepCount\Hy@linkcounter
6049     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6050   \fi
6051 \endgroup
6052 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6053 \ifHy@localanchaname
6054   \let\@currentHref\HyperLocalCurrentHref
6055 \else

```

```

6056 \global\let\@currentHref\HyperGlobalCurrentHref
6057 \fi
6058 }

```

`\Hy@MakeCurrentHref`

```

6059 \def\Hy@MakeCurrentHref#1{%
6060 \edef\HyperLocalCurrentHref{#1}%
6061 \@onelevel@sanitize\HyperLocalCurrentHref
6062 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6063 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6064 \ifHy@localanchorname
6065 \let\@currentHref\HyperLocalCurrentHref
6066 \else
6067 \global\let\@currentHref\HyperGlobalCurrentHref
6068 \fi
6069 }

```

`\Hy@MakeCurrentHrefAuto`

```

6070 \def\Hy@MakeCurrentHrefAuto#1{%
6071 \Hy@GlobalStepCount\Hy@linkcounter
6072 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6073 }

```

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

```

6074 \def\@currentHlabel{\@currentHref}

6075 \ifpackageloaded{fancyvrb}{%
6076 \ifpackagelater{fancyvrb}{1998/05/20}{}%
6077 \def\FV@StepLineNo{%
6078 \FV@SetLineNo
6079 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6080 \FV@StepLineNo
6081 }%
6082 }%
6083 }{}

```

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 `hypertextnames` 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`

```

6084 \Hy@AtBeginDocument{%
6085 \@ifclassloaded{revtex4}{%
6086 \@namedef{ver@lastpage.sty}{1994/06/25}%
6087 }{}%
6088 \@ifpackageloaded{lastpage}{%
6089 \ifHy@pageanchor
6090 \else
6091 \Hy@WarningNoLine{%

```

```

6092     The \string\pageref{LastPage} link doesn't work\MessageBreak
6093     with disabled option 'pageanchor'%
6094 }%
6095 \fi
6096 \def\lastpage@putlabel{%
6097   \addtocounter{page}{-1}%
6098   \if@filesw
6099     \begingroup
6100     \let\@number\@firstofone
6101     \ifHy@pageanchor
6102       \ifHy@hypertextnames
6103         \ifHy@plainpages
6104           \def\Hy@temp{\arabic{page}}%
6105         \else
6106           \Hy@unicodedefalse
6107           \pdfstringdef\Hy@temp{\thepage}%
6108         \fi
6109       \else
6110         \def\Hy@temp{\the\Hy@pagecounter}%
6111       \fi
6112     \fi
6113     \immediate\write\@auxout{%
6114       \string\newlabel
6115       {LastPage}{{}{\thepage}}{ }{%
6116         \ifHy@pageanchor page.\Hy@temp\fi}{ }%
6117     }%
6118   \endgroup
6119 \fi
6120 \addtocounter{page}{1}%
6121 }%
6122 \@ifclassloaded{revtex4}{%
6123   \begingroup
6124   \toks@\expandafter{\lastpage@putlabel}%
6125   \edef\x{\endgroup
6126     \def\noexpand\lastpage@putlabel{%
6127       \noexpand\stepcounter{page}%
6128       \the\toks@
6129       \noexpand\addtocounter{page}\noexpand\m@ne
6130     }%
6131   }%
6132   \x
6133 }{}%
6134 }{}%
6135 }
6136 \end{package}
6137 \check
6138 \checkpackage{lastpage}[1994/06/25]
6139 \checkcommand\def\lastpage@putlabel{%
6140   \addtocounter{page}{-1}%
6141   \immediate\write\@auxout{%
6142     \string\newlabel{LastPage}{{}{\thepage}}%
6143   }%
6144   \addtocounter{page}{1}%
6145 }
6146 \end{check}
6147 \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.

```
6148 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
6149 \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:

```
6150 \@ifpackageloaded{titlesec}{%
6151   \def\ttl@Hy@steplink#1{%
6152     \Hy@MakeCurrentHrefAuto{#1*}%
6153     \edef\ttl@Hy@saveanchor{%
6154       \noexpand\Hy@raisedlink{%
6155         \noexpand\hyper@anchorstart{\@currentHref}%
6156         \noexpand\hyper@anchorend
6157         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6158         \noexpand\ttl@Hy@PatchSaveWrite
6159       }%
6160     }%
6161   }%
6162   \def\ttl@Hy@PatchSaveWrite{%
6163     \begingroup
6164     \toks@\expandafter{\ttl@savewrite}%
6165     \edef\x{\endgroup
6166       \def\noexpand\ttl@savewrite{%
6167         \let\noexpand\@currentHref
6168         \noexpand\ttl@Hy@SavedCurrentHref
6169         \the\toks@
6170       }%
6171     }%
6172     \x
6173   }%
6174   \def\ttl@Hy@refstepcounter#1{%
6175     \let\ttl@b\Hy@raisedlink
6176     \def\Hy@raisedlink##1{%
6177       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6178     }%
6179     \refstepcounter{#1}%
6180     \let\Hy@raisedlink\ttl@b
6181   }%
6182 }{}
```

Package titletoc support:

```
6183 \@ifpackageloaded{titletoc}{%
6184   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6185 }{}
```

32 Package varioref support

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

```

6186 \def\Hy@varioref@undefined{{??}{??}}{}{}
6187 \@ifpackageloaded{varioref}{%
6188   \def\vref@pagenum#1#2{%
6189     \@ifundefined{r@#2}{%
6190       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6191     }{}%
6192     \edef#1{\getpagerefnumber{#2}}%
6193   }%
6194 }{}

```

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

```

6195 \@ifpackageloaded{longtable}{%
6196   \begingroup
6197   \def\y{\LT@array}%
6198   \@ifundefined{scr@LT@array}{%
6199     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
6200   }{\def\y{\scr@LT@array}}%
6201   \long\def\x\refstepcounter#1#2\sharp#3#4\@nil{%
6202     \expandafter\endgroup
6203     \expandafter\def\y[#1]##2{%
6204       \H@refstepcounter{#1}%
6205       \hyper@makecurrent{table}%
6206       \let\Hy@LT@currentHref\@currentHref
6207       #2\sharp###4%
6208     }%
6209   }%
6210   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6211 \begingroup
6212 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6213   \endgroup
6214   \def\LT@start{%
6215     #1%
6216     \ifvoid\LT@foot#2\fi
6217     \let\@currentHref\Hy@LT@currentHref
6218     \Hy@raisedlink{%
6219       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6220     }%
6221     #3%
6222   }%
6223 }%
6224 \expandafter\x\LT@start\@nil
6225 }{}

```

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.

```

6226 \let\new@refstepcounter\refstepcounter
6227 \let\H@equation\equation
6228 \let\H@endequation\endequation

6229 \@ifpackageloaded{amsmath}{%
6230   \long\def\Hy@temp{%
6231     \incr@eqnum
6232     \mathdisplay@push
6233     \st@rredfalse \global\@eqnswtrue
6234     \mathdisplay{equation}%
6235   }%
6236   \ifx\Hy@temp\equation
6237     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6238       \csname iftrue\endcsname
6239   \else
6240     \long\def\equation{%
6241       \mathdisplay@push
6242       \st@rredfalse \global\@eqnswtrue
6243       \mathdisplay{equation}%
6244       \incr@eqnum
6245     }%
6246   \fi
6247 \fi
6248 }{%
6249 \def\equation{%
6250   \let\refstepcounter\H@refstepcounter
6251   \H@equation
6252   \@ifundefined{theHequation}{%
6253     \make@stripped@name{\theequation}%
6254     \let\theHequation\newname
6255   }{%
6256     \hyper@makecurrent{equation}%
6257     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6258     \let\refstepcounter\new@refstepcounter
6259   }%
6260 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6261 }

```

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.

```

6262 \newif\if@eqnstar
6263 \@eqnstarfalse
6264 \let\H@eqnarray\eqnarray
6265 \let\H@endeqnarray\endeqnarray
6266 \def\eqnarray{%
6267   \let\Hy@reserved@a\relax
6268   \def\@currentHref{}%
6269   \H@eqnarray
6270   \if@eqnstar
6271   \else
6272     \ifx\\\@currentHref\\%
6273     \else

```

```

6274 \ifundefined{theHequation}{%
6275 \make@stripped@name{\theequation}%
6276 \let\theHequation\newname
6277 }{}%
6278 \hyper@makecurrent{equation}%
6279 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6280 \fi
6281 \fi
6282 }
6283 \def\endeqnarray{%
6284 \H@endeqnarray
6285 }

```

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.

```

6286 \@namedef{eqnarray*}{%
6287 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6288 }
6289 \@namedef{endeqnarray*}{%
6290 \nonumber\endeqnarray\@eqnstarfalse
6291 }

```

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

```

6292 \ltx@ifundefined{subeqnarray}{%}{%
6293 \let\H@subeqnarray\subeqnarray
6294 \let\H@endsubeqnarray\endsubeqnarray
6295 \def\subeqnarray{%
6296 \let\Hy@reserved@a\relax
6297 \H@subeqnarray
6298 \ifundefined{theHequation}{%
6299 \make@stripped@name{\theequation}%
6300 \let\theHequation\newname
6301 }{}%
6302 \hyper@makecurrent{equation}%
6303 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6304 }%
6305 \def\endsubeqnarray{%
6306 \H@endsubeqnarray
6307 }%
6308 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6309 }

```

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

```

6310 \def\make@stripped@name#1{%
6311 \begingroup
6312 \escapechar\m@ne
6313 \global\let\newname\@empty
6314 \protected@edef\Hy@tempa{#1}%
6315 \edef\@tempb{%
6316 \noexpand\@tfor\noexpand\Hy@tempa:=%
6317 \expandafter\strip@prefix\meaning\Hy@tempa
6318 }%
6319 \@tempb\do{%
6320 \if{\Hy@tempa\else
6321 \if}\Hy@tempa\else
6322 \xdef\newname{\newname\Hy@tempa}%
6323 \fi
6324 \fi

```

```

6325 }%
6326 \endgroup
6327 }

```

Support for amsmath's subequations:

```

6328 \begingroup\expandafter\expandafter\expandafter\endgroup
6329 \expandafter\ifx\csname subequations\endcsname\relax
6330 \else
6331 \let\HyOrg@subequations\subequations
6332 \def\subequations{%
6333 \stepcounter{equation}%
6334 \protected@edef\theHparentequation{%
6335 \ifundefined{theHequation}\theequation\theHequation
6336 }%
6337 \addtocounter{equation}{-1}%
6338 \HyOrg@subequations
6339 \def\theHequation{\theHparentequation\alph{equation}}%
6340 \ignorespaces
6341 }%
6342 \fi

```

Support for package amsthm (Daniel Müllner):

```

6343 \@ifpackageloaded{amsthm}{%
6344 \def\@thm#1#2#3{%
6345 \ifhmode
6346 \unskip\unskip\par
6347 \fi
6348 \normalfont
6349 \trivlist
6350 \let\thmheadn\relax
6351 \let\thm@swap\@gobble
6352 \thm@notefont{\fontseries\mddefault\upshape}%
6353 \thm@headpunct{.}% add period after heading
6354 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6355 \thm@space@setup
6356 #1% style overrides
6357 \@topsep \thm@preskip % used by thm head
6358 \@topsepadd \thm@postskip % used by \@endparenv
6359 \def\dth@counter{#2}%
6360 \ifx\@empty\dth@counter
6361 \def\@tempa{%
6362 \@oparg{\@begintheorem{#3}{}}{}%
6363 }%
6364 \else
6365 \H@refstepcounter{#2}%
6366 \hyper@makecurrent{#2}%
6367 \let\Hy@dth@currentHref\@currentHref
6368 \def\@tempa{%
6369 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6370 }%
6371 \fi
6372 \@tempa
6373 }%
6374 \dth@everypar={%
6375 \@minipagefalse
6376 \global\@newlistfalse
6377 \@noparitemfalse
6378 \if@inlabel

```

```

6379 \global\@inlabelfalse
6380 \begingroup
6381 \setbox\z@\lastbox
6382 \ifvoid\z@
6383 \kern-\itemindent
6384 \fi
6385 \endgroup
6386 \ifx\@empty\dth@counter
6387 \else
6388 \Hy@raisedlink{%
6389 \hyper@anchorstart{%
6390 \ltx@ifundefined{Hy@dth@currentHref}%
6391 \@currentHref\Hy@dth@currentHref
6392 }\hyper@anchorend
6393 }%
6394 \fi
6395 \unhbox\@labels
6396 \fi
6397 \if@nobreak
6398 \@nobreakfalse \clubpenalty\@M
6399 \else
6400 \clubpenalty\@clubpenalty \everypar{}\%
6401 \fi
6402 }%
6403 }{}

```

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.

```

6404 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6405 \ifHy@hyperfootnotes
6406 \newcounter{Hfootnote}%
6407 \let\H@@footnotetext\@footnotetext
6408 \let\H@@footnotemark\@footnotemark
6409 \def\xfootnotenext[#1]{%
6410 \begingroup
6411 \csname c@\@mpfn\endcsname #1\relax
6412 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6413 \endgroup
6414 \ifx\@footnotetext\@mpfootnotetext
6415 \expandafter\H@@mpfootnotetext
6416 \else
6417 \expandafter\H@@footnotetext
6418 \fi
6419 }%
6420 \def\xfootnotemark[#1]{%
6421 \begingroup
6422 \c@footnote #1\relax
6423 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6424 \endgroup
6425 \H@@footnotemark
6426 }%

```

```

6427 \let\H@@mpfootnotetext\@mpfootnotetext
6428 \long\def\@mpfootnotetext#1{%
6429   \H@@mpfootnotetext{%
6430     \ifHy@nesting
6431       \expandafter\hyper@@anchor\expandafter{%
6432         \Hy@footnote@currentHref
6433       }{#1}%
6434     \else
6435       \Hy@raisedlink{%
6436         \expandafter\hyper@@anchor\expandafter{%
6437           \Hy@footnote@currentHref
6438         }{\relax}%
6439       }#1%
6440     \fi
6441   }%
6442 }%
6443 \long\def\@footnotetext#1{%
6444   \H@@footnotetext{%
6445     \ifHy@nesting
6446       \expandafter\hyper@@anchor\expandafter{%
6447         \Hy@footnote@currentHref
6448       }{#1}%
6449     \else
6450       \Hy@raisedlink{%
6451         \expandafter\hyper@@anchor\expandafter{%
6452           \Hy@footnote@currentHref
6453         }{\relax}%
6454       }%
6455       \let\@currentHref\Hy@footnote@currentHref
6456       \let\@currentlabelname\@empty
6457       #1%
6458     \fi
6459   }%
6460 }%

```

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.

```

6461 \def\@footnotemark{%
6462   \leavevmode
6463   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6464   \stepcounter{Hfootnote}%
6465   \global\let\Hy@saved@currentHref\@currentHref
6466   \hyper@makecurrent{Hfootnote}%
6467   \global\let\Hy@footnote@currentHref\@currentHref
6468   \global\let\@currentHref\Hy@saved@currentHref
6469   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6470   \@makefnmark
6471   \hyper@linkend
6472   \ifhmode\spacefactor\@x@sf\fi
6473   \relax
6474 }%

```

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

```

6475 \ifpackageloaded{longtable}{%
6476 \CheckCommand*{\LT@p@ftntext}[1]{%
6477 \edef\@tempa{%
6478 \the\LT@p@ftn
6479 \noexpand\footnotetext[\the\c@footnote]%
6480 }%
6481 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6482 }%
6483 \long\def\LT@p@ftntext#1{%
6484 \edef\@tempa{%
6485 \the\LT@p@ftn
6486 \begingroup
6487 \noexpand\c@footnote=\the\c@footnote\relax
6488 \noexpand\protected@xdef
6489 \noexpand\@thefnmark{\noexpand\thempfn}%
6490 \noexpand\protected@xdef\noexpand\@thefnmark{%
6491 \noexpand\thempfn
6492 }%
6493 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6494 \expandafter{%
6495 \Hy@footnote@currentHref
6496 }%
6497 }%
6498 \global\LT@p@ftn\expandafter{%
6499 \@tempa{#1}%
6500 \endgroup
6501 }%
6502 }%
6503 \long\def\Hy@LT@footnotetext#1#2{%
6504 \H@@@footnotetext{%
6505 \ifHy@nesting
6506 \hyper@@anchor{#1}{#2}%
6507 \else
6508 \Hy@raisedlink{%
6509 \hyper@@anchor{#1}{\relax}%
6510 }%
6511 \def\@currentHref{#1}%
6512 \let\@currentlabelname\@empty
6513 #2%
6514 \fi
6515 }%
6516 }%
6517 }{}%

```

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

```

6518 \ifpackageloaded{fancyvrb}{%
6519 \def\V@@@footnotetext{%
6520 \insert\footins\bgroup
6521 \csname reset@font\endcsname
6522 \footnotesize
6523 \interlinepenalty\interfootnotelinepenalty
6524 \splittopskip\footnotesep
6525 \splitmaxdepth\dp\strutbox
6526 \floatingpenalty \@MM
6527 \hsize\columnwidth
6528 \@parboxrestore
6529 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6530 \@makefnmark{}%

```



```

6531 \rule{\z@}{\footnotesep}%
6532 \bgroup
6533 \aftergroup\V@@@footnotetext
6534 \Hy@raisedlink{%
6535 \expandafter\hyper@@anchor\expandafter{%
6536 \Hy@footnote@currentHref
6537 }{\relax}%
6538 }%
6539 \let\@currentHref\Hy@footnote@currentHref
6540 \let\@currentlabelname\@empty
6541 \ignorespaces
6542 }%
6543 }{}%

```

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

```

6544 \def\Hy@temp#1{%
6545 \begingroup
6546 \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
6547 \endgroup
6548 \@footnotemark
6549 }%
6550 \ifx\Hy@temp\footref
6551 \def\footref#1{%
6552 \begingroup
6553 \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
6554 \endgroup
6555 \H@@@footnotemark
6556 }%
6557 \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.

```

6558 \let\HyOrg@maketitle\maketitle
6559 \def\maketitle{%
6560 \let\Hy@saved@footnotemark\@footnotemark
6561 \let\Hy@saved@footnotetext\@footnotetext
6562 \let\@footnotemark\H@@@footnotemark
6563 \let\@footnotetext\H@@@footnotetext
6564 \@ifnextchar[\Hy@maketitle@optarg{% ]
6565 \HyOrg@maketitle
6566 \Hy@maketitle@end
6567 }%
6568 }%
6569 \def\Hy@maketitle@optarg[#1]{%
6570 \HyOrg@maketitle[{#1}]%
6571 \Hy@maketitle@end
6572 }%
6573 \def\Hy@maketitle@end{%
6574 \ifx\@footnotemark\H@@@footnotemark
6575 \let\@footnotemark\Hy@saved@footnotemark
6576 \fi
6577 \ifx\@footnotetext\H@@@footnotetext
6578 \let\@footnotetext\Hy@saved@footnotetext
6579 \fi
6580 }%

```

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

```

6581 \def\realfootnote{%
6582   \@ifnextchar[\@xfootnote{%
6583     \stepcounter{\@mpfn}%
6584     \protected@xdef\@thefnmark{\thempfn}%
6585     \H@@footnotemark\H@@footnotetext
6586   }%
6587 }%

6588 \fi
6589 \Hy@DisableOption{hyperfootnotes}

6590 \</package>
6591 \<*check>
6592 \checklatex
6593 \checkcommand\def\@xfootnotenext[#1]{%
6594   \begingroup
6595   \csname c@\@mpfn\endcsname #1\relax
6596   \unrestored@protected@xdef\@thefnmark{\thempfn}%
6597   \endgroup
6598   \@footnotetext
6599 }
6600 \checkcommand\def\@xfootnotemark[#1]{%
6601   \begingroup
6602   \c@footnote #1\relax
6603   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6604   \endgroup
6605   \@footnotemark
6606 }
6607 \checkcommand\def\@footnotemark{%
6608   \leavevmode
6609   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6610   \@makefnmark
6611   \ifhmode\spacefactor\@x@sf\fi
6612   \relax
6613 }
6614 \</check>
6615 \<*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.

```

6616 \def\caption{%
6617   \ifx\@capttype\@undefined
6618     \@latex@error{\noexpand\caption outside float}\@ehd
6619     \expandafter\@gobble
6620   \else
6621     \H@refstepcounter\@capttype
6622     \let\Hy@tempa\@caption
6623     \ifundefined{float@caption}{%
6624       }{%
6625         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6626           \float@caption
6627         \let\Hy@tempa\Hy@float@caption
6628       }
6629     }%
6630     \expandafter\@firstofone

```

```

6631 \fi
6632 {\@dblarg{\Hy@tempa\@capttype}}%
6633 }
6634 \long\def\@caption#1[#2]#3{%
6635 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6636 \csname iftrue\endcsname
6637 \global\let\@currentHref\hc@currentHref
6638 \else
6639 \hyper@makecurrent{\@capttype}%
6640 \fi
6641 \@ifundefined{NR@gettitle}{%
6642 \def\@currentlabelname{#2}%
6643 }{%
6644 \NR@gettitle{#2}%
6645 }%
6646 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6647 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6648 }%
6649 \begingroup
6650 \@parboxrestore
6651 \if@minipage
6652 \@setminipage
6653 \fi
6654 \normalsize
6655 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6656 \csname iftrue\endcsname
6657 \global\@capstartfalse
6658 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6659 \else
6660 \@makecaption{\csname fnum@#1\endcsname}{%
6661 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6662 \ifHy@nesting
6663 \expandafter\hyper@@@anchor\expandafter{\@currentHref}{#3}%
6664 \else
6665 \Hy@raisedlink{%
6666 \expandafter\hyper@@@anchor\expandafter{%
6667 \@currentHref
6668 }{\relax}%
6669 }%
6670 #3%
6671 \fi
6672 }%
6673 \fi
6674 \par
6675 \endgroup
6676 }

```

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.

```

6677 \let\Hy@float@caption\@caption
6678 \@ifpackageloaded{float}{%
6679 \def\Hy@float@caption{%
6680 \ifx\Hy@float@currentHref\@undefined
6681 \hyper@makecurrent{\@capttype}%
6682 \global\let\Hy@float@currentHref\@currentHref
6683 \else

```

```

6684 \let\@currentHref\Hy@float@currentHref
6685 \fi
6686 \float@caption
6687 }%
6688 \let\HyOrg@float@makebox\float@makebox
6689 \renewcommand{\float@makebox}[1]{%
6690 \HyOrg@float@makebox{%
6691 #1\relax
6692 \ifx\Hy@float@currentHref\@undefined
6693 \else
6694 \expandafter\hyper@@anchor\expandafter{%
6695 \Hy@float@currentHref
6696 }{\relax}%
6697 \global\let\Hy@float@currentHref\@undefined
6698 \fi
6699 }%
6700 }%
6701 }{}

6702 \</package>
6703 \<*check>
6704 \checklatex[1999/06/01 - 2000/06/01]
6705 \checkcommand\def\caption{%
6706 \ifx\@capttype\@undefined
6707 \<@latex@error{\noexpand\caption outside float}\<@ehd
6708 \expandafter\<gobble
6709 \else
6710 \refstepcounter\@capttype
6711 \expandafter\<firstofone
6712 \fi
6713 {\<@dblarg{\<caption\<capttype}}}%
6714 }
6715 \checkcommand\long\def\<caption#1[#2]#3{%
6716 \par
6717 \addcontentsline{\<csname ext@#1\endcsname}{#1}{%
6718 \protect\<numberline{\<csname the#1\endcsname}{\<ignorespaces #2}%
6719 }%
6720 \<begingroup
6721 \<@parboxrestore
6722 \<if@minipage
6723 \<@setminipage
6724 \fi
6725 \<normalsize
6726 \<@makecaption{\<csname fnum@#1\endcsname}{\<ignorespaces #3}\<par
6727 \<endgroup
6728 }
6729 \</check>
6730 \<*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, lets make an attempt to get *natbib* right, because thats a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

6731 \def\hyper@natlinkstart#1{%
6732   \Hy@backout{#1}%
6733   \hyper@linkstart{cite}{cite.#1}%
6734   \def\hyper@nat@current{#1}%
6735 }
6736 \def\hyper@natlinkend{%
6737   \hyper@linkend
6738 }
6739 \def\hyper@natlinkbreak#1#2{%
6740   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6741 }
6742 \def\hyper@natanchorstart#1{%
6743   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6744 }
6745 \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.

```

6746 \ltx@ifundefined{NAT@parse}{%
6747   \providecommand*\extra@binfo{}%
6748   \providecommand*\extra@b@citeb{}%
6749   \def\bibcite#1#2{%
6750     \@newl@bel{b}{#1\extra@binfo}{%
6751       \hyper@@link{cite}{cite.#1\extra@b@citeb}{#2}%
6752     }%
6753   }%
6754   \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.”.

```

6755 \let\Hy@bibcite\bibcite
6756 \begingroup
6757   \@ifundefined{bbl@cite@choice}{}{%
6758     \g@addto@macro\bbl@cite@choice{%
6759       \let\bibcite\Hy@bibcite
6760     }%
6761   }%
6762 \endgroup

```

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

```

6763 \providecommand*\@BIBLABEL{\@biblabel}%
6764 \def\@lbibitem[#1]#2{%
6765   \@skiphyperreftrue
6766   \H@item[%
6767     \ifx\Hy@raisedlink\@empty
6768       \hyper@anchorstart{cite.#2\extra@b@citeb}%
6769       \@BIBLABEL{#1}%
6770     \hyper@anchorend
6771   \else
6772     \Hy@raisedlink{%
6773       \hyper@anchorstart{cite.#2\extra@b@citeb}\hyper@anchorend
6774     }%
6775   \@BIBLABEL{#1}%

```

```

6776 \fi
6777 \hfill
6778 ]%
6779 \@skiphyperreffalse
6780 \if@filesw
6781 \begingroup
6782 \let\protect\noexpand
6783 \immediate\write\@auxout{%
6784 \string\bibcite{#2}{#1}%
6785 }%
6786 \endgroup
6787 \fi
6788 \ignorespaces
6789 }%

```

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

```

6790 \def\@bibitem#1{%
6791 \@skiphyperrefftrue\H@item\@skiphyperreffalse
6792 \Hy@raisedlink{%
6793 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6794 }%
6795 \if@filesw
6796 \begingroup
6797 \let\protect\noexpand
6798 \immediate\write\@auxout{%
6799 \string\bibcite{#1}{\the\value{\@listctr}}%
6800 }%
6801 \endgroup
6802 \fi
6803 \ignorespaces
6804 }%
6805 }{}

6806 </package>
6807 <*check>
6808 \checklatex
6809 \checkcommand\def\@lbibitem[#1]#2{%
6810 \item[\@biblabel{#1}\hfill]%
6811 \if@filesw
6812 {%
6813 \let\protect\noexpand
6814 \immediate\write\@auxout{%
6815 \string\bibcite{#2}{#1}%
6816 }%
6817 }%
6818 \fi
6819 \ignorespaces
6820 }
6821 \checkcommand\def\@bibitem#1{%
6822 \item
6823 \if@filesw
6824 \immediate\write\@auxout{%
6825 \string\bibcite{#1}{\the\value{\@listctr}}%
6826 }%
6827 \fi
6828 \ignorespaces
6829 }

```

```
6830 </check>
6831 <*package>
```

Revtext (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.

```
6832 \@ifclassloaded{revtext}{%
6833   \Hy@Info{*** compatibility with revtext **** }%
6834   \def\revtext@checking#1#2{%
6835     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6836     \expandafter\def\csname b@#1\endcsname{#2}%
6837     \@SetMaxRnhefLabel{#1}%
6838     \expandafter\let\csname b@#1\endcsname\T@temp
6839   }%
```

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

```
6840   \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
6841   \providecommand*{\@extra@b@citeb}{}%
6842   \def\CITEX[#1]#2{%
6843     \let\@citea\@empty
6844     \leavevmode
6845     \unskip
6846     $\sim$%
6847     \scriptstyle
6848     \@CITE{%
6849       \@for\@citeb:=#2\do{%
6850         \@citea
6851         \def\@citea{,\penalty\@m\ }%
6852         \edef\@citeb{\expandafter\@firstofone\@citeb}%
6853         \if@filesw
6854           \immediate\write\@auxout{\string\citation{\@citeb}}%
6855         \fi
6856         \@ifundefined{b@\@citeb\extra@b@citeb}{%
6857           \mbox{\reset@font\bfseries ?}%
6858           \G@refundefinedtrue
6859           \@latex@warning{%
6860             Citation ‘\@citeb’ on page \thepage \space undefined%
6861           }%
6862         }{%
6863           {\csname b@\@citeb\extra@b@citeb\endcsname}%
6864         }%
6865       }%
6866     }{#1}%
6867   }$%
6868 }%
```

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

```
6869   \def\@citex[#1]#2{%
6870     \let\@citea\@empty
6871     \@cite{%
6872       \@for\@citeb:=#2\do{%
6873         \@citea
6874         \def\@citea{,\penalty\@m\ }%
6875         \edef\@citeb{\expandafter\@firstofone\@citeb}%
6876         \if@filesw
6877           \immediate\write\@auxout{\string\citation{\@citeb}}%
6878         \fi
6879       }%
6880     }{#1}%
6881   }%
```

```

6878 \fi
6879 \ifundefined{b@\@citeb\@extra@b@citeb}{%
6880 \mbox{\reset@font\bfseries ?}%
6881 \G@refundefinedtrue
6882 \@latex@warning{%
6883 Citation '\@citeb' on page \thepage \space undefined%
6884 }%
6885 }{%
6886 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6887 }%
6888 }%
6889 }{#1}%
6890 }%
6891 }{}

```

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.

```

6892 \ifpackageloaded{harvard}{%
6893 \Hy@AtBeginDocument{%
6894 \Hy@Info{*** compatibility with harvard **** }%
6895 \Hy@raiselinksfalse
6896 \def\harvardcite#1#2#3#4{%
6897 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
6898 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
6899 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
6900 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6901 }%
6902 \def\HAR@citetoaux#1{%
6903 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6904 \ifHy@backref
6905 \ifx\@empty\@currentlabel
6906 \else
6907 \@bsphack
6908 \if@filesw
6909 \protected@write\@auxout{}{%
6910 \string\@writefile{brf}{%
6911 \string\backcite{#1}{%
6912 {\thepage}{\@currentlabel}{\@currentHref}%
6913 }%
6914 }%
6915 }%
6916 \fi
6917 \@esphack
6918 \fi
6919 \fi
6920 }%
6921 \def\harvarditem{%
6922 \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6923 }%
6924 \def\@harvarditem[#1]#2#3#4#5\par{%

```



```

6925 \item[]%
6926 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6927 \if@filesw
6928 \begingroup
6929 \def\protect##1{\string ##1\space}%
6930 \ifthenelse{\equal{#1}{\null}}%
6931 {\def\next{{#4}{#2}{#2}{#3}}}%
6932 {\def\next{{#4}{#2}{#1}{#3}}}%
6933 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6934 \endgroup
6935 \fi
6936 \protect\hspace*{-\labelwidth}%
6937 \protect\hspace*{-\labelsep}%
6938 \ignorespaces
6939 #5%
6940 \ifHy@backref
6941 \newblock
6942 \backref{\csname br@#4\endcsname}%
6943 \fi
6944 \par
6945 }%

```

\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:

```

6946 \long\def\HAR@checkcitations#1#2#3#4{%
6947 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6948 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6949 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6950 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6951 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6952 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6953 \else
6954 \@tempswatrue
6955 \fi
6956 \else
6957 \@tempswatrue
6958 \fi
6959 \else
6960 \@tempswatrue
6961 \fi
6962 }%
6963 }%
6964 }{}

```

37.2 Package chicago

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

```

6965 \@ifpackageloaded{chicago}{%

```

\citeN

```

6966 \def\citeN{%
6967 \def\@citesep{ -1000}%
6968 \def\@cite##1##2{##1}%
6969 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%

```

```

6970 \citedata@opt
6971 }%

\shortciteN
6972 \def\shortciteN{%
6973 \def\cite#1#2#3{-1000}%
6974 \def\cite##1##2{##1}%
6975 \def\citeauthoryear##1##2##3{##2 (##3\cite@opt)}%
6976 \citedata@opt
6977 }%

\citedata@opt
6978 \def\citedata@opt{%
6979 \let\cite@opt\empty
6980 \ifnextchar [{%
6981 \@tempwattrue
6982 \citedatax@opt
6983 }{%
6984 \@tempwafalse
6985 \citedatax[]%
6986 }%
6987 }%

\citedatax@opt
6988 \def\citedatax@opt[#1]{%
6989 \def\cite@opt{, #1}%
6990 \citedatax[{#1}]%
6991 }%

6992 }{}

```

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.

```

6993 \def\Hy@EveryPageAnchor{%
6994 \Hy@DistillerDestFix
6995 \ifHy@pageanchor
6996 \ifHy@hypertexnames
6997 \ifHy@plainpages
6998 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6999 \else
7000 \begin{group}
7001 \let\@number\@firstofone
7002 \Hy@unicodedefalse
7003 \pdfstringdef\@the@H@page{\thepage}%
7004 \end{group}
7005 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7006 \fi
7007 \else
7008 \Hy@GlobalStepCount\Hy@pagecounter

```

```

7009 \def\Hy@TempPageAnchor{%
7010 \hyper@@anchor{page.\the\Hy@pagecounter}%
7011 }%
7012 \fi
7013 \vbox to 0pt{%
7014 \kern\voffset
7015 \kern\topmargin
7016 \kern-1bp\relax
7017 \hbox to 0pt{%
7018 \kern\hoffset
7019 \kern\ifodd\value{page}%
7020 \oddsidemargin
7021 \else
7022 \evensidemargin
7023 \fi
7024 \kern-1bp\relax
7025 \Hy@TempPageAnchor
7026 \hss
7027 }%
7028 \vss
7029 }%
7030 \fi
7031 }
7032 \g@addto@macro\Hy@EveryPageBoxHook{%
7033 \Hy@EveryPageAnchor
7034 }

```

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.

```

7035 \def\addcontentsline#1#2#3{% toc extension, type, tag
7036 \begingroup
7037 \let\label\@gobble
7038 \ifx\@currentHref\@empty
7039 \Hy@Warning{%
7040 No destination for bookmark of \string\addcontentsline,%
7041 \MessageBreak destination is added%
7042 }%
7043 \phantomsection
7044 \fi
7045 \expandafter\ifx\csname toplevel@#2\endcsname\relax
7046 \begingroup
7047 \def\Hy@tempa{#1}%
7048 \ifx\Hy@tempa\Hy@bookmarkstype
7049 \Hy@WarningNoLine{%
7050 bookmark level for unknown #2 defaults to 0%
7051 }%
7052 \else
7053 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7054 \fi
7055 \endgroup
7056 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7057 \fi
7058 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%

```

```

7059 \Hy@writebookmark{\csname the#2\endcsname}%
7060 {#3}%
7061 {\@currentHref}%
7062 {\Hy@toclevel}%
7063 {#1}%
7064 \ifHy@verbose
7065 \begingroup
7066 \def\Hy@tempa{#3}%
7067 \@onelevel@sanitize\Hy@tempa
7068 \let\temp@online\on@line
7069 \let\on@line\@empty
7070 \Hy@Info{%
7071 bookmark\temp@online:\MessageBreak
7072 thecounter {\csname the#2\endcsname}\MessageBreak
7073 text {\Hy@tempa}\MessageBreak
7074 reference {\@currentHref}\MessageBreak
7075 toclevel {\Hy@toclevel}\MessageBreak
7076 type {#1}%
7077 }%
7078 \endgroup
7079 \fi
7080 \addtocontents{#1}{%
7081 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7082 }%
7083 \endgroup
7084 }
7085 \def\contentsline#1#2#3#4{%
7086 \ifx\\#4\\%
7087 \csname l@#1\endcsname{#2}{#3}%
7088 \else
7089 \ifcase\Hy@linktoc % none
7090 \csname l@#1\endcsname{#2}{#3}%
7091 \or % section
7092 \csname l@#1\endcsname{%
7093 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7094 }{#3}%
7095 \or % page
7096 \csname l@#1\endcsname{#2}{#3}%
7097 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7098 }%
7099 \else % all
7100 \csname l@#1\endcsname{%
7101 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7102 }{%
7103 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7104 }%
7105 \fi
7106 \fi
7107 }
7108 \end{package}
7109 \end{check}
7110 \checklatex
7111 \checkcommand\def\addcontentsline#1#2#3{%
7112 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7113 }
7114 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7115 \end{check}

```

```
7116 <*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.

```
7117 \let\H@definecounter\@definecounter
7118 \def\@definecounter#1{%
7119   \H@definecounter{#1}%
7120   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7121 }
```

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.

```
7122 \let\H@newctr\@newctr
7123 \def\@newctr#1[#2]{%
7124   \H@newctr#1[#2]%
7125   \expandafter\def\csname theH#1\endcsname{%
7126     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7127   }%
7128 }
```

41 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```
7129 \@ifpackageloaded{amsmath}{%
7130   \def\Hy@make@anchor{%
7131     \Hy@MakeCurrentHrefAuto{AMS}%
7132     \Hy@Raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7133   }%
7134   \def\Hy@make@df@tag@@#1{%
7135     \gdef\df@tag{%
7136       \maketag@@@{\Hy@make@anchor#1}%
7137       \def\@currentlabel{#1}%
7138     }%
7139   }%
7140   \def\Hy@make@df@tag@@@#1{%
7141     \gdef\df@tag{%
7142       \tagform@{\Hy@make@anchor#1}%
7143       \toks@{\exp{\p@equation{#1}}}%
7144       \edef\@currentlabel{\the\toks@}%
7145     }%
7146   }%
7147   \let\HyOrg@make@df@tag@@\make@df@tag@@
7148   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7149   \let\make@df@tag@@\Hy@make@df@tag@@
7150   \let\make@df@tag@@@\Hy@make@df@tag@@@
7151 }{}
```

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

```

7152 \ifpackagewith{hyperref}{pdfTeX}{%
7153   \let\H@seteqlabel\@seteqlabel
7154   \def\@seteqlabel#1{%
7155     \H@seteqlabel{#1}%
7156     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7157     \Hy@raisedlink{%
7158       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7159     }%
7160   }%
7161 }{}

```

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.

```

7162 \let\HyOrg@addtoreset\@addtoreset
7163 \def\@addtoreset#1#2{%
7164   \HyOrg@addtoreset{#1}{#2}%
7165   \expandafter\xdef\csname theH#1\endcsname{%
7166     \expandafter\noexpand
7167     \csname the\@ifundefined{theH#2}{H#2}\endcsname
7168     .\noexpand\the\noexpand\value{#1}%
7169   }%
7170 }

```

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

```

7171 </package>
7172 <*check>
7173 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7174 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7175   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7176     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7177       \@addtoreset{#2}{#3}%
7178       \exp\xdef\csname the#2\endcsname{%
7179         \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7180       }%
7181     }%
7182   }%
7183 }%
7184 </check>
7185 <*package>
7186 \ifpackageloaded{amsmath}{%
7187   \ifpackagelater{amsmath}{1999/12/14}{%

```

```

7188 \renewcommand*{\numberwithin}[3][\arabic]{%
7189 \ifundefined{c@#2}{\@nocounterr{#2}}{%
7190 \ifundefined{c@#3}{\@nocnterr{#3}}{%
7191 \HyOrg@addtoreset{#2}{#3}%
7192 \xp\xdef\csname the#2\endcsname{%
7193 \xp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7194 }%
7195 \xp\xdef\csname theH#2\endcsname{%
7196 \xp\xnx
7197 \csname the\ifundefined{theH#3}{H#3\endcsname
7198 .\@nx#1{#2}%
7199 }%
7200 }%
7201 }%
7202 }%
7203 }{%
7204 \Hy@WarningNoLine{%
7205 \string\numberwithin\space of package ‘amsmath’ %
7206 only fixed\MessageBreak
7207 for version 2000/06/06 v2.12 or newer%
7208 }%
7209 }%
7210 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7211 \ifHy@figures
7212 \let\Hy@Gin@setfile\Gin@setfile
7213 \def\Gin@setfile#1#2#3{%
7214 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7215 }%
7216 \fi
7217 \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.

```

7218 \ifHy@hyperindex
7219 \def\HyInd@ParenLeft{({}%
7220 \def\HyInd@ParenRight{)}}%
7221 \def\hyperindexformat#1#2{%
7222 \let\HyOrg@hyperpage\hyperpage
7223 \let\hyperpage\@firstofone
7224 #1{\HyOrg@hyperpage{#2}}%
7225 \let\hyperpage\HyOrg@hyperpage

```

```

7226 }%
7227 \Hy@nextfalse
7228 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7229 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7230 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7231 \begingroup
7232 \lccode'\l=\expandafter\HyInd@EncapChar\relax
7233 \lccode'\l='\\relax
7234 \lowercase{\endgroup
7235 \ifHy@next
7236 \let\HyInd@org@wrindex\@wrindex
7237 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
7238 \def\HyInd@@wrindex#1#2|#3|#4\{\%
7239 \ifx\\#3\%
7240 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7241 \else
7242 \HyInd@@@wrindex{#1}{#2}#3\%
7243 \fi
7244 }%
7245 \def\HyInd@@@wrindex#1#2#3#4\{\%
7246 \def\Hy@temp@A{#3}%
7247 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7248 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7249 \relax
7250 \HyInd@org@wrindex{#1}{%
7251 #2|hyperindexformat{/#3#4}%
7252 }%
7253 \else
7254 \ifx\\#4\%
7255 \ifx\Hy@temp@A\HyInd@ParenRight
7256 \HyInd@org@wrindex{#1}{#2|#3}%
7257 \else
7258 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7259 \fi
7260 \else
7261 \HyInd@org@wrindex{#1}{%
7262 #2|#3hyperindexformat{/#4}%
7263 }%
7264 \fi
7265 \fi
7266 }%
7267 \else
7268 \def\@wrindex#1{\@@wrindex#1||\}%
7269 \def\@@wrindex#1|#2|#3\{\%
7270 \if@filesw
7271 \ifx\\#2\%
7272 \protected@write\@indexfile{}{%
7273 \string\indexentry{#1|hyperpage}{\thepage}%
7274 }%
7275 \else
7276 \HyInd@@@wrindex{#1}#2\%
7277 \fi
7278 \fi
7279 \endgroup
7280 \@esphack
7281 }%
7282 \def\HyInd@@@wrindex#1#2#3\{\%

```



```

7283 \def\Hy@temp@A{#2}%
7284 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7285 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7286 \relax
7287 \protected@write\@indexfile{}\{%
7288 \string\indexentry{%
7289 #1|hyperindexformat{/#2#3}%
7290 }\the page}%
7291 }%
7292 \else
7293 \ifx\#3\%
7294 \ifx\Hy@temp@A\HyInd@ParenRight
7295 \protected@write\@indexfile{}\{%
7296 \string\indexentry{#1|#2}\the page}%
7297 }%
7298 \else
7299 \protected@write\@indexfile{}\{%
7300 \string\indexentry{#1|#2hyperpage}\the page}%
7301 }%
7302 \fi
7303 \else
7304 \protected@write\@indexfile{}\{%
7305 \string\indexentry{%
7306 #1|#2hyperindexformat{/#3}%
7307 }\the page}%
7308 }%
7309 \fi
7310 \fi
7311 }%
7312 \fi
7313 }%
7314 \fi
7315 \Hy@DisableOption{hyperindex}
7316 \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.

```
7317 \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.

```

7318 \def\hyperpage#1{%
7319 \HyInd@hyperpage#1\nohyperpage{}\@nil
7320 }
7321 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7322 \HyInd@@hyperpage{#1}%
7323 #2%
7324 \def\Hy@temp{#3}%
7325 \ifx\Hy@temp\@empty
7326 \else
7327 \Hy@ReturnAfterFi{%
7328 \HyInd@hyperpage#3\@nil
7329 }%
7330 \fi
7331 }
7332 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7333 \def\@hyperpage#1--#2--#3\{\%

```

```

7334 \ifx\#2\%
7335 \commahyperpage{#1}%
7336 \else
7337 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7338 \fi
7339 }
7340 \def\commahyperpage#1{\commahyperpage#1, ,\}
7341 \def\commahyperpage#1, #2,#3\{%
7342 \ifx\#2\%
7343 \HyInd@pagelink{#1}%
7344 \else
7345 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7346 \fi
7347 }

```

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

```

7348 \def\HyInd@pagelink#1{%
7349 \begingroup
7350 \toks@={}%
7351 \HyInd@removespaces#1 \@nil
7352 \endgroup
7353 }
7354 \def\HyInd@removespaces#1 #2\@nil{%
7355 \toks@=\expandafter{\the\toks@#1}%
7356 \ifx\#2\%
7357 \edef\x{\the\toks@}%
7358 \ifx\x\empty
7359 \else
7360 \hyperlink{page.\the\toks@}{\the\toks@}%
7361 \fi
7362 \else
7363 \Hy@ReturnAfterFi{%
7364 \HyInd@removespaces#2\@nil
7365 }%
7366 \fi
7367 }

```

44 Compatibility with foiltex

```

7368 \@ifclassloaded{foils}{%
7369 \providecommand*\ext@table{lot}%
7370 \providecommand*\ext@figure{lof}%
7371 }{}

```

45 Compatibility with seminar slide package

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

```

7372 \@ifclassloaded{seminar}{%
7373 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7374 }{%
7375 \Hy@seminarslidesfalse
7376 }
7377 \@ifpackageloaded{slidesec}{%
7378 \newcommand\theHslidesection {\arabic{slidesection}}}%

```

```

7379 \newcommand\theHslidesubsection{%
7380 \theHslidesection.\arabic{slidesubsection}%
7381 }%
7382 \def\slide@heading[#1]#2{%
7383 \H@refstepcounter{slidesection}%
7384 \@addtoreset{slidesubsection}{slidesection}%
7385 \addtocontents{los}{%
7386 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7387 {\@SCTR}{slideheading.\theslidesection}%
7388 }%
7389 \def\Hy@tempa{#2}%
7390 \ifx\Hy@tempa\@empty
7391 \else
7392 {%
7393 \edef\@currentlabel{%
7394 \csname p@slidesection\endcsname\theslidesection
7395 }%
7396 \makeslideheading{#2}%
7397 }%
7398 \fi
7399 \gdef\theslideheading{#1}%
7400 \gdef\theslidesubheading{}%
7401 \ifHy@bookmarksnumbered
7402 \def\Hy@slidetitle{\theslidesection\space #1}%
7403 \else
7404 \def\Hy@slidetitle{#1}%
7405 \fi
7406 \ifHy@hypertexnames
7407 \ifHy@naturalnames
7408 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7409 \Hy@writebookmark
7410 {\theslidesection}%
7411 {\Hy@slidetitle}%
7412 {slideheading.\theslidesection}%
7413 {1}%
7414 {toc}%
7415 \else
7416 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7417 \Hy@writebookmark
7418 {\theslidesection}%
7419 {\Hy@slidetitle}%
7420 {slideheading.\theHslidesection}%
7421 {1}%
7422 {toc}%
7423 \fi
7424 \else
7425 \Hy@GlobalStepCount\Hy@linkcounter
7426 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7427 \Hy@writebookmark
7428 {\theslidesection}%
7429 {\Hy@slidetitle}%
7430 {slideheading.\the\Hy@linkcounter}%
7431 {1}%
7432 {toc}%
7433 \fi
7434 }%
7435 \def\slide@subheading[#1]#2{%

```

```

7436 \H@refstepcounter{slidesubsection}%
7437 \addtocontents{los}{%
7438   \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7439   {\@SCTR}{slideheading.\theslidesubsection}%
7440 }%
7441 \def\Hy@tempa{#2}%
7442 \ifx\Hy@tempa\@empty
7443 \else
7444   {%
7445     \edef\@currentlabel{%
7446       \csname p@slidesubsection\endcsname\theslidesubsection
7447     }%
7448     \makeslidesubheading{#2}%
7449   }%
7450 \fi
7451 \gdef\theslidesubheading{#1}%
7452 \ifHy@bookmarksnumbered
7453   \def\Hy@slidetitle{\theslidesubsection\space #1}%
7454 \else
7455   \def\Hy@slidetitle{#1}%
7456 \fi
7457 \ifHy@hypertexnames
7458   \ifHy@naturalnames
7459     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7460     \Hy@writebookmark
7461       {\theslidesubsection}%
7462       {\Hy@slidetitle}%
7463       {slideheading.\theslidesubsection}%
7464       {2}%
7465       {toc}%
7466   \else
7467     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7468     \Hy@writebookmark
7469       {\theslidesubsection}%
7470       {\Hy@slidetitle}%
7471       {slideheading.\theHslidesubsection}%
7472       {2}%
7473       {toc}%
7474   \fi
7475 \else
7476   \Hy@GlobalStepCount\Hy@linkcounter
7477   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7478   \Hy@writebookmark
7479     {\theslidesubsection}%
7480     {\Hy@slidetitle}%
7481     {slideheading.\the\Hy@linkcounter}%
7482     {1}%
7483     {toc}%
7484 \fi
7485 }%
7486 \providecommand*{\listslidenam}{List of Slides}%
7487 \def\listofslides{%
7488   \section*{%
7489     \listslidenam
7490     \@mkboth{%
7491       \expandafter\MakeUppercase\listslidenam
7492     }{%

```

```

7493     \expandafter\MakeUppercase\listslidenam
7494     }%
7495 }%
7496 \def\l@slide##1##2##3##4{%
7497     \slide@undottedcline{%
7498         \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7499     }{}%
7500 }%
7501 \let\l@subslide\l@slide
7502 \@startlos
7503 }%
7504 \def\slide@contents{%
7505     \def\l@slide##1##2##3##4{%
7506         \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7507     }%
7508     \let\l@subslide\@gobblefour
7509     \@startlos
7510 }%
7511 \def\Slide@contents{%
7512     \def\l@slide##1##2##3##4{%
7513         \ifcase\lslide@flag
7514             \message{##1 ** \the\c@slidesection}%
7515             \ifnum##1>\c@slidesection
7516                 \def\lslide@flag{1}%
7517                 {%
7518                     \large
7519                     \slide@cline{%
7520                         \slidenumberline{$\Rightarrow\bullet$}%
7521                         {\hyperlink{##4}{##2}}%
7522                     }{##3}%
7523                 }%
7524             \else
7525                 {%
7526                     \large
7527                     \slide@cline{%
7528                         \slidenumberline{$\surd\;\bullet$}%
7529                         {\hyperlink{##4}{##2}}%
7530                     }{##3}%
7531                 }%
7532             \fi
7533         \or
7534             \def\lslide@flag{2}%
7535             {%
7536                 \large
7537                 \slide@cline{%
7538                     \slidenumberline{$\bullet$}%
7539                     {\hyperlink{##4}{##2}}%
7540                 }{##3}%
7541             }%
7542         \or
7543             {%
7544                 \large
7545                 \slide@cline{%
7546                     \slidenumberline{$\bullet$}%
7547                     {\hyperlink{##4}{##2}}%
7548                 }{##3}%
7549             }%

```

```

7550 \fi
7551 }%
7552 \def\l@subslide##1##2##3##4{%
7553 \ifnum\lslide@flag=1 %
7554 \@@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7555 \fi
7556 }%
7557 \def\lslide@flag{0}%
7558 \startlos
7559 }%
7560 }{}

```

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.)

```

7561 \ifHy@texht
7562 \expandafter\endinput
7563 \fi
7564 \let\real@setref\@setref
7565 \def\@setref#1#2#3{% csname, extract group, refname
7566 \ifx#1\relax
7567 \protect\G@refundefinedtrue
7568 \nfss@text{\reset@font\bfseries ??}%
7569 \latex@warning{%
7570 Reference '#3' on page \thepage \space undefined%
7571 }%
7572 \else
7573 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7574 \fi
7575 }

```

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

```

7576 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7577 \begingroup
7578 \toks0={\hyper@@link{#5}{#4}}%
7579 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7580 \edef\x{\endgroup
7581 \the\toks0 {\the\toks1 }%
7582 }%
7583 \x
7584 }
7585 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7586 \ifx#1\relax
7587 \protect\G@refundefinedtrue
7588 \nfss@text{\reset@font\bfseries ??}%
7589 \latex@warning{%
7590 Reference '#3' on page \thepage \space undefined%
7591 }%
7592 \else
7593 \protect\hyper@@link
7594 {\expandafter\@fifthoffive#1}%
7595 {page.\expandafter\@secondoffive#1}%
7596 {\expandafter\@secondoffive#1}%
7597 \fi
7598 }
7599 </package>
7600 <*check>

```

```

7601 \checklatex
7602 \checkcommand\def\@setref#1#2#3{%
7603   \ifx#1\relax
7604     \protect\G@refundefinedtrue
7605     \nfss@text{\reset@font\bfseries ??}%
7606     \@latex@warning{%
7607       Reference '#3' on page \thepage\space undefined%
7608     }%
7609   \else
7610     \expandafter#2#1\null
7611   \fi
7612 }
7613 \</check>
7614 \<*package>

```

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

```

7615 \def\HyRef@StarSetRef#1{%
7616   \begingroup
7617   \Hy@safe@activetrue
7618   \edef\x{#1}%
7619   \@onelevel@sanitize\x
7620   \edef\x{\endgroup
7621     \noexpand\HyRef@@StarSetRef
7622     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7623   }%
7624   \x
7625 }
7626 \def\HyRef@@StarSetRef#1#2#3{%
7627   \ifx#1\@undefined
7628     \let#1\relax
7629   \fi
7630   \real@setref#1#3{#2}%
7631 }
7632 \def\@refstar#1{%
7633   \HyRef@StarSetRef{#1}\@firstoffive
7634 }
7635 \def\@pagerefstar#1{%
7636   \HyRef@StarSetRef{#1}\@secondoffive
7637 }
7638 \def\@namerefstar#1{%
7639   \HyRef@StarSetRef{#1}\@thirdoffive
7640 }
7641 \Hy@AtBeginDocument{%
7642   \@ifpackageloaded{varioref}{%
7643     \def\@Refstar#1{%
7644       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7645     }%
7646     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7647       \MakeUppercase#1%
7648     }%
7649     \DeclareRobustCommand*\Ref}{%
7650       \@ifstar\@Refstar\HyRef@Ref
7651     }%
7652     \def\HyRef@Ref#1{%
7653       \hyperref[#{1}]{\Ref*{#1}}%
7654     }%
7655     \def\Vr@f#1{%

```

```

7656 \leavevmode\unskip\vref@space
7657 \hyperref[#1]{%
7658 \Ref*{#1}%
7659 \let\vref@space\nobreakspace
7660 \@vpageref[\unskip]{#1}%
7661 }%
7662 }%
7663 \def\vr@f#1{%
7664 \leavevmode\unskip\vref@space
7665 \begingroup
7666 \let\T@pageref\@pagerefstar
7667 \hyperref[#1]{%
7668 \ref*{#1}%
7669 \vpageref[\unskip]{#1}%
7670 }%
7671 \endgroup
7672 }%
7673 }{}%
7674 }
7675 \DeclareRobustCommand*\autopageref{%
7676 \@ifstar{%
7677 \HyRef@autopagerefname\pageref*%
7678 }\HyRef@autopageref
7679 }
7680 \def\HyRef@autopageref#1{%
7681 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
7682 }
7683 \def\HyRef@autopagerefname{%
7684 \ltx@ifundefined{pageautorefname}{%
7685 \ltx@ifundefined{pagename}{%
7686 \Hy@Warning{No autoref name for 'page'}%
7687 }{%
7688 \pagename\nobreakspace
7689 }%
7690 }{}%
7691 \pageautorefname\nobreakspace
7692 }%
7693 }
7694 \DeclareRobustCommand*\autoref{%
7695 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7696 }
7697 \def\HyRef@autoref#1#2{%
7698 \begingroup
7699 \Hy@safe@activetrue
7700 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7701 \endgroup
7702 }
7703 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7704 \HyRef@ShowKeysRef{#2}%
7705 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7706 \edef\HyRef@thisref{%
7707 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7708 }%
7709 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7710 \Hy@safe@activesfalse
7711 #3{%
7712 \expandafter\@fifthoffive#1\@empty\@empty\@empty

```



```

7713 }{%
7714   \expandafter\@fourthoffive#1\@empty\@empty\@empty
7715 }{%
7716   \HyRef@currentHtag
7717   \expandafter\@firstoffive#1\@empty\@empty\@empty
7718   \null
7719 }%
7720 \else
7721   \protect\G@refundefinedtrue
7722   \nfss@text{\reset@font\bfseries ??}%
7723   \@latex@warning{%
7724     Reference '#2' on page \thepage\space undefined%
7725   }%
7726 \fi
7727 }
7728 \def\HyRef@testreftype#1.#2\{%
7729   \ltx@ifundefined{#1autorefname}{%
7730     \ltx@ifundefined{#1name}{%
7731       \HyRef@StripStar#1\*\@nil{#1}%
7732       \ltx@ifundefined{\HyRef@name autorefname}{%
7733         \ltx@ifundefined{\HyRef@name name}{%
7734           \def\HyRef@currentHtag{%
7735             \Hy@Warning{No autoref name for '#1'}%
7736           }{%
7737             \edef\HyRef@currentHtag{%
7738               \expandafter\noexpand\csname\HyRef@name name\endcsname
7739               \noexpand~%
7740             }%
7741           }%
7742         }{%
7743           \edef\HyRef@currentHtag{%
7744             \expandafter\noexpand
7745             \csname\HyRef@name autorefname\endcsname
7746             \noexpand~%
7747           }%
7748         }%
7749       }{%
7750         \edef\HyRef@currentHtag{%
7751           \expandafter\noexpand\csname#1name\endcsname
7752           \noexpand~%
7753         }%
7754       }%
7755     }{%
7756       \edef\HyRef@currentHtag{%
7757         \expandafter\noexpand\csname#1autorefname\endcsname
7758         \noexpand~%
7759       }%
7760     }%
7761   }
7762 \def\HyRef@StripStar#1*\@nil#3{%
7763   \def\HyRef@name{#2}%
7764   \ifx\HyRef@name\HyRef@CaseStar
7765     \def\HyRef@name{#1}%
7766   \else
7767     \def\HyRef@name{#3}%
7768   \fi
7769 }

```

```

7770 \def\HyRef@CaseStar{*\\}
7771 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7772 \let\HyRef@ShowKeysRef\@gobble
7773 \def\HyRef@ShowKeysInit{%
7774   \begingroup\expandafter\expandafter\expandafter\endgroup
7775   \expandafter\ifx\csname SK@@label\endcsname\relax
7776   \else
7777     \ifx\SK@ref\@empty
7778     \else
7779       \def\HyRef@ShowKeysRef{%
7780         \SK@\SK@@ref
7781       }%
7782     \fi
7783   \fi
7784 }
7785 \@ifpackageloaded{showkeys}{%
7786   \HyRef@ShowKeysInit
7787 }{%
7788   \Hy@AtBeginDocument{%
7789     \@ifpackageloaded{showkeys}{%
7790       \HyRef@ShowKeysInit
7791     }{}%
7792   }%
7793 }

```

Defaults for the names that \autoref uses.

```

7794 \providecommand*\AMSautorefname{\equationautorefname}
7795 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7796 \providecommand*\Itemautorefname{\itemautorefname}
7797 \providecommand*\itemautorefname{item}
7798 \providecommand*\equationautorefname{Equation}
7799 \providecommand*\footnoteautorefname{footnote}
7800 \providecommand*\itemautorefname{item}
7801 \providecommand*\figureautorefname{Figure}
7802 \providecommand*\tableautorefname{Table}
7803 \providecommand*\partautorefname{Part}
7804 \providecommand*\appendixautorefname{Appendix}
7805 \providecommand*\chapterautorefname{chapter}
7806 \providecommand*\sectionautorefname{section}
7807 \providecommand*\subsectionautorefname{subsection}
7808 \providecommand*\subsubsectionautorefname{subsubsection}
7809 \providecommand*\paragraphautorefname{paragraph}
7810 \providecommand*\subparagraphautorefname{subparagraph}
7811 \providecommand*\FancyVerbLineautorefname{line}
7812 \providecommand*\theoremautorefname{Theorem}
7813 \providecommand*\pageautorefname{page}
7814 \</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 pdfTeX offers `\pdfescapestring`.

```
7815 (*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
7816 \RequirePackage{pdfTeXcmds}[2009/04/10]
7817 \begingroup\expandafter\expandafter\expandafter\endgroup
7818 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7819 \begingroup
7820 \catcode'\|=0 %
7821 \@makeother\|%
7822 |@firstofone{ |endgroup
7823 |def|Hy@pstringdef#1#2{%
7824 |begingroup
7825 |edef~{|string~}%
7826 |xdef|Hy@gtemp{#2}%
7827 |endgroup
7828 |let#1|Hy@gtemp
7829 |@onelevel@sanitize#1%
7830 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
7831 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7832 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7833 }%
7834 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7835 #1%
7836 |ifx|\#2\|%%
7837 |else
7838 \| %
7839 |Hy@ReturnAfterFi{%
7840 |Hy@ExchangeBackslash#2|@nil
7841 }%
7842 |fi
7843 }%
7844 }%
7845 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7846 #1%
7847 \ifx\#2\| %
7848 \else
7849 \@backslashchar(%
7850 \Hy@ReturnAfterFi{%
7851 \Hy@ExchangeLeftParenthesis#2\@nil
7852 }%
7853 \fi
7854 }%
7855 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7856 #1%
7857 \ifx\#2\| %
7858 \else
7859 \@backslashchar)%
7860 \Hy@ReturnAfterFi{%
```

```

7861      \Hy@ExchangeRightParenthesis#2\@nil
7862    }%
7863  \fi
7864 }%
7865 \else
7866 \def\Hy@pstringdef#1#2{%
7867   \begingroup
7868   \edef~{\string~}%
7869   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7870   \endgroup
7871   \let#1\Hy@gtemp
7872 }%
7873 \fi
7874 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7875 <*pdfTeX>
7876 \providecommand*{\XR@ext}{pdf}
7877 \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`

```

7878 \let\Hy@pdfminorversion\relax
7879 \begingroup\expandafter\expandafter\expandafter\endgroup
7880 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7881   \begingroup\expandafter\expandafter\expandafter\endgroup
7882   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7883     \else
7884       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7885     \fi
7886   \else
7887     \def\Hy@pdfminorversion{\pdfminorversion}%
7888   \fi
7889 \@ifundefined{Hy@pdfminorversion}{%
7890   \PackageInfo{hyperref}{%
7891     PDF version is not set, because pdfTeX is too old (<1.10a)%
7892   }%
7893 }{%
7894   \ifHy@ocgcolorlinks
7895     \ifnum\Hy@pdfminorversion<5 %
7896       \setkeys{Hyp}{pdfversion=1.5}%
7897     \fi
7898   \fi
7899   \ifHy@setpdfversion
7900     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7901     \else
7902       \Hy@pdfminorversion=\Hy@pdfversion\relax
7903     \fi
7904   \PackageInfo{hyperref}{%
7905     \expandafter\string\Hy@pdfminorversion
7906     :=\number\Hy@pdfversion\space

```

```

7907 }%
7908 \fi
7909 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7910 }
7911 \Hy@DisableOption{pdfversion}%
7912 \ifHy@ocgcolorlinks
7913 \immediate\pdfobj{%
7914 <<%
7915 /Type/OCG%
7916 /Name(View)%
7917 /Usage<<%
7918 /Print<<%
7919 /PrintState/OFF%
7920 >>%
7921 /View<<%
7922 /ViewState/ON%
7923 >>%
7924 >>%
7925 >>%
7926 }%
7927 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7928 \immediate\pdfobj{%
7929 <<%
7930 /Type/OCG%
7931 /Name(Print)%
7932 /Usage<<%
7933 /Print<<%
7934 /PrintState/ON%
7935 >>%
7936 /View<<%
7937 /ViewState/OFF%
7938 >>%
7939 >>%
7940 >>%
7941 }%
7942 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7943 \immediate\pdfobj{%
7944 [%
7945 \OBJ@OCG@view\space\OBJ@OCG@print
7946 ]%
7947 }%
7948 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7949 \pdfcatalog{%
7950 /OCProperties<<%
7951 /OCGs \OBJ@OCGs
7952 /D<<%
7953 /OFF[\OBJ@OCG@print]%
7954 /AS[%
7955 <<%
7956 /Event/View%
7957 /OCGs \OBJ@OCGs
7958 /Category[/View]%
7959 >>%
7960 <<%
7961 /Event/Print%
7962 /OCGs \OBJ@OCGs
7963 /Category[/Print]%

```

```

7964     >>%
7965     <<%
7966     /Event/Export%
7967     /OCGs \OBJ@OCGs
7968     /Category[/Print]%
7969     >>%
7970     ]%
7971     >>%
7972     >>%
7973     }%
7974     \beginpgroup
7975     \edef\x{\endpgroup
7976     \pdfpageresources{%
7977     /Properties<<%
7978     /OCView \OBJ@OCG@view
7979     /OCPrint \OBJ@OCG@print
7980     >>%
7981     }%
7982     }%
7983     \x
7984     \Hy@AtBeginDocument{%
7985     \def\Hy@colorlink#1{%
7986     \beginpgroup
7987     \ifHy@ocgcolorlinks
7988     \def\Hy@ocgcolor{#1}%
7989     \setbox0=\color@hbox
7990     \else
7991     \HyColor@UseColor#1%
7992     \fi
7993     }%
7994     \def\Hy@endcolorlink{%
7995     \ifHy@ocgcolorlinks
7996     \color@endbox
7997     \mbox{%
7998     \pdfliteral page{/OC/OCPrint BDC}%
7999     \rlap{\copy0}%
8000     \pdfliteral page{EMC/OC/OCView BDC}%
8001     \beginpgroup
8002     \expandafter\HyColor@UseColor\Hy@ocgcolor
8003     \box0 %
8004     \endpgroup
8005     \pdfliteral page{EMC}%
8006     }%
8007     \fi
8008     \endpgroup
8009     }%
8010     }%
8011     \else
8012     \Hy@DisableOption{ocgcolorlinks}%
8013     \fi

```

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

```

8014 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8015 \ifx\pdfstartlink\@undefined% less than version 14
8016 \let\pdfstartlink\pdfannotlink
8017 \let\pdfinkmargin\@tempdima
8018 \let\pdfxform\pdfform
8019 \let\pdflastxform\pdflastform

```

```

8020 \let\pdfrefxform\pdfrefform
8021 \else
8022 \pdflinkmargin1pt %
8023 \fi

```

First set up the default linking

```
8024 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8025 \def\new@pdfink#1{%
8026 \Hy@SaveLastskip
8027 \Hy@VerboseAnchor{#1}%
8028 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8029 \Hy@DestName\Hy@pstringDest\@pdfview
8030 \Hy@RestoreLastskip
8031 }
8032 \let\pdf@endanchor\@empty

```

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

```

8033 \def\Hy@DestName#1#2{%
8034 \pdfdest name{#1}#2\relax
8035 }

```

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.

```

8036 \providecommand*\@pdfborder{0 0 1}
8037 \providecommand*\@pdfborderstyle{}
8038 \def\Hy@undefinedname{UNDEFINED}
8039 \def\find@pdfink#1#2{%
8040 \leavevmode
8041 \protected@edef\Hy@testname{#2}%
8042 \ifx\Hy@testname\@empty
8043 \Hy@Warning{%
8044 Empty destination name,\MessageBreak
8045 using '\Hy@undefinedname'%
8046 }%
8047 \let\Hy@testname\Hy@undefinedname
8048 \else
8049 \Hy@pstringdef\Hy@testname{%
8050 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8051 }%
8052 \fi
8053 \Hy@StartlinkName{%
8054 \ifHy@pdfa /F 4\fi
8055 \Hy@setpdfborder
8056 \ifx\@pdfhighlight\@empty
8057 \else
8058 /H\@pdfhighlight
8059 \fi
8060 \ifx\CurrentBorderColor\relax
8061 \else
8062 /C[\CurrentBorderColor]%
8063 \fi
8064 }\Hy@testname
8065 \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

8066 }
8067 \def\Hy@StartlinkName#1#2{%
8068   \pdfstartlink attr{#1}goto name{#2}\relax
8069 }
8070 \def\close@pdfink{%
8071   \Hy@endcolorlink
8072   \Hy@VerboseLinkStop
8073   \pdfendlink
8074 }
8075 \def\hyper@anchor#1{%
8076   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8077 }
8078 \def\hyper@anchorstart#1{%
8079   \new@pdfink{#1}%
8080   \Hy@activeanchortrue
8081 }
8082 \def\hyper@anchorend{%
8083   \pdf@endanchor
8084   \Hy@activeanchorfalse
8085 }
8086 \def\hyper@linkstart#1#2{%
8087   \Hy@VerboseLinkStart{#1}{#2}%
8088   \ltx@ifundefined{@#1bordercolor}{%
8089     \let\CurrentBorderColor\relax
8090   }{%
8091     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8092   }%
8093   \find@pdfink{#1}{#2}%
8094 }
8095 \def\hyper@linkend{\close@pdfink}
8096 \def\hyper@link#1#2#3{%
8097   \Hy@VerboseLinkStart{#1}{#2}%
8098   \ltx@ifundefined{@#1bordercolor}{%
8099     \let\CurrentBorderColor\relax
8100   }{%
8101     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8102   }%
8103   \find@pdfink{#1}{#2}#3%
8104   \close@pdfink
8105 }
8106 \let\CurrentBorderColor\@linkbordercolor
8107 \def\hyper@linkurl#1#2{%
8108   \begingroup
8109     \Hy@pstringdef\Hy@pstringURI{#2}%
8110     \hyper@chars
8111     \leavevmode
8112     \pdfstartlink
8113       attr{%
8114         \Hy@setpdfborder
8115         \ifx\@pdfhighlight\@empty
8116           \else
8117             /H\@pdfhighlight
8118           \fi
8119         \ifx\@urlbordercolor\relax
8120           \else
8121             /C[\@urlbordercolor]%
8122           \fi

```



```

8123     }%
8124     user{%
8125         /Subtype/Link%
8126         \ifHy@pdfa /F 4\fi
8127         /A<<%
8128         /Type/Action%
8129         /S/URI%
8130         /URI(\Hy@pstringURI)%
8131     >>%
8132     }%
8133     \relax
8134     \Hy@colorlink\@urlcolor#1%
8135     \close@pdflink
8136 \endgroup
8137 }
8138 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8139 \begingroup
8140   \Hy@pstringdef\Hy@pstringF{#2}%
8141   \Hy@pstringdef\Hy@pstringD{#3}%
8142   \leavevmode
8143   \pdfstartlink
8144   attr{%
8145     \Hy@setpdfborder
8146     \ifx\@pdfhighlight\@empty
8147     \else
8148       /H\@pdfhighlight
8149     \fi
8150     \ifx\@filebordercolor\relax
8151     \else
8152       /C[\@filebordercolor]%
8153     \fi
8154   }%
8155   user {%
8156     /Subtype/Link%
8157     \ifHy@pdfa /F 4\fi
8158     /A<<%
8159     /F(\Hy@pstringF)%
8160     /S/GoToR%
8161     \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}

```

```

8162     \ifx\#3\%
8163     /D[0 \pdfstartview]%
8164     \else
8165     /D(\Hy@pstringD)%
8166     \fi
8167     >>%
8168     }%

```

```

8169 \relax
8170 \Hy@colorlink\@filecolor#1%
8171 \close@pdflink
8172 \endgroup
8173 }
8174 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
8175 \begingroup
8176 \Hy@pstringdef\Hy@pstringF{#1}%
8177 \Hy@pstringdef\Hy@pstringP{#3}%
8178 \leavevmode
8179 \pdfstartlink
8180 attr{%
8181 \Hy@setpdfborder
8182 \ifx\@pdfhighlight\@empty
8183 \else
8184 /H\@pdfhighlight
8185 \fi
8186 \ifx\@runbordercolor\relax
8187 \else
8188 /C[\@runbordercolor]%
8189 \fi
8190 }%
8191 user {%
8192 /Subtype/Link%
8193 \ifHy@pdfa /F 4\fi
8194 /A<<%
8195 /F(\Hy@pstringF)%
8196 /S/Launch%
8197 \Hy@SetNewWindow
8198 \ifx\|#3\|%
8199 \else
8200 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8201 \fi
8202 >>%
8203 }%
8204 \relax
8205 \Hy@colorlink\@runcolor#2%
8206 \close@pdflink
8207 \endgroup
8208 }

```

\@pdfproducer

```

8209 \ifx\@pdfproducer\relax
8210 \begingroup\expandafter\expandafter\expandafter\endgroup
8211 \expandafter\ifx\csname luatexversion\endcsname\relax
8212 \def\@pdfproducer{pdfTeX}%
8213 \ifx\eTeXversion\@undefined
8214 \else
8215 \ifx\eTeXversion\relax
8216 \else
8217 \ifnum\eTeXversion>0 %
8218 \def\@pdfproducer{pdfTeX}%
8219 \fi
8220 \fi
8221 \fi
8222 \ifx\pdfTeXversion\@undefined
8223 \else

```

```

8224 \ifnum\pdfTeXversion<100 %
8225 \edef\@pdfproducer{%
8226 \@pdfproducer
8227 \the\pdfTeXversion.\pdfTeXrevision
8228 }%
8229 \else
8230 \ifnum\pdfTeXversion<130 %
8231 \edef\@pdfproducer{%
8232 \@pdfproducer-%
8233 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8234 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8235 \pdfTeXrevision
8236 }%
8237 \else
8238 \ifnum\pdfTeXversion<140 %
8239 \else
8240 \def\@pdfproducer{pdfTeX}%
8241 \fi
8242 \edef\@pdfproducer{%
8243 \@pdfproducer-%
8244 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8245 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8246 \pdfTeXrevision
8247 }%
8248 \fi
8249 \fi
8250 \fi
8251 \else
8252 \begingroup
8253 \count@=\luaTeXversion
8254 \divide\count@ by 100 %
8255 \edef\x{\the\count@}%
8256 \count@=-\x\relax
8257 \multiply\count@ by 100 %
8258 \advance\count@ by \luaTeXversion
8259 \edef\x{\endgroup
8260 \def\noexpand\@pdfproducer{%
8261 LuaTeX-\x.\the\count@.\luaTeXrevision
8262 }%
8263 }%
8264 \x
8265 \fi
8266 \fi

```

\PDF@SetupDox

```

8267 \def\PDF@SetupDoc{%
8268 \ifx\@pdfpagescrop\@empty
8269 \else
8270 \edef\process@me{%
8271 \pdfpagesattr={%
8272 /CropBox[\@pdfpagescrop]%
8273 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8274 \else
8275 ^^J\the\pdfpagesattr
8276 \fi
8277 }%
8278 }%

```

```

8279 \process@me
8280 \fi
8281 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8282 \pdfcatalog{%
8283 /PageMode/\@pdfpagemode
8284 \ifx\@baseurl\@empty
8285 \else
8286 /URI<</Base(\Hy@pstringB)>>%
8287 \fi
8288 }%
8289 \ifx\@pdfstartpage\@empty
8290 \else
8291 \ifx\@pdfstartview\@empty
8292 \else
8293 openaction goto page\@pdfstartpage{\@pdfstartview}%
8294 \fi
8295 \fi
8296 \edef\Hy@temp{%
8297 \ifHy@toolbar\else /HideToolbar true\fi
8298 \ifHy@menubar\else /HideMenubar true\fi
8299 \ifHy>windowui\else /HideWindowUI true\fi
8300 \ifHy@fitwindow /FitWindow true\fi
8301 \ifHy@centerwindow /CenterWindow true\fi
8302 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8303 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8304 \Hy@UseNameKey{Direction}\@pdfdirection
8305 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8306 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8307 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8308 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8309 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8310 \Hy@UseNameKey{Duplex}\@pdfduplex
8311 \ifx\@pdfpicktraybypdfsize\@empty
8312 \else
8313 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8314 \fi
8315 \ifx\@pdfprintpagerange\@empty
8316 \else
8317 /PrintPageRange[\@pdfprintpagerange]%
8318 \fi
8319 \ifx\@pdfnumcopies\@empty
8320 \else
8321 /NumCopies \@pdfnumcopies
8322 \fi
8323 }%
8324 \pdfcatalog{%
8325 \ifx\Hy@temp\@empty
8326 \else
8327 /ViewerPreferences<<\Hy@temp>>%
8328 \fi
8329 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8330 \ifx\@pdflang\@empty
8331 \else
8332 /Lang(\@pdflang)%
8333 \fi
8334 }%
8335 }

```

\PDF@FinishDoc

```
8336 \def\PDF@FinishDoc{%
8337   \Hy@UseMaketitleInfos
8338   \HyInfo@GenerateAddons
8339   \pdfinfo{%
8340     /Author(\@pdfauthor)%
8341     /Title(\@pdftitle)%
8342     /Subject(\@pdfsubject)%
8343     /Creator(\@pdfcreator)%
8344     \ifx\@pdfcreationdate\@empty
8345     \else
8346       /CreationDate(\@pdfcreationdate)%
8347     \fi
8348     \ifx\@pdfmoddate\@empty
8349     \else
8350       /ModDate(\@pdfmoddate)%
8351     \fi
8352     \ifx\@pdfproducer\relax
8353     \else
8354       /Producer(\@pdfproducer)%
8355     \fi
8356     /Keywords(\@pdfkeywords)%
8357     \ifx\@pdftrapped\@empty
8358     \else
8359       /Trapped/\@pdftrapped
8360     \fi
8361     \HyInfo@Addons
8362   }%
8363   \Hy@DisableOption{pdfauthor}%
8364   \Hy@DisableOption{pdftitle}%
8365   \Hy@DisableOption{pdfsubject}%
8366   \Hy@DisableOption{pdfcreator}%
8367   \Hy@DisableOption{pdfcreationdate}%
8368   \Hy@DisableOption{pdfmoddate}%
8369   \Hy@DisableOption{pdfproducer}%
8370   \Hy@DisableOption{pdfkeywords}%
8371   \Hy@DisableOption{pdftrapped}%
8372   \Hy@DisableOption{pdfinfo}%
8373 }
```

\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.

```
8374 \def\hyper@pagetransition{%
8375   \ifx\@pdfpagetransition\relax
8376   \else
8377     \expandafter\Hy@RemoveTransPageAttr
8378     \the\pdfpageattr^^J/Trans{}}>>\END
8379   \ifx\@pdfpagetransition\@empty
8380   \else
8381     \edef\@processme{%
8382       \global\pdfpageattr{%
8383         \the\pdfpageattr
8384         ^^J/Trans << /S /\@pdfpagetransition\space >>%
8385       }%
8386     }%
8387     \@processme
```

```

8388   \fi
8389   \fi
8390 }

```

`\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.

```

8391 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8392   \ifx\#2\%
8393     \global\pdfpageattr{#1}%
8394   \else
8395     \Hy@RemoveTransPageAttr#1#4\END
8396   \fi
8397 }

```

`\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`.

```

8398 \def\hyper@pageduration{%
8399   \ifx\@pdfpageduration\relax
8400   \else
8401     \expandafter
8402     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8403     \ifx\@pdfpageduration\@empty
8404     \else
8405       \edef\@processme{%
8406         \global\pdfpageattr{%
8407           \the\pdfpageattr
8408             ^^J/Dur \@pdfpageduration\space
8409         }%
8410       }%
8411       \@processme
8412     \fi
8413   \fi
8414 }

```

`\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.

```

8415 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8416   \ifx\#2\%
8417     \global\pdfpageattr{#1}%
8418   \else
8419     \Hy@RemoveDurPageAttr#1#4\END
8420   \fi
8421 }

```

`\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).

```

8422 \def\hyper@pagehidden{%
8423   \ifHy@useHidKey
8424     \expandafter
8425     \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{ } \END

```

```

8426 \ifHy@pdfpagehidden
8427 \edef\@processme{%
8428 \global\pdfpageattr{%
8429 \the\pdfpageattr
8430 ^^J/Hid true % SPACE
8431 }%
8432 }%
8433 \@processme
8434 \fi
8435 \fi
8436 }

```

`\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.

```

8437 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8438 \ifx\#2\%
8439 \global\pdfpageattr{#1}%
8440 \else
8441 \Hy@RemoveHidPageAttr#1#4\END
8442 \fi
8443 }

8444 \g@addto@macro\Hy@EveryPageHook{%
8445 \hyper@pagetransition
8446 \hyper@pageduration
8447 \hyper@pagehidden
8448 }

```

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

```

8449 </pdfTeX>
8450 <*pdfTeX | xetex>
8451 \Hy@AtBeginDocument{%
8452 \ifHy@setpagesize
8453 \expandafter\@firstofone
8454 \else
8455 \expandafter\@gobble
8456 \fi
8457 {%
8458 \@ifclassloaded{seminar}{%
8459 <*pdfTeX>
8460 \setlength{\pdfhorigin}{1truein}%
8461 \setlength{\pdfvorigin}{1truein}%
8462 </pdfTeX>
8463 \ifportrait
8464 \ifdim\paperwidth=\z@
8465 \else
8466 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8467 \fi
8468 \ifdim\paperheight=\z@
8469 \else
8470 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8471 \fi
8472 \else
8473 \ifdim\paperheight=\z@
8474 \else

```

```

8475     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8476     \fi
8477     \ifdim\paperwidth=\z@
8478     \else
8479     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8480     \fi
8481     \fi
8482   }{%
8483     \ltx@ifundefined{stockwidth}{%
8484       \ifdim\paperwidth>\z@
8485       \setlength{\pdfpagewidth}{\paperwidth}%
8486       \fi
8487       \ifdim\paperheight>\z@
8488       \setlength{\pdfpageheight}{\paperheight}%
8489       \fi
8490     }{%
8491       \ifdim\stockwidth>\z@
8492       \setlength{\pdfpagewidth}{\stockwidth}%
8493       \fi
8494       \ifdim\stockheight>\z@
8495       \setlength{\pdfpageheight}{\stockheight}%
8496       \fi
8497     }%
8498   }%
8499 }%
8500 \Hy@DisableOption{setpagesize}%
8501 }
8502 </pdfTeX | xetex>
8503 <*pdfTeX>
8504 \def\Acrobatmenu#1#2{%
8505   \Hy@Acrobatmenu{#1}{#2}{%
8506     \pdfstartlink
8507     attr{%
8508       \Hy@setpdfborder
8509       \ifx\@pdfhighlight\@empty
8510       \else
8511       /H\@pdfhighlight
8512       \fi
8513       \ifx\@menubordercolor\relax
8514       \else
8515       /C[\@menubordercolor]%
8516       \fi
8517     }%
8518     user{%
8519       /Subtype/Link%
8520       \ifHy@pdfa /F 4\fi
8521       /A<<%
8522       /S/Named/N/#1%
8523       >>%
8524     }%
8525     \relax
8526     \Hy@colorlink\@menucolor#2%
8527     \close@pdfink
8528   }%
8529 }

```


46.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_TE_X'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 pdf_TE_X—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`.

```
8530 \def\Hy@FixNotFirstPage{%
8531   \gdef\Hy@FixNotFirstPage{%
8532     \setbox\AtBeginShipoutBox=\hbox{%
8533       \copy\AtBeginShipoutBox
8534     }%
8535   }%
8536 }
8537 \AtBeginShipout{\Hy@FixNotFirstPage}
8538 \</pdfTeX>
```

46.3 hypertex

The Hyper_TE_X 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 _TE_X file — the _TE_X 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.

```
8539 (*hypertex)
8540 \providecommand*{\XR@ext}{dvi}
8541 \def\PDF@FinishDoc{}
8542 \def\PDF@SetupDoc{%
```

```

8543 \ifx\@baseurl\@empty
8544 \else
8545 \special{html:<base href="\@baseurl">}%
8546 \fi
8547 }
8548 \def\hyper@anchor#1{%
8549 \Hy@SaveLastskip
8550 \Hy@VerboseAnchor{#1}%
8551 \begingroup
8552 \let\protect=\string
8553 \hyper@chars
8554 \special{html:<a name=%
8555 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8556 \endgroup
8557 \Hy@activeanchortrue
8558 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8559 \special{html:</a>}%
8560 \Hy@activeanchorfalse
8561 \Hy@RestoreLastskip
8562 }
8563 \def\hyper@anchorstart#1{%
8564 \Hy@SaveLastskip
8565 \Hy@VerboseAnchor{#1}%
8566 \begingroup
8567 \hyper@chars
8568 \special{html:<a name=%
8569 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8570 \endgroup
8571 \Hy@activeanchortrue
8572 }
8573 \def\hyper@anchorend{%
8574 \special{html:</a>}%
8575 \Hy@activeanchorfalse
8576 \Hy@RestoreLastskip
8577 }
8578 \def\@urltype{url}
8579 \def\hyper@linkstart#1#2{%
8580 \Hy@VerboseLinkStart{#1}{#2}%
8581 \expandafter\Hy@colorlink\csname @#1color\endcsname
8582 \def\Hy@tempa{#1}%
8583 \ifx\Hy@tempa\@urltype
8584 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8585 \else
8586 \begingroup
8587 \hyper@chars
8588 \special{html:<a href=%
8589 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
8590 \endgroup
8591 \fi
8592 }
8593 \def\hyper@linkend{%
8594 \special{html:</a>}%
8595 \Hy@endcolorlink
8596 }
8597 \def\hyper@linkfile#1#2#3{%
8598 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8599 }

```

```
8600 \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.

```
8601 \leavevmode
8602 \ifHy@raiselinks
8603 \setbox\@tempboxa=\color@hbox #1\color@endbox
8604 \@linkdim\dp\@tempboxa
8605 \lower\@linkdim\hbox{%
8606   \hyper@chars
8607   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8608 }%
8609 \Hy@colorlink\@urlcolor#1%
8610 \@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).

```
8611 \advance\@linkdim by -6.5\p@
8612 \raise\@linkdim\hbox{\special{html:</a>}}%
8613 \Hy@endcolorlink
8614 \else
8615 \begingroup
8616   \hyper@chars
8617   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8618   \Hy@colorlink\@urlcolor#1%
8619   \special{html:</a>}%
8620   \Hy@endcolorlink
8621 \endgroup
8622 \fi
8623 }
```

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

```
8624 \def\hyper@link#1#2#3{%
8625   \Hy@VerboseLinkStart{#1}{#2}%
8626   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
8627 }

8628 \def\hyper@image#1#2{%
8629   \begingroup
8630   \hyper@chars
8631   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8632   \endgroup
8633 }
8634 </hypertex>
8635 <*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.

```

8636 \providecommand*{\XR@ext}{dvi}
8637 \providecommand*{\wwwbrowser{c:\string\netscape\string\netscape}
8638 \def\hyper@anchor#1{%
8639   \Hy@SaveLastskip
8640   \Hy@VerboseAnchor{#1}%
8641   \begingroup
8642     \let\protect=\string
8643     \special{mark: #1}%
8644   \endgroup
8645   \Hy@activeanchortrue
8646   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8647   \Hy@activeanchorfalse
8648   \Hy@RestoreLastskip
8649 }
8650 \def\hyper@anchorstart#1{%
8651   \Hy@SaveLastskip
8652   \Hy@VerboseAnchor{#1}%
8653   \special{mark: #1}%
8654   \Hy@activeanchortrue
8655 }
8656 \def\hyper@anchorend{%
8657   \Hy@activeanchorfalse
8658   \Hy@RestoreLastskip
8659 }
8660 \def\hyper@linkstart#1#2{%
8661   \Hy@VerboseLinkStart{#1}{#2}%
8662   \expandafter\Hy@colorlink\csname @#1color\endcsname
8663   \special{button: %
8664     10000000 %
8665     \number\baselineskip\space
8666     #2%
8667   }%
8668 }
8669 \def\hyper@linkend{%
8670   \Hy@endcolorlink
8671 }
8672 \def\hyper@link#1#2#3{%
8673   \Hy@VerboseLinkStart{#1}{#2}%
8674   \setbox\@tempboxa=\color@hbox #3\color@endbox
8675   \leavevmode
8676   \ifHy@raiselinks
8677     \@linkdim\dp\@tempboxa
8678     \lower\@linkdim\hbox{%
8679       \special{button: %
8680         \number\wd\@tempboxa\space
8681         \number\ht\@tempboxa\space
8682         #2%
8683       }%
8684       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8685       \Hy@endcolorlink
8686     }%
8687     \@linkdim\ht\@tempboxa
8688     \advance\@linkdim by -6.5\p@
8689     \raise\@linkdim\hbox{}%
8690   \else

```

```

8691 \special{button: %
8692 \number\wd\@tempboxa\space
8693 \number\ht\@tempboxa\space
8694 #2%
8695 }%
8696 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8697 \Hy@endcolorlink
8698 \fi
8699 }
8700 \def\hyper@linkurl#1#2{%
8701 \begingroup
8702 \hyper@chars
8703 \leavevmode
8704 \setbox\@tempboxa=\color@hbox #1\color@endbox
8705 \ifHy@raiselinks
8706 \@linkdim\dp\@tempboxa
8707 \lower\@linkdim\hbox{%
8708 \special{button: %
8709 \number\wd\@tempboxa\space
8710 \number\ht\@tempboxa\space
8711 launch: \wwwbrowser\space
8712 #2%
8713 }%
8714 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8715 }%
8716 \@linkdim\ht\@tempboxa
8717 \advance\@linkdim by -6.5\p@
8718 \raise\@linkdim\hbox{}}%
8719 \else
8720 \special{button: %
8721 \number\wd\@tempboxa\space
8722 \number\ht\@tempboxa\space
8723 launch: \wwwbrowser\space
8724 #2%
8725 }%
8726 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8727 \fi
8728 \endgroup
8729 }
8730 \def\hyper@linkfile#1#2#3{%
8731 \begingroup
8732 \hyper@chars
8733 \leavevmode
8734 \setbox\@tempboxa=\color@hbox #1\color@endbox
8735 \ifHy@raiselinks
8736 \@linkdim\dp\@tempboxa
8737 \lower\@linkdim\hbox{%
8738 \special{button: %
8739 \number\wd\@tempboxa\space
8740 \number\ht\@tempboxa\space
8741 #3,%
8742 file: #2%
8743 }%
8744 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8745 }%
8746 \@linkdim\ht\@tempboxa
8747 \advance\@linkdim by -6.5\p@

```

```

8748     \raise\@linkdim\hbox{}%
8749   \else
8750     \special{button: %
8751       \number\wd\@tempboxa\space
8752       \number\ht\@tempboxa\space
8753       #3,%
8754       file: #2%
8755     }%
8756     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8757   \fi
8758 \endgroup
8759 }
8760 \ifx\@pdfproducer\relax
8761   \def\@pdfproducer{dviwindo + Distiller}%
8762 \fi
8763 \HyInfo@AddonUnsupportedtrue
8764 \def\PDF@FinishDoc{%
8765   \Hy@UseMaketitleInfos
8766   \HyInfo@TrappedUnsupported
8767   \special{PDF: Keywords \@pdfkeywords}%
8768   \special{PDF: Title \@pdftitle}%
8769   \special{PDF: Creator \@pdfcreator}%
8770   \ifx\@pdfcreationdate\@empty
8771     \else
8772     \special{PDF: CreationDate \@pdfcreationdate}%
8773   \fi
8774   \ifx\@pdfmoddate\@empty
8775     \else
8776     \special{PDF: ModDate \@pdfmoddate}%
8777   \fi
8778   \special{PDF: Author \@pdfauthor}%
8779   \ifx\@pdfproducer\relax
8780     \else
8781     \special{PDF: Producer \@pdfproducer}%
8782   \fi
8783   \special{PDF: Subject \@pdfsubject}%
8784   \Hy@DisableOption{pdfauthor}%
8785   \Hy@DisableOption{pdftitle}%
8786   \Hy@DisableOption{pdfsubject}%
8787   \Hy@DisableOption{pdfcreator}%
8788   \Hy@DisableOption{pdfcreationdate}%
8789   \Hy@DisableOption{pdfmoddate}%
8790   \Hy@DisableOption{pdfproducer}%
8791   \Hy@DisableOption{pdfkeywords}%
8792   \Hy@DisableOption{pdftrapped}%
8793   \Hy@DisableOption{pdfinfo}%
8794 }
8795 \def\PDF@SetupDoc{%
8796   \ifx\@baseurl\@empty
8797     \else
8798     \special{PDF: Base \@baseurl}%
8799   \fi
8800   \ifx\@pdfpagescrop\@empty\else
8801     \special{PDF: BBox \@pdfpagescrop}%
8802   \fi
8803   \def\Hy@temp{}%
8804   \ifx\@pdfstartpage\@empty

```

```

8805 \else
8806 \ifx\@pdfstartview\@empty
8807 \else
8808 \edef\Hy@temp{%
8809 ,Page=\@pdfstartpage
8810 ,View=\@pdfstartview
8811 }%
8812 \fi
8813 \fi
8814 \edef\Hy@temp{%
8815 \noexpand\pdfmark{%
8816 pdfmark=/DOCVIEW,%
8817 PageMode=/\@pdfpagemode
8818 \Hy@temp
8819 }%
8820 }%
8821 \Hy@temp
8822 \ifx\@pdfpagescrop\@empty
8823 \else
8824 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8825 \fi
8826 \edef\Hy@temp{%
8827 \ifHy@toolbar\else /HideToolbar true\fi
8828 \ifHy@menubar\else /HideMenubar true\fi
8829 \ifHy>windowui\else /HideWindowUI true\fi
8830 \ifHy@fitwindow /FitWindow true\fi
8831 \ifHy@centerwindow /CenterWindow true\fi
8832 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8833 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
8834 \Hy@UseNameKey{Direction}\@pdfdirection
8835 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8836 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8837 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8838 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8839 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8840 \Hy@UseNameKey{Duplex}\@pdfduplex
8841 \ifx\@pdfpicktraybypdfsize\@empty
8842 \else
8843 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8844 \fi
8845 \ifx\@pdfprintpagerange\@empty
8846 \else
8847 /PrintPageRange[\@pdfprintpagerange]%
8848 \fi
8849 \ifx\@pdfnumcopies\@empty
8850 \else
8851 /NumCopies \@pdfnumcopies
8852 \fi
8853 }%
8854 \pdfmark{pdfmark=/PUT,%
8855 Raw={%
8856 \string{Catalog\string}<<%
8857 \ifx\Hy@temp\@empty
8858 \else
8859 /ViewerPreferences<<\Hy@temp>>%
8860 \fi
8861 \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```

```

8862      \ifx\@pdflang\@empty
8863      \else
8864      /Lang(\@pdflang)%
8865      \fi
8866      >>%
8867      }%
8868      }%
8869      }
8870      \</dviwindo>
8871      \<*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8872 \providecommand*\XR@ext{-pdf}
8873 \Hy@setbreaklinks{true}
8874 \newsavebox{\pdfm@box}
8875 \def\@pdfm@mark#1{\special{pdf:#1}}
8876 \def\@pdfm@dest#1{%
8877   \Hy@SaveLastskip
8878   \Hy@VerboseAnchor{#1}%
8879   \begingroup
8880     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8881     \def\x{XYZ}%
8882     \ifx\x\@pdfview
8883       \def\x{XYZ @xpos @ypos null}%
8884     \else
8885       \def\x{FitH}%
8886       \ifx\x\@pdfview
8887         \def\x{FitH @ypos}%
8888       \else
8889         \def\x{FitBH}%
8890         \ifx\x\@pdfview
8891           \def\x{FitBH @ypos}%
8892         \else
8893           \def\x{FitV}%
8894           \ifx\x\@pdfview
8895             \def\x{FitV @xpos}%
8896           \else
8897             \def\x{FitBV}%
8898             \ifx\x\@pdfview
8899               \def\x{FitBV @xpos}%
8900             \else
8901               \def\x{Fit}%
8902               \ifx\x\@pdfview
8903                 \let\x\@pdfview
8904               \else
8905                 \def\x{FitB}%
8906                 \ifx\x\@pdfview
8907                   \let\x\@pdfview
8908                 \else
8909                   \def\x{FitR}%
8910                   \ifx\x\@pdfview
8911                     \Hy@Warning{'pdfview=FitR' is not supported}%
8912                     \def\x{XYZ @xpos @ypos null}%
8913                   \else
8914                     \@onelevel@sanitize\@pdfview

```



```

8915         \Hy@Warning{%
8916             Unknown value '\@pdfview' for pdfview%
8917         }%
8918         \def\x{XYZ @xpos @ypos null}%
8919     \fi
8920 \fi
8921 \fi
8922 \fi
8923 \fi
8924 \fi
8925 \fi
8926 \fi
8927 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8928 \endgroup
8929 \Hy@RestoreLastskip
8930 }
8931 \providecommand*\@pdfview{XYZ}
8932 \providecommand*\@pdfborder{0 0 1}
8933 \providecommand*\@pdfborderstyle{}
8934 \def\hyper@anchor#1{%
8935     \@pdfm@dest{#1}%
8936 }
8937 \def\hyper@anchorstart#1{%
8938     \Hy@activeanchortrue
8939     \@pdfm@dest{#1}%
8940 }
8941 \def\hyper@anchorend{%
8942     \Hy@activeanchorfalse
8943 }
8944 \newcounter{Hy@AnnotLevel}
8945 \ifHy@ocgcolorlinks
8946     \def\OBJ@OCG@view{@OCG@view}%
8947     \@pdfm@mark{%
8948         obj \OBJ@OCG@view <<%
8949         /Type/OCG%
8950         /Name(View)%
8951         /Usage<<%
8952         /Print<<%
8953         /PrintState/OFF%
8954         >>%
8955         /View<<%
8956         /ViewState/ON%
8957         >>%
8958         >>%
8959         >>%
8960     }%
8961     \@pdfm@mark{close \OBJ@OCG@view}%
8962     \def\OBJ@OCG@print{@OCG@print}%
8963     \@pdfm@mark{%
8964         obj \OBJ@OCG@print <<%
8965         /Type/OCG%
8966         /Name(Print)%
8967         /Usage<<%
8968         /Print<<%
8969         /PrintState/ON%
8970         >>%
8971         /View<<%

```

```

8972         /ViewState/OFF%
8973     >>%
8974 >>%
8975 >>%
8976 }%
8977 \@pdfm@mark{close \OBJ@OCG@print}%
8978 \def\OBJ@OCGs{\@OCGs}%
8979 \@pdfm@mark{%
8980     obj \OBJ@OCGs [%
8981         \OBJ@OCG@view\space\OBJ@OCG@print
8982     ]%
8983 }%
8984 \@pdfm@mark{close \OBJ@OCGs}%
8985 \@pdfm@mark{%
8986     put @catalog <<%
8987         /OCProperties<<%
8988         /OCGs \OBJ@OCGs
8989         /D<<%
8990         /OFF[\OBJ@OCG@print]%
8991         /AS[%
8992             <<%
8993             /Event/View%
8994             /OCGs \OBJ@OCGs
8995             /Category[/View]%
8996             >>%
8997             <<%
8998             /Event/Print%
8999             /OCGs \OBJ@OCGs
9000             /Category[/Print]%
9001             >>%
9002             <<%
9003             /Event/Export%
9004             /OCGs \OBJ@OCGs
9005             /Category[/Print]%
9006             >>%
9007             ]%
9008             >>%
9009             >>%
9010             >>%
9011         }%
9012     \AtBeginShipout{%
9013         \setbox\AtBeginShipoutBox=\hbox{%
9014             \copy\AtBeginShipoutBox
9015             \@pdfm@mark{%
9016                 put @resources <<%
9017                     /Properties<<%
9018                     /OCView \OBJ@OCG@view
9019                     /OCPrint \OBJ@OCG@print
9020                     >>%
9021                     >>%
9022                 }%
9023             }%
9024         }%
9025     \Hy@AtBeginDocument{%
9026         \def\Hy@colorlink#1{%
9027             \begingroup
9028             \ifHy@ocgcolorlinks

```

```

9029     \def\Hy@ocgcolor{#1}%
9030     \setbox0=\color@hbox
9031     \else
9032     \HyColor@UseColor#1%
9033     \fi
9034 }%
9035 \def\Hy@endcolorlink{%
9036 \ifHy@ocgcolorlinks
9037 \color@endbox
9038 \mbox{%
9039 \@pdfm@mark{content /OC/OCPrint BDC}%
9040 \rlap{\copy0}%
9041 \@pdfm@mark{content EMC/OC/OCView BDC}%
9042 \begingroup
9043 \expandafter\HyColor@UseColor\Hy@ocgcolor
9044 \box0 %
9045 \endgroup
9046 \@pdfm@mark{content EMC}%
9047 }%
9048 \fi
9049 \endgroup
9050 }%
9051 }%
9052 \else
9053 \Hy@DisableOption{ocgcolorlinks}%
9054 \fi

9055 \def\Hy@BeginAnnot#1{%
9056 \stepcounter{Hy@AnnotLevel}%
9057 \ifnum\value{Hy@AnnotLevel}=\@ne
9058 #1%
9059 \fi
9060 }
9061 \def\Hy@endAnnot{%
9062 \ifnum\value{Hy@AnnotLevel}=\@ne
9063 \Hy@endcolorlink
9064 \@pdfm@mark{eann}%
9065 \fi
9066 \addtocounter{Hy@AnnotLevel}\m@ne
9067 }

9068 \def\Hy@undefinedname{UNDEFINED}
9069 \def\hyper@linkstart#1#2{%
9070 \Hy@VerboseLinkStart{#1}{#2}%
9071 \Hy@BeginAnnot{%
9072 \protected@edef\Hy@testname{#2}%
9073 \ifx\Hy@testname\@empty
9074 \Hy@Warning{%
9075 Empty destination name,\MessageBreak
9076 using '\Hy@undefinedname'%
9077 }%
9078 \let\Hy@testname\Hy@undefinedname
9079 \else
9080 \Hy@pstringdef\Hy@testname{%
9081 \expandafter\HyperDestNameFilter\expandafter{%
9082 \Hy@testname
9083 }%
9084 }%
9085 \fi

```

```

9086 \pdfmark{mark}%
9087   bann<<%
9088     /Type/Annot%
9089     /Subtype/Link%
9090     \ifHy@pdfa /F 4\fi
9091     \Hy@setpdfborder
9092     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9093     \else
9094       /C[\csname @#1bordercolor\endcsname]%
9095     \fi
9096     /A<<%
9097     /S/GoTo%
9098     /D(\Hy@testname)%
9099     >>%
9100   >>%
9101 }%
9102 \expandafter\Hy@colorlink\csname @#1color\endcsname
9103 }%
9104 }
9105 \def\hyper@linkend{\Hy@endAnnot}%
9106 \def\hyper@link#1#2#3{%
9107   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9108 }
9109 \def\hyper@linkfile#1#2#3{%
9110   \leavevmode
9111   \Hy@BeginAnnot{%
9112     \Hy@pstringdef\Hy@pstringF{#2}%
9113     \Hy@pstringdef\Hy@pstringD{#3}%
9114     \pdfmark{mark}%
9115       bann<<%
9116         /Type/Annot%
9117         /Subtype/Link%
9118         \ifHy@pdfa /F 4\fi
9119         \Hy@setpdfborder
9120         \ifx\@filebordercolor\relax
9121         \else
9122           /C[\@filebordercolor]%
9123         \fi
9124         /A<<%
9125         /S/GoToR%
9126         /F(\Hy@pstringF)%
9127         /D\ifx\#3\[\[0 \pdfstartview\else(\Hy@pstringD)\fi
9128         \Hy@SetNewWindow
9129       >>%
9130     >>%
9131   }%
9132   \Hy@colorlink\@filecolor
9133 }%
9134 #1%
9135 \Hy@endAnnot
9136 }
9137 \def\hyper@linkurl#1#2{%
9138   \leavevmode
9139   \Hy@BeginAnnot{%
9140     \Hy@pstringdef\Hy@pstringURI{#2}%
9141     \pdfmark{mark}%
9142     bann<<%

```

```

9143      /Type/Annot%
9144      /Subtype/Link%
9145      \ifHy@pdfa /F 4\fi
9146      \Hy@setpdfborder
9147      \ifx\@urlbordercolor\relax
9148      \else
9149      /C[\@urlbordercolor]%
9150      \fi
9151      /A<<%
9152      /S/URI%
9153      /URI(\Hy@pstringURI)%
9154      >>%
9155      >>%
9156      }%
9157      \Hy@colorlink\@urlcolor
9158      }%
9159      #1%
9160      \Hy@endAnnot
9161      }
9162      \def\Acrobatmenu#1#2{%
9163      \Hy@Acrobatmenu{#1}{#2}{%
9164      \Hy@BeginAnnot{%
9165      \@pdfm@mark{%
9166      bann<<%
9167      /Type/Annot%
9168      /Subtype/Link%
9169      \ifHy@pdfa /F 4\fi
9170      /A<<%
9171      /S/Named%
9172      /N/#1%
9173      >>%
9174      \Hy@setpdfborder
9175      \ifx\@menubordercolor\relax
9176      \relax
9177      /C[\@menubordercolor]%
9178      \fi
9179      >>%
9180      }%
9181      \Hy@colorlink\@menucolor
9182      }%
9183      #2%
9184      \Hy@endAnnot
9185      }%
9186      }
9187      \ifx\@pdfproducer\relax
9188      \def\@pdfproducer{dvipdfm}%

```

Detect Xe_TTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9189      \begingroup\expandafter\expandafter\expandafter\endgroup
9190      \expandafter\ifx\csname XeTeXversion\endcsname\relax
9191      \else
9192      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9193      \fi
9194      \fi
9195      \def\PDF@FinishDoc{%
9196      \Hy@UseMaketitleInfos
9197      \HyInfo@GenerateAddons
9198      \@pdfm@mark{%

```

```

9199 docinfo<<%
9200   /Title(\@pdftitle)%
9201   /Subject(\@pdfsubject)%
9202   /Creator(\@pdfcreator)%
9203   \ifx\@pdfcreationdate\@empty
9204   \else
9205     /CreationDate(\@pdfcreationdate)%
9206   \fi
9207   \ifx\@pdfmoddate\@empty
9208   \else
9209     /ModDate(\@pdfmoddate)%
9210   \fi
9211   /Author(\@pdfauthor)%
9212   \ifx\@pdfproducer\relax
9213   \else
9214     /Producer(\@pdfproducer)%
9215   \fi
9216   /Keywords(\@pdfkeywords)%
9217   \ifx\@pdftrapped\@empty
9218   \else
9219     /Trapped/\@pdftrapped
9220   \fi
9221   \HyInfo@Addons
9222   >>%
9223 }%
9224 \Hy@DisableOption{pdfauthor}%
9225 \Hy@DisableOption{pdftitle}%
9226 \Hy@DisableOption{pdfsubject}%
9227 \Hy@DisableOption{pdfcreator}%
9228 \Hy@DisableOption{pdfcreationdate}%
9229 \Hy@DisableOption{pdfmoddate}%
9230 \Hy@DisableOption{pdfproducer}%
9231 \Hy@DisableOption{pdfkeywords}%
9232 \Hy@DisableOption{pdftrapped}%
9233 \Hy@DisableOption{pdfinfo}%
9234 }

9235 \def\PDF@SetupDoc{%
9236   \edef\Hy@temp{%
9237     \ifHy@toolbar\else /HideToolbar true\fi
9238     \ifHy@menubar\else /HideMenubar true\fi
9239     \ifHy>windowui\else /HideWindowUI true\fi
9240     \ifHy@fitwindow /FitWindow true\fi
9241     \ifHy@centerwindow /CenterWindow true\fi
9242     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9243     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9244     \Hy@UseNameKey{Direction}\@pdfdirection
9245     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9246     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9247     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9248     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9249     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9250     \Hy@UseNameKey{Duplex}\@pdfduplex
9251     \ifx\@pdfpicktraybypdfsize\@empty
9252     \else
9253       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9254     \fi
9255     \ifx\@pdfprintpagerange\@empty

```

```

9256 \else
9257   /PrintPageRange[\@pdfprintpagerange]%
9258 \fi
9259 \ifx\@pdfnumcopies\@empty
9260 \else
9261   /NumCopies \@pdfnumcopies
9262 \fi
9263 }%
9264 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9265 \@pdfm@mark{%
9266   docview<<%
9267   \ifx\@pdfstartpage\@empty
9268   \else
9269     \ifx\@pdfstartview\@empty
9270     \else
9271       /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9272     \fi
9273   \fi
9274   \ifx\@baseurl\@empty
9275   \else
9276     /URI<</Base(\Hy@pstringB)>>%
9277   \fi
9278   /PageMode/\@pdfpagemode
9279   \ifx\Hy@temp\@empty
9280   \else
9281     /ViewerPreferences<<\Hy@temp>>%
9282   \fi
9283   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9284   \ifx\@pdflang\@empty
9285   \else
9286     /Lang(\@pdflang)%
9287   \fi
9288   >>%
9289 }%
9290 \ifx\@pdfpagescrop\@empty
9291 \else
9292   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9293 \fi
9294 }
9295 </dvipdfm | xetex>

```

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

```

9296 <*dvipdfm>
9297 \AtBeginShipoutFirst{%
9298   \ifHy@setpagesize
9299   \begingroup
9300     \@ifundefined{stockwidth}{%
9301       \ifdim\paperwidth>\z@
9302       \ifdim\paperheight>\z@
9303         \special{papersize=\the\paperwidth,\the\paperheight}%
9304       \fi
9305     \fi
9306   }{%
9307     \ifdim\stockwidth>\z@
9308     \ifdim\stockheight>\z@
9309       \special{papersize=\the\stockwidth,\the\stockheight}%
9310     \fi

```

```

9311     \fi
9312   }%
9313 \endgroup
9314 \fi
9315 \Hy@DisableOption{setpagesize}%
9316 }
9317 </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.

```

9318 <*vtexhtml>
9319 \providecommand*{\XR@ext}{htm}
9320 \RequirePackage{vtexhtml}
9321 \newif\if@Localurl
9322 \def\PDF@FinishDoc{}
9323 \def\PDF@SetupDoc{%
9324   \ifx\@baseurl\@empty
9325   \else
9326     \special{!direct <base href="\@baseurl">}%
9327   \fi
9328 }
9329 \def\@urltype{url}
9330 \def\hyper@link#1#2#3{%
9331   \Hy@VerboseLinkStart{#1}{#2}%
9332   \leavevmode
9333   \special{!direct <a href=%
9334     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9335   #3%
9336   \special{!direct </a>}%
9337 }
9338 \def\hyper@linkurl#1#2{%
9339   \begingroup
9340     \hyper@chars
9341     \leavevmode
9342     \MathBSuppress=1\relax
9343     \special{!direct <a href=%
9344       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9345     #1%
9346     \MathBSuppress=0\relax
9347     \special{!direct </a>}%
9348   \endgroup
9349 }
9350 \def\hyper@linkfile#1#2#3{%
9351   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\##3\fi}%
9352 }
9353 \def\hyper@linkstart#1#2{%
9354   \Hy@VerboseLinkStart{#1}{#2}%
9355   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
9356     \@Localurltrue
9357     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9358   \else
9359     \@Localurlfalse
9360   \begingroup
9361     \hyper@chars
9362     \special{!aref \HyperDestNameFilter{#2}}%

```



```

9363 \endgroup
9364 \fi
9365 }
9366 \def\hyper@linkend{%
9367 \if@Localurl
9368 \special{!endaref}%
9369 \else
9370 \special{!direct </a>}%
9371 \fi
9372 }
9373 \def\hyper@anchorstart#1{%
9374 \Hy@SaveLastskip
9375 \Hy@VerboseAnchor{#1}%
9376 \begingroup
9377 \hyper@chars
9378 \special{!aname #1}%
9379 \special{!direct <a name=%
9380 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9381 \endgroup
9382 \Hy@Activeanchortrue
9383 }
9384 \def\hyper@anchorend{%
9385 \special{!direct </a>}%
9386 \Hy@Activeanchorfalse
9387 \Hy@RestoreLastskip
9388 }
9389 \def\hyper@anchor#1{%
9390 \Hy@SaveLastskip
9391 \Hy@VerboseAnchor{#1}%
9392 \begingroup
9393 \let\protect=\string
9394 \hyper@chars
9395 \leavevmode
9396 \special{!aname #1}%
9397 \special{!direct <a name=%
9398 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9399 \endgroup
9400 \Hy@Activeanchortrue
9401 \bgroup\anchor@spot\egroup
9402 \special{!direct </a>}%
9403 \Hy@Activeanchorfalse
9404 \Hy@RestoreLastskip
9405 }
9406 \def\@Form[#1]{%
9407 \typeout{Sorry, TeXpider does not yet support FORMs}%
9408 }
9409 \def\@endForm{}
9410 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9411 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9412 }
9413 \def\@TextField[#1]#2{% parameters, label
9414 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9415 }
9416 \def\@CheckBox[#1]#2{% parameters, label
9417 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9418 }
9419 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

9420 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9421 }
9422 \def\@PushButton[#1]#2{% parameters, label
9423 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9424 }
9425 \def\@Reset[#1]#2{%
9426 \typeout{Sorry, TeXpider does not yet support FORMs}%
9427 }
9428 \def\@Submit[#1]#2{%
9429 \typeout{Sorry, TeXpider does not yet support FORMs}%
9430 }
9431 \</vtexhtml>
9432 \*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.

```

9433 \ifx\mediaheight\@undefined
9434 \else
9435 \ifx\mediaheight\relax
9436 \else
9437 \ifHy@setpagesize
9438 \providecommand*\VTeXInitMediaSize{%
9439 \ltx@ifundefined{stockwidth}{%
9440 \ifdim\paperheight>0pt %
9441 \setlength\mediaheight\paperheight
9442 \fi
9443 \ifdim\paperheight>0pt %
9444 \setlength\mediawidth\paperwidth
9445 \fi
9446 }{%
9447 \ifdim\stockheight>0pt %
9448 \setlength\mediaheight\stockheight
9449 \fi
9450 \ifdim\stockwidth>0pt %
9451 \setlength\mediawidth\stockwidth
9452 \fi
9453 }%
9454 }%
9455 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9456 \fi
9457 \Hy@DisableOption{setpagesize}%
9458 \fi
9459 \fi

```

Older versions of VTeX require xyz in lower case.

```

9460 \providecommand*\@pdfview{xyz}
9461 \providecommand*\@pdfborder{0 0 1}
9462 \providecommand*\@pdfborderstyle{}
9463 \let\CurrentBorderColor\@linkbordercolor
9464 \def\hyper@anchor#1{%
9465 \Hy@SaveLastskip
9466 \Hy@VerboseAnchor{#1}%
9467 \begingroup
9468 \let\protect=\string
9469 \hyper@chars
9470 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9471 \endgroup

```

```

9472 \Hy@activeanchortrue
9473 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9474 \Hy@activeanchorfalse
9475 \Hy@RestoreLastskip
9476 }
9477 \def\hyper@anchorstart#1{%
9478 \Hy@SaveLastskip
9479 \Hy@VerboseAnchor{#1}%
9480 \begingroup
9481 \hyper@chars
9482 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9483 \endgroup
9484 \Hy@activeanchortrue
9485 }
9486 \def\hyper@anchorend{%
9487 \Hy@activeanchorfalse
9488 \Hy@RestoreLastskip
9489 }
9490 \def\@urltype{url}
9491 \def\Hy@undefinedname{UNDEFINED}
9492 \def\hyper@linkstart#1#2{%
9493 \Hy@VerboseLinkStart{#1}{#2}%
9494 \Hy@pstringdef\Hy@pstringURI{#2}%
9495 \expandafter\Hy@colorlink\csname @#1color\endcsname
9496 \ltx@ifundefined{@#1bordercolor}{%
9497 \let\CurrentBorderColor\relax
9498 }{%
9499 \edef\CurrentBorderColor{%
9500 \csname @#1bordercolor\endcsname
9501 }%
9502 }%
9503 \def\Hy@tempa{#1}%
9504 \ifx\Hy@tempa\@urltype
9505 \special{!%
9506 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9507 a=<%
9508 \ifHy@pdfa /F 4\fi
9509 \Hy@setpdfborder
9510 \ifx\CurrentBorderColor\relax
9511 \else
9512 /C [\CurrentBorderColor]%
9513 \fi
9514 >%
9515 }%
9516 \else
9517 \protected@edef\Hy@testname{#2}%
9518 \ifx\Hy@testname\@empty
9519 \Hy@Warning{%
9520 Empty destination name,\MessageBreak
9521 using '\Hy@undefinedname'%
9522 }%
9523 \let\Hy@testname\Hy@undefinedname
9524 \fi
9525 \special{!%
9526 aref \expandafter\HyperDestNameFilter
9527 \expandafter{\Hy@testname};%
9528 a=<%

```

```

9529 \ifHy@pdfa /F 4\fi
9530 \Hy@setpdfborder
9531 \ifx\CurrentBorderColor\relax
9532 \else
9533 /C [\CurrentBorderColor]%
9534 \fi
9535 >%
9536 }%
9537 \fi
9538 }
9539 \def\hyper@linkend{%
9540 \special{!endaref}%
9541 \Hy@endcolorlink
9542 }
9543 \def\hyper@linkfile#1#2#3{%
9544 \leavevmode
9545 \special{!%
9546 aref <%
9547 \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9548 f=#2>#3;%
9549 a=<%
9550 \ifHy@pdfa /F 4\fi
9551 \Hy@setpdfborder
9552 \ifx\@filebordercolor\relax
9553 \else
9554 /C [\@filebordercolor]%
9555 \fi
9556 >%
9557 }%
9558 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9559 \special{!endaref}%
9560 }
9561 \def\hyper@linkurl#1#2{%
9562 \begingroup
9563 \Hy@pstringdef\Hy@pstringURI{#2}%
9564 \hyper@chars
9565 \leavevmode
9566 \special{!%
9567 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9568 a=<%
9569 \ifHy@pdfa /F 4\fi
9570 \Hy@setpdfborder
9571 \ifx\@urlbordercolor\relax
9572 \else
9573 /C [\@urlbordercolor]%
9574 \fi
9575 >%
9576 }%
9577 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9578 \special{!endaref}%
9579 \endgroup
9580 }
9581 \def\hyper@link#1#2#3{%
9582 \Hy@VerboseLinkStart{#1}{#2}%
9583 \ltx@ifundefined{@#1bordercolor}{%
9584 \let\CurrentBorderColor\relax
9585 }{%

```

```

9586 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9587 }%
9588 \leavevmode
9589 \protected@edef\Hy@testname{#2}%
9590 \ifx\Hy@testname\@empty
9591 \Hy@Warning{%
9592 Empty destination name,\MessageBreak
9593 using '\Hy@undefinedname'%
9594 }%
9595 \let\Hy@testname\Hy@undefinedname
9596 \fi
9597 \special{!%
9598 aref \expandafter\HyperDestNameFilter
9599 \expandafter{\Hy@testname};%
9600 a=<%
9601 \ifHy@pdfa /F 4\fi
9602 \Hy@setpdfborder
9603 \ifx\CurrentBorderColor\relax
9604 \else
9605 /C [\CurrentBorderColor]%
9606 \fi
9607 >%
9608 }%
9609 \expandafter
9610 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9611 \special{!endaref}%
9612 }
9613 \def\hyper@image#1#2{%
9614 \hyper@linkurl{#2}{#1}%
9615 }
9616 \def\@hyper@launch run:#1\#2#3{%
9617 \Hy@pstringdef\Hy@pstringF{#1}%
9618 \Hy@pstringdef\Hy@pstringP{#3}%
9619 \leavevmode
9620 \special{!aref %
9621 <u=%
9622 /Type/Action%
9623 /S/Launch%
9624 /F(\Hy@pstringF)%
9625 \Hy@SetNewWindow
9626 \ifx\#3\%
9627 \else
9628 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9629 \fi%
9630 >%
9631 a=<%
9632 \ifHy@pdfa /F 4\fi
9633 \Hy@setpdfborder
9634 \ifx\@runbordercolor\relax
9635 \else
9636 /C[\@runbordercolor]%
9637 \fi
9638 >%
9639 }%
9640 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9641 \special{!endaref}%
9642 }

```

```

9643 \def\Acrobatmenu#1#2{%
9644   \Hy@Acrobatmenu{#1}{#2}{%
9645     \special{!%
9646       aref <u=/S /Named /N /#1>;%
9647       a=<%
9648         \ifHy@pdfa /F 4\fi
9649         \Hy@setpdfborder
9650         \ifx\@menubordercolor\relax
9651           \else
9652             /C[\@menubordercolor]%
9653           \fi
9654         >%
9655       }%
9656       \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9657       \special{!endaref}%
9658     }%
9659 }

```

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*.

```

9660 \ifnum\Hy@VTeXversion<702 %
9661 \else
9662   \def\hyper@pagetransition{%
9663     \ifx\@pdfpagetransition\relax
9664     \else
9665       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9666   \else
9667     \hvtex@parse@trans\@pdfpagetransition
9668   \fi
9669 \fi
9670 }%

```

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>}:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                      <Dissolve_effect> | <Glitter_effect> |
                      <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

9671 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9672 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%

```

```

9673 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}}%
9674 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}}%
9675 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}}%
9676 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}}%
9677 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%

```

Optional parameters:

```

9678 \def\hvtex@par@dimension{/Dm}%
9679 \def\hvtex@par@direction{/Di}%
9680 \def\hvtex@par@duration{/D}%
9681 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9682 \def\hvtex@gettoken{%
9683   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9684 }%

```

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

```

9685 \def\hvtex@gettoken@#1 #2\@nil{%
9686   \edef\hvtex@token{#1}%
9687   \edef\hvtex@buffer{#2}%
9688 }%
9689 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9690 \let\hvtex@trans@code\@empty
9691 \let\hvtex@param@dimension\@empty
9692 \let\hvtex@param@direction\@empty
9693 \let\hvtex@param@duration\@empty
9694 \let\hvtex@param@motion\@empty
9695 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9696 \hvtex@gettoken
9697 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9698   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9699   \else
9700     \hvtex@gettoken
9701     \fi
9702   \fi
9703   \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9704   \hvtex@trans@params
9705 }%

```

Reentrant macro to parse optional parameters.

```

9706 \def\hvtex@trans@params{%
9707   \ifx\hvtex@buffer\@empty
9708   \else
9709     \hvtex@gettoken
9710     \let\hvtex@trans@par\hvtex@token
9711     \ifx\hvtex@buffer\@empty
9712     \else
9713       \hvtex@gettoken
9714       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```
9715     \let\hvtex@param@duration\hvtex@token
9716     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9717     \expandafter\edef\expandafter\hvtex@param@motion
9718     \expandafter{\expandafter\@gobble\hvtex@token}%
9719     \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9720     \expandafter\edef\expandafter\hvtex@param@dimension
9721     \expandafter{\expandafter\@gobble\hvtex@token}%
9722     \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).

```
9723     \let\hvtex@param@direction\hvtex@token
9724     \fi\fi\fi
9725     \fi
9726     \fi
9727     \ifx\hvtex@buffer\@empty
9728     \let\next\hvtex@produce@trans
9729     \else
9730     \let\next\hvtex@trans@params
9731     \fi
9732     \next
9733 }%
```

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

```
9734 \def\hvtex@produce@trans{%
9735 \let\vtex@trans@special\@empty
9736 \if S\hvtex@trans@code
9737 \edef\vtex@trans@special{\hvtex@trans@code
9738 \hvtex@param@dimension\hvtex@param@motion}%
9739 \else\if B\hvtex@trans@code
9740 \edef\vtex@trans@special{%
9741 \hvtex@trans@code\hvtex@param@dimension
9742 }%
9743 \else\if X\hvtex@trans@code
9744 \edef\vtex@trans@special{%
9745 \hvtex@trans@code\hvtex@param@motion
9746 }%
9747 \else\if W\hvtex@trans@code
9748 \edef\vtex@trans@special{%
9749 \hvtex@trans@code\hvtex@param@direction
9750 }%
9751 \else\if D\hvtex@trans@code
9752 \let\vtex@trans@special\hvtex@trans@code
9753 \else\if R\hvtex@trans@code
9754 \let\vtex@trans@special\hvtex@trans@code
9755 \else\if G\hvtex@trans@code
9756 \edef\vtex@trans@special{%
9757 \hvtex@trans@code\hvtex@param@direction
9758 }%
9759 \fi\fi\fi\fi\fi
9760 \ifx\vtex@trans@special\@empty
9761 \else
9762 \ifx\hvtex@param@duration\@empty
```



```

9763     \else
9764     \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9765     \multiply\dimen@\@m
9766     \edef\vtex@trans@special{%
9767     \vtex@trans@special,\strip@pt\dimen@
9768     }%
9769     \fi

```

And all the mess is just for this.

```

9770     \special{!trans \vtex@trans@special}%
9771     \fi
9772 }%

9773 \def\hyper@pageduration{%
9774 \ifx\@pdfpageduration\relax
9775 \else
9776 \ifx\@pdfpageduration\@empty
9777 \special{!duration-}%
9778 \else
9779 \special{!duration \@pdfpageduration}%
9780 \fi
9781 \fi
9782 }%

9783 \def\hyper@pagehidden{%
9784 \ifHy@useHidKey
9785 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9786 \fi
9787 }%

9788 \g@addto@macro\Hy@EveryPageBoxHook{%
9789 \hyper@pagetransition
9790 \hyper@pageduration
9791 \hyper@pagehidden
9792 }%
9793 \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

```

9794 \ifx\@pdfproducer\relax
9795 \def\@pdfproducer{VTeX}%
9796 \ifnum\Hy@VTeXversion>\z@
9797 \count@\VTeXversion
9798 \divide\count@ 100 %
9799 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9800 \multiply\count@ -100 %
9801 \advance\count@\VTeXversion
9802 \edef\@pdfproducer{%
9803 \@pdfproducer
9804 .\ifnum\count@<10 0\fi\the\count@
9805 \ifx\VTeXOS\@undefined\else

```

```

9806 \ifnum\VTeXOS>0 %
9807 \ifnum\VTeXOS<6 %
9808 \space(
9809 \ifcase\VTeXOS
9810 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9811 \fi
9812 )%
9813 \fi
9814 \fi
9815 \fi
9816 ,\space
9817 \ifnum\OpMode=\@ne PDF\else PS\fi
9818 \space backend%
9819 \ifx\gexmode\@undefined\else
9820 \ifnum\gexmode>\z@\space with GeX\fi
9821 \fi
9822 }%
9823 \fi
9824 \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).

```

9825 \def\PDF@SetupDoc{%
9826 \ifx\@pdfpagescrop\@empty
9827 \else
9828 \special{!pdfinfo b=<\@pdfpagescrop>}%
9829 \fi
9830 \ifx\@pdfstartpage\@empty
9831 \else
9832 \ifx\@pdfstartview\@empty
9833 \else
9834 \special{!onopen Page\@pdfstartpage}%
9835 \fi
9836 \fi
9837 \special{!pdfinfo p=</\@pdfpagemode>}%
9838 \ifx\@baseurl\@empty
9839 \else
9840 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9841 \fi
9842 \special{!pdfinfo v=<<<%
9843 \ifHy@toolbar\else /HideToolbar true\fi
9844 \ifHy@menubar\else /HideMenubar true\fi
9845 \ifHy>windowui\else /HideWindowUI true\fi
9846 \ifHy@fitwindow /FitWindow true\fi
9847 \ifHy@centerwindow /CenterWindow true\fi

```

```

9848 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9849 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9850 \Hy@UseNameKey{Direction}\@pdfdirection
9851 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9852 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9853 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9854 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9855 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9856 \Hy@UseNameKey{Duplex}\@pdfduplex
9857 \ifx\@pdfpicktraybypdfsize\@empty
9858 \else
9859 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9860 \fi
9861 \ifx\@pdfprintpagerange\@empty
9862 \else
9863 /PrintPageRange[\@pdfprintpagerange]%
9864 \fi
9865 \ifx\@pdfnumcopies\@empty
9866 \else
9867 /NumCopies \@pdfnumcopies
9868 \fi
9869 >>>}%
9870 \ifx\@pdfpagelayout\@empty
9871 \else
9872 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9873 \fi
9874 }%
9875 \HyInfo@AddonUnsupportedtrue
9876 \def\PDF@FinishDoc{%
9877 \Hy@UseMaketitleInfos
9878 \HyInfo@TrappedUnsupported
9879 \special{!pdfinfo a=<\@pdfauthor>}%
9880 \special{!pdfinfo t=<\@pdftitle>}%
9881 \special{!pdfinfo s=<\@pdfsubject>}%
9882 \special{!pdfinfo c=<\@pdfcreator>}%
9883 \ifx\@pdfproducer\relax
9884 \else
9885 \special{!pdfinfo r=<\@pdfproducer>}%
9886 \fi
9887 \special{!pdfinfo k=<\@pdfkeywords>}%
9888 \Hy@DisableOption{pdfauthor}%
9889 \Hy@DisableOption{pdftitle}%
9890 \Hy@DisableOption{pdfsubject}%
9891 \Hy@DisableOption{pdfcreator}%
9892 \Hy@DisableOption{pdfcreationdate}%
9893 \Hy@DisableOption{pdfmoddate}%
9894 \Hy@DisableOption{pdfproducer}%
9895 \Hy@DisableOption{pdfkeywords}%
9896 \Hy@DisableOption{pdftrapped}%
9897 \Hy@DisableOption{pdfinfo}%
9898 }
9899 </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.

```
9900 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
9901 <package>\providecommand*{\Hy@DistillerDestFix}{%  
9902 <*pdfmark | dviwindo>  
9903 \def\Hy@DistillerDestFix{%  
9904   \begingroup  
9905     \let\x\literalps@out
```

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

```
9906   \ifnum \@ifundefined{OpMode}{0}{%  
9907     \@ifundefined{gexmode}{0}{%  
9908       \ifnum\gexmode>0 \OpMode\else 0\fi  
9909     }>1 %  
9910   \def\x##1{%  
9911     \immediate\special{!=##1}%  
9912   }%  
9913   \fi  
9914   \x{%  
9915     /product where{%  
9916       pop %  
9917       product(Distiller)search{%  
9918         pop pop pop %  
9919         version(.)search{%  
9920           exch pop exch pop%  
9921           (3011)eq{%  
9922             gsave %  
9923             newpath 0 0 moveto closepath clip%  
9924             /Courier findfont 10 scalefont setfont %  
9925             72 72 moveto(.)show %  
9926             grestore%  
9927           }if%  
9928         }{pop}ifelse%  
9929       }{pop}ifelse%  
9930     }if%  
9931   }%  
9932   \endgroup  
9933 }  
9934 </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

```

9935 (*pdfmark)
9936 \Hy@breaklinks@unsupported
9937 \def\hyper@anchor#1{%
9938   \Hy@SaveLastskip
9939   \Hy@VerboseAnchor{#1}%
9940   \begingroup
9941     \pdfmark[\anchor@spot]{%
9942       pdfmark=/DEST,%
9943       linktype=anchor,%
9944       View=/\@pdfview \@pdfviewparams,%
9945       DestAnchor={#1}%
9946     }%
9947   \endgroup
9948   \Hy@RestoreLastskip
9949 }
9950 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
9951 \def\hyper@anchorstart#1{%
9952   \Hy@SaveLastskip
9953   \Hy@VerboseAnchor{#1}%
9954   \literalps@out{H.S}%
9955   \Hy@AllowHyphens
9956   \xdef\hyper@currentanchor{#1}%
9957   \Hy@activeanchortrue
9958 }
9959 \def\hyper@anchorend{%
9960   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9961   \pdfmark{%
9962     pdfmark=/DEST,%
9963     linktype=anchor,%
9964     View=/\@pdfview \@pdfviewparams,%
9965     DestAnchor=\hyper@currentanchor,%
9966   }%
9967   \Hy@activeanchorfalse
9968   \Hy@RestoreLastskip
9969 }
9970 \def\hyper@linkstart#1#2{%
9971   \Hy@VerboseLinkStart{#1}{#2}%
9972   \ifHy@breaklinks
9973     \else
9974     \leavevmode\hbox\bgroup
9975     \fi
9976     \expandafter\Hy@colorlink\csname @#1color\endcsname
9977     \literalps@out{H.S}%
9978     \Hy@AllowHyphens
9979     \xdef\hyper@currentanchor{#2}%
9980     \gdef\hyper@currentlinktype{#1}%
9981 }
9982 \def\hyper@linkend{%
9983   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9984   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%

```

```

9985 \let\Hy@tempcolor\relax
9986 }{%
9987 \edef\Hy@tempcolor{%
9988 \csname @\hyper@currentlinktype bordercolor\endcsname
9989 }%
9990 }%
9991 \pdfmark{%
9992 pdfmark=/ANN,%
9993 linktype=link,%
9994 Subtype=/Link,%
9995 PDFAFlags=4,%
9996 Dest=\hyper@currentanchor,%
9997 AcroHighlight=\@pdfhighlight,%
9998 Border=\@pdfborder,%
9999 BorderStyle=\@pdfborderstyle,%
10000 Color=\Hy@tempcolor,%
10001 Raw=H.B%
10002 }%
10003 \Hy@endcolorlink
10004 \ifHy@breaklinks
10005 \else
10006 \egroup
10007 \fi
10008 }

```

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.

```

10009 \begingroup
10010 \catcode'P=12 %
10011 \catcode'T=12 %
10012 \lowercase{\endgroup
10013 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
10014 }
10015 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10016 \def\hyper@pagetransition{%
10017 \ifx\@pdfpagetransition\relax
10018 \else
10019 \ifx\@pdfpagetransition\@empty
10020 % 1. Does an old entry have to be deleted?
10021 % 2. If 1=yes, how to delete?
10022 \else
10023 \pdfmark{%
10024 pdfmark=/PUT,%
10025 Raw={%
10026 \string{ThisPage\string}%
10027 <</Trans << /S /\@pdfpagetransition\space >> >>%
10028 }%
10029 }%
10030 \fi
10031 \fi
10032 }

```

\hyper@pageduration

```

10033 \def\hyper@pageduration{%

```

```

10034 \ifx\@pdfpageduration\relax
10035 \else
10036 \ifx\@pdfpageduration\@empty
10037 % 1. Does an old entry have to be deleted?
10038 % 2. If 1=yes, how to delete?
10039 \else
10040 \pdfmark{%
10041 pdfmark=/PUT,%
10042 Raw={%
10043 \string{ThisPage\string}%
10044 <</Dur \@pdfpageduration>>%
10045 }%
10046 }%
10047 \fi
10048 \fi
10049 }

```

\hyper@pagehidden

```

10050 \def\hyper@pagehidden{%
10051 \ifHy@useHidKey
10052 \pdfmark{%
10053 pdfmark=/PUT,%
10054 Raw={%
10055 \string{ThisPage\string}%
10056 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10057 }%
10058 }%
10059 \fi
10060 }

10061 \g@addto@macro\Hy@EveryPageBoxHook{%
10062 \hyper@pagetransition
10063 \hyper@pageduration
10064 \hyper@pagehidden
10065 }

10066 \def\hyper@image#1#2{%
10067 \hyper@linkurl{#2}{#1}%
10068 }

10069 \def\Hy@undefinedname{UNDEFINED}
10070 \def\hyper@link#1#2#3{%
10071 \Hy@VerboseLinkStart{#1}{#2}%
10072 \ltx@ifundefined{@#1bordercolor}{%
10073 \let\Hy@tempcolor\relax
10074 }{%
10075 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10076 }%
10077 \begingroup
10078 \protected@edef\Hy@testname{#2}%
10079 \ifx\Hy@testname\@empty
10080 \Hy@Warning{%
10081 Empty destination name,\MessageBreak
10082 using '\Hy@undefinedname'%
10083 }%
10084 \let\Hy@testname\Hy@undefinedname
10085 \fi
10086 \pdfmark[{#3}]{%
10087 Color=\Hy@tempcolor,%

```

```

10088     linktype={#1},%
10089     AcroHighlight=\@pdfhighlight,%
10090     Border=\@pdfborder,%
10091     BorderStyle=\@pdfborderstyle,%
10092     pdfmark=/ANN,%
10093     Subtype=/Link,%
10094     PDFAFlags=4,%
10095     Dest=\Hy@testname
10096   }%
10097 \endgroup
10098 }
10099 \newtoks\pdf@docset
10100 \def\PDF@FinishDoc{%
10101   \Hy@UseMaketitleInfos
10102   \HyInfo@GenerateAddons
10103   \let\Hy@temp\@empty
10104   \ifx\@pdfcreationdate\@empty
10105   \else
10106     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10107   \fi
10108   \ifx\@pdfmoddate\@empty
10109   \else
10110     \expandafter\def\expandafter\Hy@temp\expandafter{%
10111       \Hy@temp
10112       ModDate=\@pdfmoddate,%
10113     }%
10114   \fi
10115   \ifx\@pdfproducer\relax
10116   \else
10117     \expandafter\def\expandafter\Hy@temp\expandafter{%
10118       \Hy@temp
10119       Producer=\@pdfproducer,%
10120     }%
10121   \fi
10122   \expandafter
10123   \pdfmark\expandafter{%
10124     \Hy@temp
10125     pdfmark=/DOCINFO,%
10126     Title=\@pdftitle,%
10127     Subject=\@pdfsubject,%
10128     Creator=\@pdfcreator,%
10129     Author=\@pdfauthor,%
10130     Keywords=\@pdfkeywords,%
10131     Trapped=\@pdftrapped
10132   }%
10133   \ifx\HyInfo@Addons\@empty
10134   \else
10135     \pdfmark{%
10136       pdfmark=/DOCINFO,%
10137       Raw={\HyInfo@Addons}%
10138     }%
10139   \fi
10140   \Hy@DisableOption{pdfauthor}%
10141   \Hy@DisableOption{pdftitle}%
10142   \Hy@DisableOption{pdfsubject}%
10143   \Hy@DisableOption{pdfcreator}%
10144   \Hy@DisableOption{pdfcreationdate}%

```



```

10145 \Hy@DisableOption{pdfmoddate}%
10146 \Hy@DisableOption{pdfproducer}%
10147 \Hy@DisableOption{pdfkeywords}%
10148 \Hy@DisableOption{pdftrapped}%
10149 \Hy@DisableOption{pdfinfo}%
10150 }
10151 \def\PDF@SetupDoc{%
10152 \def\Hy@temp{%
10153 \ifx\@pdfstartpage\@empty
10154 \else
10155 \ifx\@pdfstartview\@empty
10156 \else
10157 \edef\Hy@temp{%
10158 ,Page=\@pdfstartpage
10159 ,View=\@pdfstartview
10160 }%
10161 \fi
10162 \fi
10163 \edef\Hy@temp{%
10164 \noexpand\pdfmark{%
10165 pdfmark=/DOCVIEW,%
10166 PageMode=/\@pdfpagemode
10167 \Hy@temp
10168 }%
10169 }%
10170 \Hy@temp
10171 \ifx\@pdfpagescrop\@empty
10172 \else
10173 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10174 \fi
10175 \edef\Hy@temp{%
10176 \ifHy@toolbar\else /HideToolbar true\fi
10177 \ifHy@menubar\else /HideMenubar true\fi
10178 \ifHy>windowui\else /HideWindowUI true\fi
10179 \ifHy@fitwindow /FitWindow true\fi
10180 \ifHy@centerwindow /CenterWindow true\fi
10181 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10182 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10183 \Hy@UseNameKey{Direction}\@pdfdirection
10184 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10185 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10186 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10187 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10188 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10189 \Hy@UseNameKey{Duplex}\@pdfduplex
10190 \ifx\@pdfpicktraybypdfsize\@empty
10191 \else
10192 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10193 \fi
10194 \ifx\@pdfprintpagerange\@empty
10195 \else
10196 /PrintPageRange\@pdfprintpagerange}%
10197 \fi
10198 \ifx\@pdfnumcopies\@empty
10199 \else
10200 /NumCopies \@pdfnumcopies
10201 \fi

```

```

10202 }%
10203 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10204 \pdfmark{%
10205   pdfmark=/PUT,%
10206   Raw={%
10207     \string{Catalog\string}<<%
10208     \ifx\Hy@temp\@empty
10209       \else
10210         /ViewerPreferences<<\Hy@temp>>%
10211       \fi
10212       \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10213       \ifx\@pdflang\@empty
10214         \else
10215           /Lang(\@pdflang)%
10216         \fi
10217       \ifx\@baseurl\@empty
10218         \else
10219           /URI<</Base(\Hy@pstringB)>>%
10220         \fi
10221     >>%
10222   }%
10223 }%
10224 }
10225 </pdfmark>
10226 <*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.

```

10227 \newif\ifHy@pdfmarkerror
10228 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10229 \def\pdfmark@[#1]#2{%
10230   \Hy@pdfmarkerrorfalse
10231   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10232   \@processme
10233   \let\pdf@type\relax
10234   \setkeys{PDF}{#2}%
10235   \ifHy@pdfmarkerror
10236     \else
10237     \ifx\pdf@type\relax
10238       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10239       \ifx\#1\%
10240         \else
10241           \pdf@rect{#1}%
10242         \fi
10243       \else
10244         \ifx\#1\%
10245           \literalps@out{%
10246             [\the\pdf@toks\space\pdf@type\space pdfmark%
10247             ]%
10248           \else
10249             \ltx@ifundefined{@\pdf@linktype color}{%
10250               \Hy@colorlink\@linkcolor
10251             }{%
10252               \expandafter\Hy@colorlink

```

```

10253             \csname @\pdf@linktype color\endcsname
10254         }%
10255         \pdf@rect{#1}%
10256         \literalps@out{%
10257             [\the\pdf@toks\space\pdf@type\space pdfmark%
10258         }%
10259         \Hy@endcolorlink
10260     \fi
10261 \fi
10262 \fi
10263 }

```

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}

```

```

10264 \newsavebox{\pdf@box}
10265 \providecommand*\Hy@setouterhbox{\sbox}
10266 \providecommand*\Hy@breaklinksunhbox{\unhbox}
10267 \def\Hy@DEST{/DEST}
10268 \def\pdf@rect#1{%
10269     \leavevmode
10270     \ifHy@breaklinks
10271         \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10272     \else
10273         \sbox\pdf@box{#1}%
10274     \fi
10275     \dimen@ \ht\pdf@box
10276     \ifdim\dp\pdf@box=\z@
10277         \literalps@out{H.S}%
10278     \else
10279         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10280     \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...).

```

10281 \ifHy@breaklinks
10282     \expandafter\Hy@breaklinksunhbox
10283 \else
10284     \expandafter\box
10285 \fi
10286 \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

```

```

10287 \ifdim\dimen@=\z@
10288     \literalps@out{H.R}%
10289 \else

```

```

10290 \raise\dimen@\hbox{\literalps@out{H.R}}}%
10291 \fi
10292 \ifx\pdf@type\Hy@DEST
10293 \else
10294 \pdf@addtoksx{H.B}%
10295 \fi
10296 }

```

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.

```

10297 \newtoks\pdf@toks
10298 \newtoks\pdf@defaulttoks
10299 \pdf@defaulttoks={}%
10300 \def\pdf@addtoks#1#2{%
10301 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10302 \@processme
10303 }
10304 \def\pdf@addtoksx#1{%
10305 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10306 \@processme
10307 }
10308 \def\PDFdefaults#1{%
10309 \pdf@defaulttoks={#1}%
10310 }

```

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

```

10311 % what is the type of pdfmark?
10312 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10313 % what is the link type?
10314 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10315 \def\pdf@linktype{link}
10316 % parameter is a stream of PDF
10317 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10318 % parameter is a name
10319 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10320 % parameter is a array
10321 \define@key{PDF}{Border}{%
10322 \edef\Hy@temp{#1}%
10323 \ifx\Hy@temp\@empty
10324 \else
10325 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10326 \fi
10327 }
10328 \let\Hy@BorderArrayPatch\@empty
10329 % parameter is a dictionary
10330 \define@key{PDF}{BorderStyle}{%
10331 \edef\Hy@temp{#1}%
10332 \ifx\Hy@temp\@empty
10333 \else
10334 \pdf@addtoks{<<#1>>}{BS}%
10335 \fi
10336 }
10337 % parameter is a array
10338 \define@key{PDF}{Color}{%
10339 \ifx\relax#1\relax
10340 \else
10341 \pdf@addtoks{[#1]}{Color}% hash-ok
10342 \fi

```

```

10343 }
10344 % parameter is a string
10345 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10346 % parameter is a integer
10347 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10348 % parameter is a array
10349 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10350 % parameter is a string
10351 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10352 % parameter is a string or file
10353 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10354 % parameter is a destination
10355 \define@key{PDF}{Dest}{%
10356   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10357   \ifx\Hy@pstringDest\@empty
10358     \Hy@pdfmarkerrortrue
10359     \Hy@Warning{Destination with empty name ignored}%
10360   \else
10361     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10362   \fi
10363 }
10364 \define@key{PDF}{DestAnchor}{%
10365   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10366   \ifx\Hy@pstringDest\@empty
10367     \Hy@pdfmarkerrortrue
10368     \Hy@Warning{Destination with empty name ignored}%
10369   \else
10370     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10371   \fi
10372 }
10373 % parameter is a string
10374 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10375 % parameter is a string
10376 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10377 % parameter is a int
10378 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10379 \define@key{PDF}{PDFAFlags}{%
10380   \ifHy@pdfa
10381     \pdf@addtoks{#1}{F}%
10382   \fi
10383 }
10384 % parameter is a name
10385 \define@key{PDF}{AcroHighlight}{%
10386   \begingroup
10387     \edef\x{#1}%
10388     \expandafter\endgroup\ifx\x\@empty
10389     \else
10390       \pdf@addtoks{#1}{H}%
10391     \fi
10392 }
10393 % parameter is a string
10394 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10395 % parameter is a string
10396 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10397 % parameter is a string
10398 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10399 % parameter is a string

```

```

10400 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10401 % parameter is a Boolean
10402 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10403 % parameter is a integer or name
10404 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10405 % parameter is a name
10406 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10407 % parameter is a string
10408 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10409 % parameter is a array
10410 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10411 % parameter is a integer
10412 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10413 % parameter is a name
10414 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10415 % parameter is a string
10416 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10417 % parameter is a string
10418 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10419 % parameter is a string
10420 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10421 % parameter is an array
10422 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10423 % parameter is a string
10424 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10425 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10426 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10427 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10428 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10429 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10430 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10431 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10432 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10433 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10434 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10435 \define@key{PDF}{Trapped}{%
10436   \edef\Hy@temp{#1}%
10437   \ifx\Hy@temp\@empty
10438     \else
10439       \pdf@addtoks{/#1}{Trapped}%
10440     \fi
10441 }
10442
10443 </pdfmarkbase>
10444 <*pdfmark>
10445 \def\Acrobatmenu#1#2{%
10446   \Hy@Acrobatmenu{#1}{#2}{%
10447     \pdfmark[{#2}]{%
10448       linktype=menu,%
10449       pdfmark=/ANN,%
10450       AcroHighlight=\pdfhighlight,%
10451       Border=\pdfborder,%
10452       BorderStyle=\pdfborderstyle,%
10453       Action={<< /Subtype /Named /N /#1 >>},%
10454       Subtype=/Link,%
10455       PDFANFlags=4%

```

```

10456 }%
10457 }%
10458 }

```

And now for some useful examples:

```

10459 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10460 \def\PDFNextPage@[#1]#2{%
10461   \pdfmark[{#2}]{%
10462     #1,%
10463     Border=\@pdfborder,%
10464     BorderStyle=\@pdfborderstyle,%
10465     Color=.2 .1 .5,%
10466     pdfmark=/ANN,%
10467     Subtype=/Link,%
10468     PDFAFlags=4,%
10469     Page=/Next%
10470   }%
10471 }
10472 \def\PDFPreviousPage{%
10473   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10474 }
10475 \def\PDFPreviousPage@[#1]#2{%
10476   \pdfmark[{#2}]{%
10477     #1,%
10478     Border=\@pdfborder,%
10479     BorderStyle=\@pdfborderstyle,%
10480     Color=.4 .4 .1,%
10481     pdfmark=/ANN,%
10482     Subtype=/Link,%
10483     PDFAFlags=4,%
10484     Page=/Prev%
10485   }%
10486 }
10487 \def\PDFOpen#1{%
10488   \pdfmark{#1,pdfmark=/DOCVIEW}%
10489 }

```

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

```

10490 \def\hyper@linkurl#1#2{%
10491   \begingroup
10492     \Hy@pstringdef\Hy@pstringURI{#2}%
10493     \hyper@chars
10494     \leavevmode
10495     \pdfmark[{#1}]{%
10496       pdfmark=/ANN,%
10497       linktype=url,%
10498       AcroHighlight=\@pdfhighlight,%
10499       Border=\@pdfborder,%
10500       BorderStyle=\@pdfborderstyle,%
10501       Color=\@urlbordercolor,%
10502       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10503       Subtype=/Link,%
10504       PDFAFlags=4%
10505     }%
10506   \endgroup
10507 }
10508 \def\hyper@linkfile#1#2#3{%
10509   \begingroup

```

```

10510 \Hy@pstringdef\Hy@pstringF{#2}%
10511 \Hy@pstringdef\Hy@pstringD{#3}%
10512 \leavevmode
10513 \pdfmark[{#1}]{%
10514   pdfmark=/ANN,%
10515   Subtype=/Link,%
10516   PDFAFlags=4,%
10517   AcroHighlight=\@pdfhighlight,%
10518   Border=\@pdfborder,%
10519   BorderStyle=\@pdfborderstyle,%
10520   linktype=file,%
10521   Color=\@filebordercolor,%
10522   Action={%
10523     <<%
10524     /S/GoToR%
10525     \Hy@SetNewWindow
10526     /F(\Hy@pstringF)%
10527     /D\ifx\#3\@0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
10528     >>%
10529   }%
10530 }%
10531 \endgroup
10532 }
10533 \def\@hyper@launch run:#1\#2#3{%
10534   \begingroup
10535   \Hy@pstringdef\Hy@pstringF{#1}%
10536   \Hy@pstringdef\Hy@pstringP{#3}%
10537   \leavevmode
10538   \pdfmark[{#2}]{%
10539     pdfmark=/ANN,%
10540     Subtype=/Link,%
10541     PDFAFlags=4,%
10542     AcroHighlight=\@pdfhighlight,%
10543     Border=\@pdfborder,%
10544     BorderStyle=\@pdfborderstyle,%
10545     linktype=run,%
10546     Color=\@runbordercolor,%
10547     Action={%
10548       <<%
10549       /S/Launch%
10550       \Hy@SetNewWindow
10551       /F(\Hy@pstringF)%
10552       \ifx\#3\@%
10553       \else
10554         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10555       \fi
10556       >>%
10557     }%
10558   }%
10559   \endgroup
10560 }
10561 \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.

```
10562 <*dvips>
10563 \providecommand*{\XR@ext}{pdf}
10564 \def\Hy@raisedlink{}
10565 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10566 \def\headerps@out#1{\special{! #1}}%
10567 \input{pdfmark.def}%
10568 \ifx\@pdfproducer\relax
10569 \def\@pdfproducer{dvips + Distiller}%
10570 \fi
10571 \providecommand*\@pdfborder{0 0 1}
10572 \providecommand*\@pdfborderstyle{}
10573 \providecommand*\@pdfview{XYZ}
10574 \providecommand*\@pdfviewparams{ H.V}
10575 \def\Hy@BorderArrayPatch{BorderArrayPatch}

10576 \g@addto@macro\Hy@FirstPageHook{%
10577 \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.

```
10578 /DvipsToPDF{72.27 mul Resolution div} def%
10579 /PDFToDvips{72.27 div Resolution mul} def%
10580 /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.

```
10581 /BorderArrayPatch{%
10582 [exch{%
10583 dup dup type/integertype eq exch type/realtype eq or%
10584 {BPToDvips}if%
10585 }forall]%
10586 }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.

```
10587 /HyperBorder {1 PDFToDvips} def%
10588 /H.V {pdf@hoff pdf@voff null} def%
10589 /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

```
10590 /H.S {%
```

```

10591     currentpoint %
10592     HyperBorder add /pdf@lly exch def %
10593     dup DvipsToPDF 72 add /pdf@hoff exch def %
10594     HyperBorder sub /pdf@llx exch def%
10595 } 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

```

10596   /H.L {%
10597     2 sub dup%
10598     /HyperBasePt exch def %
10599     PDFToDvips /HyperBaseDvips exch def %
10600     currentpoint %
10601     HyperBaseDvips sub /pdf@ury exch def%
10602     /pdf@urx exch def%
10603   } def%
10604   /H.A {%
10605     H.L %
10606     % | /pdf@voff| = the distance from the top of the page to a point
10607     % | \baselineskip| above the current point in PDF coordinates
10608     currentpoint exch pop %
10609     vsize 72 sub exch DvipsToPDF %
10610     HyperBasePt sub % baseline skip
10611     sub /pdf@voff exch def%
10612   } def%
10613   /H.R {%
10614     currentpoint %
10615     HyperBorder sub /pdf@ury exch def %
10616     HyperBorder add /pdf@urx exch def %
10617     % | /pdf@voff| = the distance from the top of the page to the current point, in
10618     % PDF coordinates
10619     currentpoint exch pop vsize 72 sub %
10620     exch DvipsToPDF sub /pdf@voff exch def%
10621   } def%
10622 } %
10623 }
10624 \AtBeginShipoutFirst{%
10625   \ifHy@setpagesize
10626     \begingroup
10627     \@ifundefined{stockwidth}{%
10628       \ifdim\paperwidth>\z@
10629         \ifdim\paperheight>\z@
10630           \special{papersize=\the\paperwidth,\the\paperheight}%
10631         \fi
10632       \fi
10633     }{%
10634       \ifdim\stockwidth>\z@
10635         \ifdim\stockheight>\z@
10636           \special{papersize=\the\stockwidth,\the\stockheight}%
10637         \fi
10638       \fi
10639     }%

```

```

10640 \endgroup
10641 \fi
10642 \Hy@DisableOption{setpagesize}%
10643 }
10644 </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.

```

10645 <*vtexpdfmark>
10646 \providecommand*\XR@ext{-pdf}
10647 \def\Hy@raisedlink{}
10648 \def\literalps@out#1{\special{pS:#1}}%
10649 \def\headerps@out#1{\immediate\special{pS:#1}}%
10650 \input{pdfmark.def}%
10651 \ifx\@pdfproducer\relax
10652 \ifnum\OpMode=\@ne
10653 \def\@pdfproducer{VTeX}%
10654 \else
10655 \def\@pdfproducer{VTeX + Distiller}%
10656 \fi
10657 \fi
10658 \providecommand*\@pdfborder{0 0 1}
10659 \providecommand*\@pdfborderstyle{}
10660 \providecommand*\@pdfview{XYZ}
10661 \providecommand*\@pdfviewparams{ H.V}

10662 \g@addto@macro\Hy@FirstPageHook{%
10663 \headerps@out{%
10664 /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.

```

10665 /HyperBorder {1} def%
10666 /H.V {pdf@hoff pdf@voff null} def%
10667 /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10668 /H.S {%
10669 currentpoint %
10670 HyperBorder sub%
10671 /pdf@lly exch def %
10672 dup 72 add /pdf@hoff exch def %
10673 HyperBorder sub%
10674 /pdf@llx exch def%
10675 } def%

```

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

```

10676 /H.L {%
10677 2 sub%
10678 /HyperBasePt exch def %
10679 currentpoint %

```

```

10680    HyperBasePt add HyperBorder add%
10681    /pdf@ury exch def %
10682    HyperBorder add%
10683    /pdf@urx exch def%
10684    } def%
10685    /H.A {%
10686    H.L %
10687    currentpoint exch pop %
10688    vsize 72 sub exch %
10689    HyperBasePt add add%
10690    /pdf@voff exch def%
10691    } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
10692    /H.R {%
10693    currentpoint %
10694    HyperBorder add%
10695    /pdf@ury exch def %
10696    HyperBorder add%
10697    /pdf@urx exch def %
10698    currentpoint exch pop vsize 72 sub add%
10699    /pdf@voff exch def%
10700    } def%
10701    }%
10702    }
10703    </vtxpdfmark>

```

46.11 Textures

```

10704    <*textures>
10705    \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.

```

10706    \begingroup
10707    \obeylines %
10708    \gdef\Hy@ps@CR{\noexpand
10709    }%
10710    \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`.

```

10711    \def\literalps@out#1{%

```

```

10712 \special{postscript 0 0 transform}%
10713 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10714 }%
10715 %

```

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.

```

10716 \def\headerps@out#1{%
10717   \special{%
10718     prepostscript TeXdict begin\Hy@ps@CR
10719       #1\Hy@ps@CR
10720     end%
10721   }%
10722 }%
10723 %

```

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.

```

10724 \g@addto@macro\Hy@FirstPageHook{%
10725   \headerps@out{%
10726     /betterpdfmark {%
10727       systemdict begin %
10728         dup /BP eq%
10729         {cleartomark gsave nulldevice []%
10730         {dup /EP eq%
10731           {cleartomark cleartomark grestore}%
10732           {cleartomark}%
10733           ifelse%
10734         }ifelse %
10735       end%
10736     }def\Hy@ps@CR
10737     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10738   }% end of \headerps@out
10739 }% end of \AtBeginShipoutFirst
10740 %
10741 \input{pdfmark.def}%
10742 %
10743 \ifx\@pdfproducer\relax
10744   \def\@pdfproducer{Textures + Distiller}%
10745 \fi
10746 \providecommand*\@pdfborder{0 0 1}
10747 \providecommand*\@pdfborderstyle{}
10748 \providecommand*\@pdfview{XYZ}
10749 \providecommand*\@pdfviewparams{ H.V}
10750 %

```

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.

```

10751 \Hy@AtBeginDocument{%
10752   \headerps@out{%

```

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

```

10753   /vsize {\Hy@pageheight} def%

```

```

10754 /DvipsToPDF {} def%
10755 /PDFToDvips {} def%
10756 /BPToDvips {} def%
10757 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10758 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10759 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10760 /H.S {%
10761   currentpoint %
10762   HyperBorder add /pdf@lly exch def %
10763   dup DvipsToPDF 72 add /pdf@hoff exch def %
10764   HyperBorder sub /pdf@llx exch def%
10765 } def\Hy@ps@CR
10766 /H.L {%
10767   2 sub %
10768   PDFToDvips /HyperBase exch def %
10769   currentpoint %
10770   HyperBase sub /pdf@ury exch def%
10771   /pdf@urx exch def%
10772 } def\Hy@ps@CR
10773 /H.A {%
10774   H.L %
10775   currentpoint exch pop %
10776   vsize 72 sub exch DvipsToPDF %
10777   HyperBase sub % baseline skip
10778   sub /pdf@voff exch def%
10779 } def\Hy@ps@CR
10780 /H.R {%
10781   currentpoint %
10782   HyperBorder sub /pdf@ury exch def %
10783   HyperBorder add /pdf@urx exch def %
10784   currentpoint exch pop vsize 72 sub %
10785   exch DvipsToPDF sub /pdf@voff exch def%
10786 } def\Hy@ps@CR
10787 }%
10788 }

10789 \Hy@AtBeginDocument{%
10790   \ifHy@colorlinks
10791     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10792   \fi
10793 }

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.

10794 \expandafter\let\expandafter\keepPDF@SetupDoc
10795   \csname PDF@SetupDoc\endcsname
10796 \def\PDF@SetupDoc{%
10797   \ifx\@baseurl\@empty
10798   \else
10799     \special{html:<base href="\@baseurl">}%
10800   \fi
10801   \keepPDF@SetupDoc
10802 }
10803 \def\hyper@anchor#1{%
10804   \Hy@SaveLastskip
10805   \Hy@VerboseAnchor{#1}%
10806   \begingroup
10807     \let\protect=\string

```

```

10808 \special{html:<a name=%
10809 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10810 \endgroup
10811 \Hy@activeanchortrue
10812 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10813 \special{html:</a>}%
10814 \Hy@activeanchorfalse
10815 \Hy@RestoreLastskip
10816 }
10817 \def\hyper@anchorstart#1{%
10818 \Hy@SaveLastskip
10819 \Hy@VerboseAnchor{#1}%
10820 \begingroup
10821 \hyper@chars
10822 \special{html:<a name=%
10823 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10824 \endgroup
10825 \Hy@activeanchortrue
10826 }
10827 \def\hyper@anchorend{%
10828 \special{html:</a>}%
10829 \Hy@activeanchorfalse
10830 \Hy@RestoreLastskip
10831 }
10832 \def\@urlltype{url}
10833 \def\hyper@linkstart#1#2{%
10834 \Hy@VerboseLinkStart{#1}{#2}%
10835 \expandafter\Hy@colorlink\csname @#1color\endcsname
10836 \def\Hy@tempa{#1}%
10837 \ifx\Hy@tempa\@urlltype
10838 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10839 \else
10840 \begingroup
10841 \hyper@chars
10842 \special{%
10843 html:<a href=%
10844 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
10845 }%
10846 \endgroup
10847 \fi
10848 }
10849 \def\hyper@linkend{%
10850 \special{html:</a>}%
10851 \Hy@endcolorlink
10852 }
10853 \def\hyper@linkfile#1#2#3{%
10854 \hyper@linkurl{#1}{%
10855 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10856 }%
10857 }
10858 \def\hyper@linkurl#1#2{%
10859 \leavevmode
10860 \ifHy@raiselinks
10861 \setbox\@tempboxa=\color@hbox #1\color@endbox
10862 \@linkdim\dp\@tempboxa
10863 \lower\@linkdim\hbox{%
10864 \hyper@chars

```

```

10865 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10866 }%
10867 \Hy@colorlink\@urlcolor#1%
10868 \@linkdim\ht\@tempboxa
10869 \advance\@linkdim by -6.5\p@
10870 \raise\@linkdim\hbox{\special{html:</a>}}%
10871 \Hy@endcolorlink
10872 \else
10873 \begingroup
10874 \hyper@chars
10875 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10876 \Hy@colorlink\@urlcolor#1%
10877 \special{html:</a>}%
10878 \Hy@endcolorlink
10879 \endgroup
10880 \fi
10881 }

```

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

```

10882 \def\hyper@link#1#2#3{%
10883 \Hy@VerboseLinkStart{#1}{#2}%
10884 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10885 }
10886 \def\hyper@image#1#2{%
10887 \begingroup
10888 \hyper@chars
10889 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10890 \endgroup
10891 }
10892 </textures>

```

46.12 dvipsone

```

10893 % \subsection{dvipsone driver}
10894 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10895 % |\special| commands.
10896 (*dvipsone)
10897 \providecommand*\XR@ext}{pdf}
10898 \def\Hy@raisedlink{}
10899 \providecommand*\@pdfborder{0 0 1}
10900 \providecommand*\@pdfborderstyle{}
10901 \def\literalps@out#1{\special{ps:#1}}%
10902 \def\headerps@out#1{\special{headertext=#1}}%
10903 \input{pdfmark.def}%
10904 \ifx\@pdfproducer\relax
10905 \def\@pdfproducer{dvipsone + Distiller}%
10906 \fi
10907 \HyInfo@AddonUnsupportedtrue
10908 \def\PDF@FinishDoc{%
10909 \Hy@UseMaketitleInfos
10910 \HyInfo@TrappedUnsupported
10911 \special{PDF: Keywords \@pdfkeywords}%
10912 \special{PDF: Title \@pdftitle}%
10913 \special{PDF: Creator \@pdfcreator}%
10914 \ifx\@pdfcreationdate\empty
10915 \else
10916 \special{PDF: CreationDate \@pdfcreationdate}%
10917 \fi

```



```

10918 \ifx\@pdfmoddate\@empty
10919 \else
10920 \special{PDF: ModDate \@pdfmoddate}%
10921 \fi
10922 \special{PDF: Author \@pdfauthor}%
10923 \ifx\@pdfproducer\relax
10924 \else
10925 \special{PDF: Producer \@pdfproducer}%
10926 \fi
10927 \special{PDF: Subject \@pdfsubject}%
10928 \Hy@DisableOption{pdfauthor}%
10929 \Hy@DisableOption{pdftitle}%
10930 \Hy@DisableOption{pdfsubject}%
10931 \Hy@DisableOption{pdfcreator}%
10932 \Hy@DisableOption{pdfcreationdate}%
10933 \Hy@DisableOption{pdfmoddate}%
10934 \Hy@DisableOption{pdfproducer}%
10935 \Hy@DisableOption{pdfkeywords}%
10936 \Hy@DisableOption{pdftrapped}%
10937 \Hy@DisableOption{pdfinfo}%
10938 }
10939 \def\PDF@SetupDoc{%
10940 \def\Hy@temp{}%
10941 \ifx\@pdfstartpage\@empty
10942 \else
10943 \ifx\@pdfstartview\@empty
10944 \else
10945 \edef\Hy@temp{%
10946 ,Page=\@pdfstartpage
10947 ,View=\@pdfstartview
10948 }%
10949 \fi
10950 \fi
10951 \edef\Hy@temp{%
10952 \noexpand\pdfmark{%
10953 pdfmark=/DOCVIEW,%
10954 PageMode=/\@pdfpagemode
10955 \Hy@temp
10956 }%
10957 }%
10958 \Hy@temp
10959 \ifx\@pdfpagescrop\@empty
10960 \else
10961 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10962 \fi
10963 \edef\Hy@temp{%
10964 \ifHy@toolbar\else /HideToolbar true\fi
10965 \ifHy@menubar\else /HideMenubar true\fi
10966 \ifHy>windowui\else /HideWindowUI true\fi
10967 \ifHy@fitwindow /FitWindow true\fi
10968 \ifHy@centerwindow /CenterWindow true\fi
10969 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10970 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10971 \Hy@UseNameKey{Direction}\@pdfdirection
10972 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10973 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10974 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

10975 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10976 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10977 \Hy@UseNameKey{Duplex}\@pdfduplex
10978 \ifx\@pdfpicktraybypdfsize\@empty
10979 \else
10980 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10981 \fi
10982 \ifx\@pdfprintpagerange\@empty
10983 \else
10984 /PrintPageRange[\@pdfprintpagerange]%
10985 \fi
10986 \ifx\@pdfnumcopies\@empty
10987 \else
10988 /NumCopies \@pdfnumcopies
10989 \fi
10990 }%
10991 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10992 \pdfmark{%
10993 pdfmark=/PUT,%
10994 Raw={%
10995 \string{Catalog\string}<<%
10996 \ifx\Hy@temp\@empty
10997 \else
10998 /ViewerPreferences<<\Hy@temp>>%
10999 \fi
11000 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11001 \ifx\@pdflang\@empty
11002 \else
11003 /Lang(\@pdflang)%
11004 \fi
11005 \ifx\@baseurl\@empty
11006 \else
11007 /URI<</Base(\Hy@pstringB)>>%
11008 \fi
11009 >>%
11010 }%
11011 }%
11012 }
11013 \providecommand*\@pdfview{XYZ}
11014 \providecommand*\@pdfviewparams{ %
11015 gsave revscl currentpoint grestore %
11016 72 add exch pop null exch null%
11017 }
11018 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

11019 \g@addto@macro\Hy@FirstPageHook{%
11020 \headerps@out{%

```

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

```

11021 /DvipsToPDF { 65781 div } def%
11022 /PDFToDvips { 65781 mul } def%
11023 /BPToDvips{65781 mul}def%
11024 /HyperBorder { 1 PDFToDvips } def%

```

```
11025 /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.

```
11026 /BorderArrayPatch{%
11027   [exch{%
11028     dup dup type/integertype eq exch type/realtype eq or%
11029     {BPToDvips}if%
11030   }forall]%
11031 }def%
11032 /H.S {%
11033   currentpoint %
11034   HyperBorder add /pdf@lly exch def %
11035   dup DvipsToPDF 72 add /pdf@hoff exch def %
11036   HyperBorder sub /pdf@llx exch def%
11037 } def%
11038 /H.L {%
11039   2 sub %
11040   PDFToDvips /HyperBase exch def %
11041   currentpoint %
11042   HyperBase sub /pdf@ury exch def%
11043   /pdf@urx exch def%
11044 } def%
11045 /H.A {%
11046   H.L %
11047   currentpoint exch pop %
11048   HyperBase sub % baseline skip
11049   DvipsToPDF /pdf@voff exch def%
11050 } def%
11051 /H.R {%
11052   currentpoint %
11053   HyperBorder sub /pdf@ury exch def %
11054   HyperBorder add /pdf@urx exch def %
11055   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11056 } def%
11057 }%
11058 }
11059 </dvipsone>
```

46.13 TeX4ht

```
11060 <*tex4ht>
11061 \providecommand*{\XR@ext}{html}
11062 \def\Hy@raisedlink{}
11063 \@ifpackageloaded{tex4ht}{%
11064   \typeout{hyperref tex4ht: tex4ht already loaded}%
11065 }{%
11066   \RequirePackage[hTeX4ht]{tex4ht}%
11067 }
11068 \hyperlinkfileprefix{}
11069 \def\PDF@FinishDoc{}
11070 \def\PDF@SetupDoc{%
11071   \ifx\@baseurl\@empty
11072   \else
11073     \special{t4ht=<base href="\@baseurl">}%
11074   \fi
11075 }
```

```

11076 \def\hyper@anchor#1{%
11077   \Hy@SaveLastskip
11078   \Hy@VerboseAnchor{#1}%
11079   \begingroup
11080     \let\protect=\string
11081     \special{t4ht=<a name=%
11082       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11083   \endgroup
11084   \Hy@activeanchortrue
11085   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11086   \special{t4ht=</a>}%
11087   \Hy@activeanchorfalse
11088   \Hy@RestoreLastskip
11089 }
11090 \def\hyper@anchorstart#1{%
11091   \Hy@SaveLastskip
11092   \Hy@VerboseAnchor{#1}%
11093   \begingroup
11094     \hyper@chars\special{t4ht=<a name=%
11095       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11096   \endgroup
11097   \Hy@activeanchortrue
11098 }
11099 \def\hyper@anchorend{%
11100   \special{t4ht=</a>}%
11101   \Hy@activeanchorfalse
11102   \Hy@RestoreLastskip
11103 }
11104 \def\@urltype{url}
11105 \def\hyper@linkstart#1#2{%
11106   \Hy@VerboseLinkStart{#1}{#2}%
11107   \expandafter\Hy@colorlink\csname @#1color\endcsname
11108   \def\Hy@tempa{#1}%
11109   \ifx\Hy@tempa\@urltype
11110     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11111   \else
11112     \begingroup
11113       \hyper@chars
11114       \special{t4ht=<a href=%
11115         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
11116     \endgroup
11117   \fi
11118 }
11119 \def\hyper@linkend{%
11120   \special{t4ht=</a>}%
11121   \Hy@endcolorlink
11122 }
11123 \def\hyper@linkfile#1#2#3{%
11124   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11125 }
11126 \def\hyper@linkurl#1#2{%
11127   \leavevmode
11128   \ifHy@raiselinks
11129     \setbox\@tempboxa=\color@hbox #1\color@endbox
11130     \@linkdim\dp\@tempboxa
11131     \lower\@linkdim\hbox{%
11132       \begingroup

```

```

11133 \hyper@chars
11134 \special{%
11135   t4ht=<a href=\hyper@quote#2\hyper@quote>%
11136 }%
11137 \endgroup
11138 }%
11139 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11140 \@linkdim\ht\@tempboxa
11141 \advance\@linkdim by -6.5\p@
11142 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11143 \else
11144 \begingroup
11145 \hyper@chars
11146 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11147 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11148 \special{t4ht=</a>}%
11149 \endgroup
11150 \fi
11151 }

```

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

```

11152 \def\hyper@link#1#2#3{%
11153   \Hy@VerboseLinkStart{#1}{#2}%
11154   \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
11155 }
11156 \def\hyper@image#1#2{%
11157   \begingroup
11158   \hyper@chars
11159   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11160   \endgroup
11161 }
11162 \let\autoref\ref
11163 \ifx \rEfLiNK \UnDef
11164   \def\rEfLiNK #1#2{#2}%
11165 \fi
11166 \def\backref#1{}
11167 </tex4ht>
11168 <*tex4htcfg>
11169 \IfFileExists{\jobname.cfg}{\endinput}{}
11170 \Preamble{html}
11171 \begin{document}%
11172 \EndPreamble
11173 \def\TeX{TeX}
11174 \def\OMEGA{Omega}
11175 \def\LaTeX{LaTeX}
11176 \def\LaTeXe{LaTeX2e}
11177 \def\eTeX{e-TeX}
11178 \def\MF{Metafont}
11179 \def\MP{MetaPost}
11180 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11181 <*pdfmark>
11182 \long\def\@Form[#1]{%
11183 \g@addto@macro\Hy@FirstPageHook{%

```

```

11184 \headerps@out{%
11185 [%
11186   /_objdef{pdfDocEncoding}%
11187   /type/dict%
11188 /OBJ pdfmark%
11189 [%
11190   {pdfDocEncoding}%
11191   <<%
11192     /Type/Encoding%
11193     /Differences[%
11194       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11195       /tilde %
11196       39/quotesingle %
11197       96/grave %
11198       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11199       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11200       /quotedblbase/quotedblleft/quotedblright/quoteleft%
11201       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11202       /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11203       164/currency %
11204       166/brokenbar %
11205       168/dieresis/copyright/ordfeminine %
11206       172/logicalnot/.notdef/registered/macron/degree/plusminus%
11207       /twosuperior/threesuperior/acute/mu %
11208       183/periodcentered/cedilla/onesuperior/ordmasculine %
11209       188/onequarter/onehalf/threequarters %
11210       192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11211       /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11212       /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11213       /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11214       /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11215       /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11216       /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11217       /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11218       /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11219       /ucircumflex/udieresis/yacute/thorn/ydieresis%
11220     ]%
11221   >>%
11222 /PUT pdfmark%
11223 [%
11224   /_objdef{ZaDb}%
11225   /type/dict%
11226 /OBJ pdfmark%
11227 [%
11228   {ZaDb}%
11229   <<%
11230     /Type/Font%
11231     /Subtype/Type1%
11232     /Name/ZaDb%
11233     /BaseFont/ZapfDingbats%
11234   >>%
11235 /PUT pdfmark%
11236 [%
11237   /_objdef{Helv}%
11238   /type/dict%
11239 /OBJ pdfmark%
11240 [%

```

```

11241 {Helv}%
11242 <<%
11243 /Type/Font%
11244 /Subtype/Type1%
11245 /Name/Helv%
11246 /BaseFont/Helvetica%
11247 /Encoding{pdfDocEncoding}%
11248 >>%
11249 /PUT pdfmark%
11250 [%
11251 /__objdef{aform}%
11252 /type/dict%
11253 /OBJ pdfmark%
11254 [%
11255 /__objdef{afields}%
11256 /type/array%
11257 /OBJ pdfmark%
11258 {%
11259 [%
11260 /BBox[0 0 100 100]%
11261 /__objdef{Check}%
11262 /BP pdfmark %
11263 1 0 0 setrgbcolor%
11264 /ZapfDingbats 80 selectfont %
11265 20 20 moveto%
11266 (4)show%
11267 [/EP pdfmark%
11268 [%
11269 /BBox[0 0 100 100]%
11270 /__objdef{Cross}%
11271 /BP pdfmark %
11272 1 0 0 setrgbcolor%
11273 /ZapfDingbats 80 selectfont %
11274 20 20 moveto%
11275 (8)show%
11276 [/EP pdfmark%
11277 [%
11278 /BBox[0 0 250 100]%
11279 /__objdef{Submit}%
11280 /BP pdfmark %
11281 0.6 setgray %
11282 0 0 250 100 rectfill %
11283 1 setgray %
11284 2 2 moveto %
11285 2 98 lineto %
11286 248 98 lineto %
11287 246 96 lineto %
11288 4 96 lineto %
11289 4 4 lineto %
11290 fill %
11291 0.34 setgray %
11292 248 98 moveto %
11293 248 2 lineto %
11294 2 2 lineto %
11295 4 4 lineto %
11296 246 4 lineto %
11297 246 96 lineto %

```

```

11298 fill%
11299 /Helvetica 76 selectfont %
11300 0 setgray %
11301 8 22.5 moveto%
11302 (Submit)show%
11303 [/EP pdfmark%
11304 [%
11305 /BBox[0 0 250 100]%
11306 /_objdef{SubmitP}%
11307 /BP pdfmark %
11308 0.6 setgray %
11309 0 0 250 100 rectfill %
11310 0.34 setgray %
11311 2 2 moveto %
11312 2 98 lineto %
11313 248 98 lineto %
11314 246 96 lineto %
11315 4 96 lineto %
11316 4 4 lineto %
11317 fill %
11318 1 setgray %
11319 248 98 moveto %
11320 248 2 lineto %
11321 2 2 lineto %
11322 4 4 lineto %
11323 246 4 lineto %
11324 246 96 lineto %
11325 fill%
11326 /Helvetica 76 selectfont %
11327 0 setgray %
11328 10 20.5 moveto%
11329 (Submit)show%
11330 [/EP pdfmark%
11331 } ?pdfmark%
11332 [%
11333 {aform}%
11334 <<%
11335 /Fields{afields}%
11336 /DR<<%
11337 /Font<<%
11338 /ZaDb{ZaDb}%
11339 /Helv{Helv}%
11340 >>%
11341 >>%
11342 /DA(/Helv 10 Tf 0 g)%
11343 /CO{corder}%
11344 \ifHy@pdfa
11345 \else
11346 /NeedAppearances true%
11347 \fi
11348 >>%
11349 /PUT pdfmark%
11350 [%
11351 {Catalog}%
11352 <<%
11353 /AcroForm{aform}%
11354 >>%

```



```

11355 /PUT pdfmark%
11356 [%
11357   /_objdef{corder}%
11358   /type/array%
11359 /OBJ pdfmark% dps
11360 }}%
11361   \setkeys{Form}{#1}%
11362 }
11363 \def\@endForm{}
11364 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11365   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11366 }
11367 \def\@TextField[#1]#2{% parameters, label
11368   \def\Fld@name{#2}%
11369   \def\Fld@default{}%
11370   \let\Fld@value\@empty
11371   \def\Fld@width{\DefaultWidthofText}%
11372   \def\Fld@height{%
11373     \ifFld@multiline
11374       \DefaultHeightofTextMultiline
11375     \else
11376       \DefaultHeightofText
11377     \fi
11378   }%
11379   \begingroup
11380     \Field@toks={ }%
11381     \expandafter\HyField@SetKeys\expandafter{%
11382       \DefaultOptionsofText,#1%
11383     }%
11384     \HyField@FlagsText
11385     \ifFld@hidden\def\Fld@width{1sp}\fi
11386     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11387     \LayoutTextField{#2}{%
11388       \Hy@escapeform\PDFForm@Text
11389       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11390         pdfmark=/ANN,Raw={\PDFForm@Text}%
11391       }%
11392     }%
11393   \endgroup
11394 }
11395 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11396   \def\Fld@name{#2}%
11397   \let\Fld@default\relax
11398   \let\Fld@value\relax
11399   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11400   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11401   \begingroup
11402     \Fld@menulength=0 %
11403     \@tempdima\z@
11404     \@for\@curropt:=#3\do{%
11405       \expandafter\Fld@checkequals\@curropt==\%
11406       \Hy@StepCount\Fld@menulength
11407       \settowidth{\@tempdimb}{\@currDisplay}%
11408       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11409     }%
11410     \advance\@tempdima by 15\p@
11411     \Field@toks={ }%

```

```

11412 \begingroup
11413 \HyField@SetKeys{#1}%
11414 \edef\x{\endgroup
11415 \noexpand\expandafter
11416 \noexpand\HyField@SetKeys
11417 \noexpand\expandafter{%
11418 \expandafter\noexpand\csname DefaultOptionsof%
11419 \ifFld@radio
11420 Radio%
11421 \else
11422 \ifFld@combo
11423 \ifFld@popdown
11424 PopdownBox%
11425 \else
11426 ComboBox%
11427 \fi
11428 \else
11429 ListBox%
11430 \fi
11431 \fi
11432 \endcsname
11433 }%
11434 }\x
11435 \HyField@SetKeys{#1}%
11436 \ifFld@hidden\def\Fld@width{1sp}\fi
11437 \ifx\Fld@value\relax
11438 \let\Fld@value\Fld@default
11439 \fi
11440 \LayoutChoiceField{#2}{%
11441 \ifFld@radio
11442 \HyField@FlagsRadioButton
11443 \@@Radio{#3}%
11444 \else
11445 \begingroup
11446 \HyField@FlagsChoice
11447 \ifdim\Fld@width<\@tempdima
11448 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11449 \edef\Fld@width{\the\@tempdima}%
11450 \fi
11451 \ifFld@combo
11452 \else
11453 \@tempdima=\the\Fld@menulength\Fld@charsize
11454 \advance\@tempdima by \Fld@borderwidth bp %
11455 \advance\@tempdima by \Fld@borderwidth bp %
11456 \edef\Fld@height{\the\@tempdima}%
11457 \fi
11458 \@@ListBox{#3}%
11459 \endgroup
11460 \fi
11461 }%
11462 \endgroup
11463 }
11464 \def\@@Radio#1{%
11465 \Fld@listcount=0 %
11466 \@for\@curropt:=#1\do{%
11467 \expandafter\Fld@checkequals\@curropt==\\%
11468 \Hy@StepCount\Fld@listcount

```

```

11469 \@currDisplay\space
11470 \Hy@escapeform\PDFForm@Radio
11471 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11472 pdfmark=/ANN,%
11473 Raw={%
11474 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11475 }%
11476 } % deliberate space between radio buttons
11477 }%
11478 }
11479 \newcount\Fld@listcount
11480 \def\@@ListBox#1{%
11481 \HyField@PDFChoices{#1}%
11482 \Hy@escapeform\PDFForm@List
11483 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11484 pdfmark=/ANN,Raw={\PDFForm@List}%
11485 }%
11486 }
11487 \def\@PushButton[#1]#2{% parameters, label
11488 \def\Fld@name{#2}%
11489 \begingroup
11490 \Field@toks={ }%
11491 \expandafter\HyField@SetKeys\expandafter{%
11492 \DefaultOptionsofPushButton,#1%
11493 }%
11494 \ifHy@pdfa
11495 \PackageError{hyperref}{%
11496 PDF/A: Push button with JavaScript is prohibited%
11497 }\@ehc
11498 \LayoutPushButtonField{%
11499 \leavevmode
11500 \MakeButtonField{#2}%
11501 }%
11502 \else
11503 \HyField@FlagsPushButton
11504 \ifFld@hidden\def\Fld@width{1sp}\fi
11505 \LayoutPushButtonField{%
11506 \leavevmode
11507 \Hy@escapeform\PDFForm@Push
11508 \pdfmark[\MakeButtonField{#2}]{%
11509 pdfmark=/ANN,Raw={\PDFForm@Push}%
11510 }%
11511 }%
11512 \fi
11513 \endgroup
11514 }
11515 \def\@Submit[#1]#2{%
11516 \Field@toks={ }%
11517 \def\Fld@width{\DefaultWidthofSubmit}%
11518 \def\Fld@height{\DefaultHeightofSubmit}%
11519 \begingroup
11520 \expandafter\HyField@SetKeys\expandafter{%
11521 \DefaultOptionsofSubmit,#1%
11522 }%
11523 \HyField@FlagsPushButton
11524 \HyField@FlagsSubmit
11525 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11526 \Hy@escapeform\PDFForm@Submit
11527 \pdfmark[\MakeButtonField{#2}]{%
11528 pdfmark=/ANN,%
11529 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11530 }%
11531 \endgroup
11532 }
11533 \def\@Reset[#1]#2{%
11534 \Field@toks={ }%
11535 \def\Fld@width{\DefaultWidthofReset}%
11536 \def\Fld@height{\DefaultHeightofReset}%
11537 \begingroup
11538 \expandafter\HyField@SetKeys\expandafter{%
11539 \DefaultOptionsofReset,#1%
11540 }%
11541 \leavevmode
11542 \ifHy@pdfa
11543 \PackageError{hyperref}{%
11544 PDF/A: Reset action is prohibited%
11545 }\@ehc
11546 \MakeButtonField{#2}%
11547 \else
11548 \HyField@FlagsPushButton
11549 \ifFld@hidden\def\Fld@width{1sp}\fi
11550 \Hy@escapeform\PDFForm@Reset
11551 \pdfmark[\MakeButtonField{#2}]{%
11552 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11553 }%
11554 \fi
11555 \endgroup
11556 }%
11557 \def\@CheckBox[#1]#2{% parameters, label
11558 \def\Fld@name{#2}%
11559 \def\Fld@default{0}%
11560 \begingroup
11561 \def\Fld@width{\DefaultWidthofCheckBox}%
11562 \def\Fld@height{\DefaultHeightofCheckBox}%
11563 \Field@toks={ }%
11564 \expandafter\HyField@SetKeys\expandafter{%
11565 \DefaultOptionsofCheckBox,#1%
11566 }%
11567 \HyField@FlagsCheckBox
11568 \ifFld@hidden\def\Fld@width{1sp}\fi
11569 \LayoutCheckField{#2}{%
11570 \Hy@escapeform\PDFForm@Check
11571 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11572 pdfmark=/ANN,Raw={\PDFForm@Check}%
11573 }%
11574 }%
11575 \endgroup
11576 }
11577 </pdfmark>

```

47.2 HyperTeX

```

11578 <*hypertex>
11579 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11580 \def\@endForm{}

```

```

11581 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11582 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11583 }
11584 \def\@TextField[#1]#2{% parameters, label
11585 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11586 }
11587 \def\@CheckBox[#1]#2{% parameters, label
11588 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11589 }
11590 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11591 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11592 }
11593 \def\@PushButton[#1]#2{% parameters, label
11594 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11595 }
11596 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11597 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11598 \end{hypertex}

```

47.3 TeX4ht

```

11599 \*tex4ht
11600 \def\@Form[#1]{%
11601 \setkeys{Form}{#1}%
11602 \HCode{<form action="\Form@action" method="\Form@method">}%
11603 }
11604 \def\@endForm{\HCode{</form>}}
11605 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11606 \typeout{Sorry, TeX4ht does not support gauges}%
11607 }
11608 \def\@TextField[#1]#2{% parameters, label
11609 \let\Hy@reserved@a\@empty
11610 \def\Fld@name{#2}%
11611 \def\Fld@default{}%
11612 \bgroup
11613 \Field@toks={ }%
11614 \setkeys{Field}{#1}%
11615 \HCode{<label for="\Fld@name">#2</label>}%
11616 \ifFld@password
11617 \@@PasswordField
11618 \else
11619 \@@TextField
11620 \fi
11621 \egroup
11622 }
11623 \def\@@PasswordField{%
11624 \HCode{%
11625 <input type="password" %
11626 id="\Fld@name" %
11627 name="\Fld@name" %
11628 \ifFld@hidden type="hidden" \fi
11629 value="\Fld@default" %
11630 \the\Fld@toks
11631 >%
11632 }%
11633 }
11634 \def\@@TextField{%
11635 \ifFld@multiline

```

```

11636 \HCode{<textarea %
11637 \ifFld@readonly readonly \fi
11638 id="\Fld@name" %
11639 name="\Fld@name" %
11640 \ifFld@hidden type="hidden" \fi
11641 \the\Field@toks>%
11642 }%
11643 \Fld@default
11644 \HCode{</textarea>}%
11645 \else
11646 \HCode{<input type="textbox" %
11647 \ifFld@readonly readonly \fi
11648 id="\Fld@name" %
11649 name="\Fld@name" %
11650 \ifFld@hidden type="hidden" \fi
11651 value="\Fld@default" %
11652 \the\Field@toks>%
11653 }%
11654 \fi
11655 }
11656 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11657 \def\Fld@name{#2}%
11658 \def\Fld@default{}%
11659 \let\Hy@reserved@a\relax
11660 \begingroup
11661 \expandafter\Fld@findlength#3\\%
11662 \Field@toks={ }%
11663 \setkeys{Field}{#1}%
11664 #2%
11665 \ifFld@radio
11666 \expandafter\@@Radio#3\\%
11667 \else
11668 \expandafter\@@Menu#3\\%
11669 \fi
11670 \endgroup
11671 }
11672 \def\Fld@findlength#1\\{%
11673 \Fld@menulength=0 %
11674 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11675 }
11676 \def\@@Menu#1\\{%
11677 \HCode{<select size="\the\Fld@menulength" %
11678 name="\Fld@name" %
11679 \the\Field@toks>%
11680 }%
11681 \@for\@curropt:=#1\do{%
11682 \expandafter\Fld@checkequals\@curropt==\\%
11683 \HCode{<option %
11684 \ifx\@curropt\Fld@default selected \fi
11685 value="\@currValue">\@currDisplay</option>%
11686 }%
11687 }%
11688 \HCode{</select>}%
11689 }
11690 \def\@@Radio#1\\{%
11691 \@for\@curropt:=#1\do{%
11692 \expandafter\Fld@checkequals\@curropt==\\%

```

```

11693 \HCode{<input type="radio" %
11694 \ifx\@curropt\Fld@default checked \fi
11695 name="\Fld@name" %
11696 value="\@currValue" %
11697 \the\Fld@toks>%
11698 }%
11699 \@currDisplay
11700 }%
11701 }
11702 \def\@PushButton[#1]#2{% parameters, label
11703 \def\Fld@name{#2}%
11704 \bgroup
11705 \Field@toks={ }%
11706 \setkeys{Field}{#1}%
11707 \HCode{<input type="button" %
11708 name="\Fld@name" %
11709 value="#2" %
11710 \the\Fld@toks>%
11711 }%
11712 \HCode{</button>}%
11713 \egroup
11714 }
11715 \def\@Submit[#1]#2{%
11716 \HCode{<button type="submit">#2</button>}%
11717 }
11718 \def\@Reset[#1]#2{%
11719 \HCode{<button type="reset">#2</button>}%
11720 }
11721 \def\@CheckBox[#1]#2{% parameters, label
11722 \let\Hy@reserved@a\@empty
11723 \def\Fld@name{#2}%
11724 \def\Fld@default{0}%
11725 \bgroup
11726 \Field@toks={ }%
11727 \setkeys{Field}{#1}%
11728 \HCode{<input type="checkbox" %
11729 \ifFld@checked checked \fi
11730 \ifFld@disabled disabled \fi
11731 \ifFld@readonly readonly \fi
11732 name="\Fld@name" %
11733 \ifFld@hidden type="hidden" \fi
11734 value="\Fld@default" %
11735 \the\Fld@toks>%
11736 #2%
11737 }%
11738 \egroup
11739 }
11740 </tex4ht>

```

47.4 pdfTeX

```

11741 <*pdfTeX>
11742 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11743 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11744 }
11745 \def\MakeFieldObject#1#2{\sbox0{#1}%
11746 \immediate\pdfxform0 %
11747 \expandafter\edef\csname #2Object\endcsname{%

```

```

11748 \the\pdflastxform\space 0 R%
11749 }%
11750 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
11751 }%
11752 \def\HyField@afields{}
11753 \begingroup\expandafter\expandafter\expandafter\endgroup
11754 \expandafter\ifx\csname pdflastlink\endcsname\relax
11755 \let\HyField@AddToFields\relax
11756 \PackageInfo{hyperref}{%
11757   You need pdfTeX 1.40.0 for setting the /Fields entry.%
11758   \MessageBreak
11759   Adobe Reader/Acrobat accepts an empty /Field array,%
11760   \MessageBreak
11761   but other PDF viewers might complain%
11762 }%
11763 \else
11764 \def\HyField@AuxAddToFields#1{%
11765 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11766 \Hy@AtBeginDocument{%
11767   \if@filesw
11768     \immediate\write\@mainaux{%
11769       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11770     }%
11771   \fi
11772   \let\HyField@AfterAuxOpen\@firstofone
11773   \def\HyField@AuxAddToFields#1{%
11774     \xdef\HyField@afields{%
11775       \ifx\HyField@afields\@empty
11776       \else
11777         \HyField@afields
11778         \space
11779       \fi
11780       #1 0 R%
11781     }%
11782   }%
11783 }%
11784 \def\HyField@AddToFields{%
11785 \expandafter\HyField@@AddToFields\expandafter{%
11786   \the\pdflastlink
11787 }%
11788 }%
11789 \def\HyField@@AddToFields#1{%
11790 \HyField@AfterAuxOpen{%
11791   \if@filesw
11792     \write\@mainaux{%
11793       \string\HyField@AuxAddToFields{#1}%
11794     }%
11795   \fi
11796 }%
11797 }%
11798 \fi
11799 \def\@Form[#1]{%
11800 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11801 \setkeys{Form}{#1}%
11802 \Hy@FormObjects
11803 \ifnum\pdfTeXversion>13 %
11804 \pdfrefobj\OBJ@pdfdocencoding

```



```

11805 \pdfrefobj\OBJ@ZaDb
11806 \pdfrefobj\OBJ@Helv
11807 \fi
11808 \AtVeryEndDocument{%
11809 \immediate\pdfobj{%
11810 <<%
11811 /Fields\HyField@afields}%
11812 /DR<<%
11813 /Font<<%
11814 /ZaDb \OBJ@ZaDb\space 0 R%
11815 /Helv \OBJ@Helv\space 0 R%
11816 >>%
11817 >>%
11818 /DA(/Helv 10 Tf 0 g)%
11819 \ifHy@pdfa
11820 \else
11821 /NeedAppearances true%
11822 \fi
11823 >>%
11824 }%
11825 \edef\OBJ@acroform{\the\pdfastobj}%
11826 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11827 }%
11828 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

11829 \begingroup
11830 \fontfamily{pzd}%
11831 \fontencoding{U}%
11832 \fontseries{m}%
11833 \fontshape{n}%
11834 \selectfont
11835 \char123 %
11836 \endgroup
11837 }{Ding}%
11838 \MakeFieldObject{%
11839 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11840 }{Submit}%
11841 \MakeFieldObject{%
11842 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11843 }{SubmitP}%
11844 }
11845 \def\@endForm{}
11846 \def\@TextField[#1]#2{% parameters, label
11847 \def\Fld@name{#2}%
11848 \def\Fld@default{}%
11849 \let\Fld@value\@empty
11850 \def\Fld@width{\DefaultWidthofText}%
11851 \def\Fld@height{%
11852 \ifFld@multiline
11853 \DefaultHeightofTextMultiline
11854 \else
11855 \DefaultHeightofText
11856 \fi
11857 }%
11858 \begingroup
11859 \Field@toks={}%
11860 \expandafter\HyField@SetKeys\expandafter{%

```

```

11861 \DefaultOptionsofText,#1%
11862 }%
11863 \PDFForm@Name
11864 \HyField@FlagsText
11865 \ifFld@hidden\def\Fld@width{1sp}\fi
11866 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
11867 \LayoutTextField{#2}{%
11868 \Hy@escapeform\PDFForm@Text
11869 \pdfstartlink user {\PDFForm@Text}\relax
11870 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11871 \HyField@AddToFields
11872 }%
11873 \endgroup
11874 }
11875 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11876 \def\Fld@name{#2}%
11877 \let\Fld@default\relax
11878 \let\Fld@value\relax
11879 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11880 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11881 \begingroup
11882 \Fld@menulength=0 %
11883 \@tempdima\z@
11884 \@for\@curropt:=#3\do{%
11885 \expandafter\Fld@checkequals\@curropt==\%
11886 \Hy@StepCount\Fld@menulength
11887 \settowidth{\@tempdimb}{\@currDisplay}%
11888 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11889 }%
11890 \advance\@tempdima by 15\p@
11891 \Field@toks={ }%
11892 \begingroup
11893 \HyField@SetKeys{#1}%
11894 \edef\x{\endgroup
11895 \noexpand\expandafter
11896 \noexpand\HyField@SetKeys
11897 \noexpand\expandafter{%
11898 \expandafter\noexpand\csname DefaultOptionsof%
11899 \ifFld@radio
11900 Radio%
11901 \else
11902 \ifFld@combo
11903 \ifFld@popdown
11904 PopdownBox%
11905 \else
11906 ComboBox%
11907 \fi
11908 \else
11909 ListBox%
11910 \fi
11911 \fi
11912 \endcsname
11913 }%
11914 }\x
11915 \HyField@SetKeys{#1}%
11916 \PDFForm@Name
11917 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11918 \ifx\Fld@value\relax
11919 \let\Fld@value\Fld@default
11920 \fi
11921 \LayoutChoiceField{#2}{%
11922 \ifFld@radio
11923 \HyField@FlagsRadioButton
11924 \@@Radio{#3}%
11925 \else
11926 \begingroup
11927 \HyField@FlagsChoice
11928 \ifdim\Fld@width<\@tempdima
11929 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11930 \edef\Fld@width{\the\@tempdima}%
11931 \fi
11932 \ifFld@combo
11933 \else
11934 \@tempdima=\the\Fld@menulength\Fld@charsize
11935 \advance\@tempdima by \Fld@borderwidth bp %
11936 \advance\@tempdima by \Fld@borderwidth bp %
11937 \edef\Fld@height{\the\@tempdima}%
11938 \fi
11939 \@@ListBox{#3}%
11940 \endgroup
11941 \fi
11942 }%
11943 \endgroup
11944 }
11945 \def\@@Radio#1{%
11946 \Fld@listcount=0 %
11947 \@for\@curropt:=#1\do{%
11948 \expandafter\Fld@checkequals\@curropt==\%
11949 \Hy@StepCount\Fld@listcount
11950 \@currDisplay\space
11951 \leavevmode
11952 \Hy@escapeform\PDFForm@Radio
11953 \pdfstartlink user {%
11954 \PDFForm@Radio
11955 /AP<<%
11956 /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.

```

11957 /\@currValue\space \DingObject
11958 >>%
11959 >>%
11960 }%
11961 \relax
11962 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11963 \ifnum\Fld@listcount=1 %
11964 \HyField@AddToFields
11965 \fi
11966 \space % deliberate space between radio buttons
11967 }%
11968 }
11969 \newcount\Fld@listcount
11970 \def\@@ListBox#1{%
11971 \HyField@PDFChoices{#1}%

```

```

11972 \leavevmode
11973 \Hy@escapeform\PDFForm@List
11974 \pdfstartlink user {\PDFForm@List}\relax
11975 \MakeChoiceField{\Fld@width}{\Fld@height}%
11976 \pdfendlink
11977 \HyField@AddToFields
11978 }
11979 \def\@PushButton[#1]#2{% parameters, label
11980 \def\Fld@name{#2}%
11981 \begingroup
11982 \Field@toks={ }%
11983 \expandafter\HyField@SetKeys\expandafter{%
11984 \DefaultOptionsofPushButton,#1%
11985 }%
11986 \PDFForm@Name
11987 \ifHy@pdfa
11988 \PackageError{hyperref}{%
11989 PDF/A: Push button with JavaScript is prohibited%
11990 }\@ehc
11991 \LayoutPushButtonField{%
11992 \leavevmode
11993 \MakeButtonField{#2}%
11994 }%
11995 \else
11996 \HyField@FlagsPushButton
11997 \ifFld@hidden\def\Fld@width{1sp}\fi
11998 \LayoutPushButtonField{%
11999 \leavevmode
12000 \Hy@escapeform\PDFForm@Push
12001 \pdfstartlink user {\PDFForm@Push}\relax
12002 \MakeButtonField{#2}%
12003 \pdfendlink
12004 \HyField@AddToFields
12005 }%
12006 \fi
12007 \endgroup
12008 }
12009 \def\@Submit[#1]#2{%
12010 \Field@toks={ }%
12011 \def\Fld@width{\DefaultWidthofSubmit}%
12012 \def\Fld@height{\DefaultHeightofSubmit}%
12013 \begingroup
12014 \expandafter\HyField@SetKeys\expandafter{%
12015 \DefaultOptionsofSubmit,#1%
12016 }%
12017 \HyField@FlagsPushButton
12018 \HyField@FlagsSubmit
12019 \ifFld@hidden\def\Fld@width{1sp}\fi
12020 \leavevmode
12021 \Hy@escapeform\PDFForm@Submit
12022 \pdfstartlink user {%
12023 \PDFForm@Submit
12024 /AP<</N \SubmitObject/D \SubmitPObject>>%
12025 }%
12026 \relax
12027 \MakeButtonField{#2}%
12028 \pdfendlink

```

```

12029 \HyField@AddToFields
12030 \endgroup
12031 }
12032 \def\@Reset[#1]#2{%
12033 \Field@toks={ }%
12034 \def\Fld@width{\DefaultWidthofReset}%
12035 \def\Fld@height{\DefaultHeightofReset}%
12036 \begingroup
12037 \expandafter\HyField@SetKeys\expandafter{%
12038 \DefaultOptionsofReset,#1%
12039 }%
12040 \leavevmode
12041 \ifHy@pdfa
12042 \PackageError{hyperref}{%
12043 PDF/A: Reset action is prohibited%
12044 }\@ehc
12045 \MakeButtonField{#2}%
12046 \else
12047 \HyField@FlagsPushButton
12048 \ifFld@hidden\def\Fld@width{1sp}\fi
12049 \Hy@escapeform\PDFForm@Reset
12050 \pdfstartlink user {\PDFForm@Reset}\relax
12051 \MakeButtonField{#2}%
12052 \pdfendlink
12053 \HyField@AddToFields
12054 \fi
12055 \endgroup
12056 }
12057 \def\@CheckBox[#1]#2{% parameters, label
12058 \def\Fld@name{#2}%
12059 \def\Fld@default{0}%
12060 \begingroup
12061 \def\Fld@width{\DefaultWidthofCheckBox}%
12062 \def\Fld@height{\DefaultHeightofCheckBox}%
12063 \Field@toks={ }%
12064 \expandafter\HyField@SetKeys\expandafter{%
12065 \DefaultOptionsofCheckBox,#1%
12066 }%
12067 \PDFForm@Name
12068 \HyField@FlagsCheckBox
12069 \ifFld@hidden\def\Fld@width{1sp}\fi
12070 \LayoutCheckField{#2}{%
12071 \Hy@escapeform\PDFForm@Check
12072 \pdfstartlink user {\PDFForm@Check}\relax
12073 \MakeCheckField{\Fld@width}{\Fld@height}%
12074 \pdfendlink
12075 \HyField@AddToFields
12076 }%
12077 \endgroup
12078 }
12079 \def\Hy@FormObjects{%
12080 \pdfobj {%
12081 <<%
12082 /Type/Encoding%
12083 /Differences[%
12084 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12085 /ring/tilde %

```

```

12086 39/quotesingle %
12087 96/grave %
12088 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12089 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12090 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12091 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12092 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12093 164/currency %
12094 166/brokenbar %
12095 168/dieresis/copyright/ordfeminine %
12096 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12097 /twosuperior/threesuperior/acute/mu %
12098 183/periodcentered/cedilla/onesuperior/ordmasculine %
12099 188/onequarter/onehalf/threequarters %
12100 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12101 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12102 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12103 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12104 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12105 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12106 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12107 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12108 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12109 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12110 }%
12111 >>%
12112 }%
12113 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12114 \pdfobj{%
12115 <<%
12116 /Type/Font%
12117 /Subtype/Type1%
12118 /Name/ZaDb%
12119 /BaseFont/ZapfDingbats%
12120 >>%
12121 }%
12122 \xdef\OBJ@ZaDb{\the\pdflastobj}%
12123 \pdfobj{%
12124 <<%
12125 /Type/Font%
12126 /Subtype/Type1%
12127 /Name/Helv%
12128 /BaseFont/Helvetica%
12129 /Encoding \OBJ@pdfdocencoding\space 0 R%
12130 >>%
12131 }%
12132 \xdef\OBJ@Helv{\the\pdflastobj}%
12133 \global\let\Hy@FormObjects\relax
12134 }
12135 </pdfTeX>

```

47.5 dvipdfm, xetex

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

```
12136 <*\dvipdfm | xetex>
```

\@Gauge

```

12137 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12138 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12139 }

```

\@Form

```

12140 \def\@Form[#1]{%
12141 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
12142 \setkeys{Form}{#1}%
12143 \Hy@FormObjects
12144 \@pdfm@mark{obj @afields []}%
12145 \@pdfm@mark{obj @corder []}%
12146 \@pdfm@mark{%
12147 obj @aform <<%
12148 /Fields @afields%
12149 /DR<<%
12150 /Font<<%
12151 /ZaDb @OBJZaDb%
12152 /Helv @OBJHelv%
12153 >>%
12154 >>%
12155 /DA(/Helv 10 Tf 0 g)%
12156 /CO @corder%
12157 \ifHy@pdfa
12158 \else
12159 /NeedAppearances true%
12160 \fi
12161 >>%
12162 }%
12163 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
12164 }

```

\@endForm

```

12165 \def\@endForm{}

```

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

```

12166 \def\dvipdfm@setdim{%
12167 height \the\ht\pdfm@box\space
12168 width \the\wd\pdfm@box\space
12169 depth \the\dp\pdfm@box\space
12170 }

```

\HyField@AnnotCount

```

12171 \newcount\HyField@AnnotCount
12172 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

12173 \def\HyField@AdvanceAnnotCount{%
12174 \global\advance\HyField@AnnotCount\@ne
12175 }

```

\HyField@TheAnnotCount

```

12176 \def\HyField@TheAnnotCount{%
12177 \the\HyField@AnnotCount
12178 }

```

\@TextField

```

12179 \def\@TextField[#1]#2{% parameters, label
12180 \def\Fld@name{#2}%
12181 \def\Fld@default{}%
12182 \let\Fld@value\@empty
12183 \def\Fld@width{\DefaultWidthofText}%
12184 \def\Fld@height{%
12185 \ifFld@multiline
12186 \DefaultHeightofTextMultiline
12187 \else
12188 \DefaultHeightofText
12189 \fi
12190 }%
12191 \begingroup
12192 \Field@toks={}%
12193 \expandafter\HyField@SetKeys\expandafter{%
12194 \DefaultOptionsofText,#1%
12195 }%
12196 \PDFForm@Name
12197 \HyField@FlagsText
12198 \ifFld@hidden\def\Fld@width{1sp}\fi
12199 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12200 \setbox\pdfm@box=\hbox{%
12201 \MakeTextField{\Fld@width}{\Fld@height}%
12202 }%
12203 \HyField@AdvanceAnnotCount
12204 \LayoutTextField{#2}{%
12205 \Hy@escapeform\PDFForm@Text
12206 \@pdfm@mark{%
12207 ann @text\HyField@TheAnnotCount\space
12208 \dvipdfm@setdim << \PDFForm@Text >>%
12209 }%
12210 }%
12211 \unhbox\pdfm@box
12212 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12213 % record in @afields array
12214 \endgroup
12215 }

```

\@ChoiceMenu

```

12216 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12217 \def\Fld@name{#2}%
12218 \let\Fld@default\relax
12219 \let\Fld@value\relax
12220 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12221 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12222 \begingroup
12223 \Fld@menulength=0 %
12224 \@tempdima\z@
12225 \@for\@curropt=#3\do{%
12226 \expandafter\Fld@checkequals\@curropt==\\%
12227 \Hy@StepCount\Fld@menulength
12228 \settowidth{\@tempdimb}{\@currDisplay}%
12229 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12230 }%
12231 \advance\@tempdima by 15\p@
12232 \Field@toks={}%

```



```

12233 \begingroup
12234   \HyField@SetKeys{#1}%
12235 \edef\x{\endgroup
12236   \noexpand\expandafter
12237   \noexpand\HyField@SetKeys
12238   \noexpand\expandafter{%
12239     \expandafter\noexpand\csname DefaultOptionsof%
12240       \Fld@radio
12241       Radio%
12242     \else
12243       \ifFld@combo
12244       \ifFld@popdown
12245       PopdownBox%
12246       \else
12247       ComboBox%
12248       \fi
12249       \else
12250       ListBox%
12251       \fi
12252     \fi
12253   \endcsname
12254   }%
12255 } \x
12256 \HyField@SetKeys{#1}%
12257 \PDFForm@Name
12258 \ifFld@hidden\def\Fld@width{1sp}\fi
12259 \ifx\Fld@value\relax
12260   \let\Fld@value\Fld@default
12261 \fi
12262 \LayoutChoiceField{#2}{%
12263   \ifFld@radio
12264     \HyField@FlagsRadioButton
12265     \@@Radio{#3}%
12266   \else
12267     \begingroup
12268     \HyField@FlagsChoice
12269     \ifdim\Fld@width<\@tempdima
12270       \ifdim\@tempdima<1cm\@tempdima1cm\fi
12271       \edef\Fld@width{\the\@tempdima}%
12272     \fi
12273     \ifFld@combo
12274     \else
12275       \@tempdima=\the\Fld@menulength\Fld@charsize
12276       \advance\@tempdima by \Fld@borderwidth bp %
12277       \advance\@tempdima by \Fld@borderwidth bp %
12278       \edef\Fld@height{\the\@tempdima}%
12279     \fi
12280     \@@ListBox{#3}%
12281   \endgroup
12282 \fi
12283 }%
12284 \endgroup
12285 }

```

\@@Radio

```

12286 \def\@@Radio#1{%
12287   \Fld@listcount=0 %

```

```

12288 \setbox\pdfm@box=\hbox{%
12289   \MakeRadioField{\Fld@width}{\Fld@height}%
12290 }%
12291 \@for\@curropt:=#1\do{%
12292   \expandafter\Fld@checkequals\@curropt==\%
12293   \Hy@StepCount\Fld@listcount
12294   \@currDisplay\space
12295   \leavevmode
12296   \Hy@escapeform\PDFForm@Radio
12297   \ifnum\Fld@listcount=1 %
12298     \HyField@AdvanceAnnotCount
12299   \fi
12300   \@pdfm@mark{%
12301     ann %
12302     \ifnum\Fld@listcount=1 %
12303       @radio\HyField@TheAnnotCount%
12304     \space
12305   \fi
12306   \dvipdfm@setdim
12307   <<%
12308     \PDFForm@Radio
12309     /AP<</N<</\@currValue /null>>>>%
12310   >>%
12311 }%
12312 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12313 \ifnum\Fld@listcount=1 %
12314   \@pdfm@mark{%
12315     put @afields @radio\HyField@TheAnnotCount
12316   }%
12317 \fi
12318 }%
12319 }

```

\Fld@listcount

```

12320 \newcount\Fld@listcount

```

\@@ListBox

```

12321 \def\@@ListBox#1{%
12322   \HyField@PDFChoices{#1}%
12323   \setbox\pdfm@box=\hbox{%
12324     \MakeChoiceField{\Fld@width}{\Fld@height}%
12325   }%
12326   \leavevmode
12327   \Hy@escapeform\PDFForm@List
12328   \HyField@AdvanceAnnotCount
12329   \@pdfm@mark{%
12330     ann @list\HyField@TheAnnotCount\space
12331     \dvipdfm@setdim
12332     <<\PDFForm@List>>%
12333   }%
12334   \unhbox\pdfm@box
12335   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12336 }

```

\@PushButton

```

12337 \def\@PushButton[#1]#2{% parameters, label
12338   \def\Fld@name{#2}%

```

```

12339 \begingroup
12340 \Field@toks={ }%
12341 \expandafter\HyField@SetKeys\expandafter{%
12342 \DefaultOptionsofPushButton,#1%
12343 }%
12344 \PDFForm@Name
12345 \ifHy@pdfa
12346 \PackageError{hyperref}{%
12347 PDF/A: Push button with JavaScript is prohibited%
12348 }\@ehc
12349 \LayoutPushButtonField{%
12350 \leavevmode
12351 \MakeButtonField{#2}%
12352 }%
12353 \else
12354 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12355 \HyField@FlagsPushButton
12356 \ifFld@hidden\def\Fld@width{1sp}\fi
12357 \HyField@AdvanceAnnotCount
12358 \LayoutPushButtonField{%
12359 \leavevmode
12360 \Hy@escapeform\PDFForm@Push
12361 \@pdfm@mark{%
12362 ann @push\HyField@TheAnnotCount\space
12363 \dvipdfm@setdim
12364 <<\PDFForm@Push>>%
12365 }%
12366 }%
12367 \unhbox\pdfm@box
12368 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12369 \fi
12370 \endgroup
12371 }

```

\@Submit

```

12372 \def\@Submit[#1]#2{%
12373 \Field@toks={ }%
12374 \def\Fld@width{\DefaultWidthofSubmit}%
12375 \def\Fld@height{\DefaultHeightofSubmit}%
12376 \begingroup
12377 \expandafter\HyField@SetKeys\expandafter{%
12378 \DefaultOptionsofSubmit,#1%
12379 }%
12380 \HyField@FlagsPushButton
12381 \HyField@FlagsSubmit
12382 \ifFld@hidden\def\Fld@width{1sp}\fi
12383 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12384 \leavevmode
12385 \Hy@escapeform\PDFForm@Submit
12386 \HyField@AdvanceAnnotCount
12387 \@pdfm@mark{%
12388 ann @submit\HyField@TheAnnotCount\space
12389 \dvipdfm@setdim
12390 <<\PDFForm@Submit>>%
12391 }%
12392 \unhbox\pdfm@box%
12393 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%

```

```

12394 \endgroup
12395 }

\@Reset
12396 \def\@Reset[#1]#2{%
12397   \Field@toks={ }%
12398   \def\Fld@width{\DefaultWidthofReset}%
12399   \def\Fld@height{\DefaultHeightofReset}%
12400   \begingroup
12401     \expandafter\HyField@SetKeys\expandafter{%
12402       \DefaultOptionsofReset,#1%
12403     }%
12404   \leavevmode
12405   \ifHy@pdfa
12406     \PackageError{hyperref}{%
12407       PDF/A: Reset action is prohibited%
12408     }\@ehc
12409     \MakeButtonField{#2}%
12410   \else
12411     \HyField@FlagsPushButton
12412     \ifFld@hidden\def\Fld@width{1sp}\fi
12413     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12414     \Hy@escapeform\PDFForm@Reset
12415     \HyField@AdvanceAnnotCount
12416     \@pdfm@mark{%
12417       ann @reset\HyField@TheAnnotCount\space
12418       \dvipdfm@setdim
12419       <<\PDFForm@Reset>>%
12420     }%
12421     \unhbox\pdfm@box
12422     \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12423   \fi
12424 \endgroup
12425 }

\@CheckBox
12426 \def\@CheckBox[#1]#2{% parameters, label
12427   \def\Fld@name{#2}%
12428   \def\Fld@default{0}%
12429   \begingroup
12430     \def\Fld@width{\DefaultWidthofCheckBox}%
12431     \def\Fld@height{\DefaultHeightofCheckBox}%
12432     \Field@toks={ }%
12433     \expandafter\HyField@SetKeys\expandafter{%
12434       \DefaultOptionsofCheckBox,#1%
12435     }%
12436     \PDFForm@Name
12437     \HyField@FlagsCheckBox
12438     \ifFld@hidden\def\Fld@width{1sp}\fi
12439     \setbox\pdfm@box=\hbox{%
12440       \MakeCheckField{\Fld@width}{\Fld@height}%
12441     }%
12442     \HyField@AdvanceAnnotCount
12443     \LayoutCheckField{#2}{%
12444       \Hy@escapeform\PDFForm@Check
12445       \@pdfm@mark{%
12446         ann @check\HyField@TheAnnotCount\space

```

```

12447      \dvipdfm@setdim
12448      <<\PDFForm@Check>>%
12449    }%
12450    \unhbox\pdfm@box
12451    \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12452  }%
12453 \endgroup
12454 }

12455 \def\Hy@FormObjects{%
12456   \@pdfm@mark{obj @OBJpdfdocencoding%
12457     <<%
12458       /Type/Encoding%
12459       /Differences[%
12460         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12461         39/quotesingle %
12462         96/grave %
12463         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12464         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12465         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12466         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12467         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12468         164/currency %
12469         166/brokenbar %
12470         168/dieresis/copyright/ordfeminine %
12471         172/logicalnot/.notdef/registered/macron/degree/plusminus%
12472         /twosuperior/threesuperior/acute/mu %
12473         183/periodcentered/cedilla/onesuperior/ordmasculine %
12474         188/onequarter/onehalf/threequarters %
12475         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12476         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12477         /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12478         /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12479         /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12480         /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12481         /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12482         /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12483         /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12484         /thorn/ydieresis%
12485       ]%
12486     >>%
12487   }%
12488   \@pdfm@mark{obj @OBJZaDb%
12489     <<%
12490       /Type/Font%
12491       /Subtype/Type1%
12492       /Name/ZaDb%
12493       /BaseFont/ZapfDingbats%
12494     >>%
12495   }%
12496   \@pdfm@mark{obj @OBJHelv%
12497     <<%
12498       /Type/Font%
12499       /Subtype/Type1%
12500       /Name/Helv%
12501       /BaseFont/Helvetica%
12502       /Encoding @OBJpdfdocencoding%
12503     >>%

```

```

12504 }%
12505 \global\let\Hy@FormObjects\relax
12506 }
12507 </dvipdfm | xetex>

```

47.6 Common forms part

```
12508 <*pdfform>
```

\Hy@escapestring

```

12509 \begingroup\expandafter\expandafter\expandafter\endgroup
12510 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12511 \let\Hy@escapestring\@firstofone
12512 \def\Hy@escapeform#1{%
12513   \ifHy@escapeform
12514     \def\Hy@escapestring##1{%
12515       \noexpand\Hy@escapestring{\noexpand##1}%
12516     }%
12517     \edef\Hy@temp{#1}%
12518     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
12519     \def\Hy@escapestring##1{%
12520       \@ifundefined{Hy@esc@\string##1}{%
12521         ##1%
12522         \ThisShouldNotHappen
12523       }{%
12524         \csname Hy@esc@\string##1\endcsname
12525       }%
12526     }%
12527   \else
12528     \let\Hy@escapestring\@firstofone
12529   \fi
12530 }%
12531 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12532   \ifx\#3\%
12533   \else
12534     \expandafter
12535     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12536     \Hy@ReturnAfterFi{%
12537       \Hy@@escapeform#3\@nil
12538     }%
12539   \fi
12540 }%
12541 \else
12542   \def\Hy@escapeform#1{%
12543     \ifHy@escapeform
12544       \let\Hy@escapestring\pdfescapestring
12545     \else
12546       \let\Hy@escapestring\@firstofone
12547     \fi
12548   }%
12549   \Hy@escapeform{ }%
12550 \fi

```

\PDFForm@Name

```

12551 \def\PDFForm@Name{%
12552   \begingroup
12553   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7

```

```

12554 \ifHy@unicode
12555 \Hy@unicodedefalse
12556 \fi
12557 \fi
12558 \HyPsd@XeTeXBigCharstrue
12559 \pdfstringdef\Hy@gtemp\Fld@name
12560 \endgroup
12561 \let\Fld@name\Hy@gtemp
12562 }

```

\PDFForm@Check

```

12563 \def\PDFForm@Check{%
12564 /Subtype/Widget%
12565 \Fld@annotflags
12566 /T(\Fld@name)%
12567 /FT/Btn%
12568 \Fld@flags
12569 /Q \Fld@align
12570 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12571 /MK<<%
12572 \ifnum\Fld@rotation=\z@
12573 \else
12574 /R \Fld@rotation
12575 \fi
12576 \ifx\Fld@bordercolor\relax
12577 \else
12578 /BC[\Fld@bordercolor]%
12579 \fi
12580 \ifx\Fld@bcolor\relax
12581 \else
12582 /BG[\Fld@bcolor]%
12583 \fi
12584 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12585 >>%
12586 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12587 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12588 /H/P%
12589 \ifFld@checked /V/Yes\else /V/Off\fi
12590 }

```

\PDFForm@Push

```

12591 \ifHy@pdfa
12592 \else
12593 \def\PDFForm@Push{%
12594 /Subtype/Widget%
12595 \Fld@annotflags
12596 /T(\Fld@name)%
12597 /FT/Btn%
12598 \Fld@flags
12599 /H/P%
12600 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12601 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12602 \ifx\Fld@bordercolor\relax\else 1\fi
12603 \space
12604 \else
12605 /MK<<%
12606 \ifnum\Fld@rotation=\z@

```

```

12607      \else
12608          /R \Fld@rotation
12609      \fi
12610      \ifx\Fld@bordercolor\relax
12611      \else
12612          /BC[\Fld@bordercolor]%
12613      \fi
12614      >>%
12615  \fi
12616  /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12617 }%
12618 \fi

```

\Fld@additionalactions

```

12619 \def\Fld@@additionalactions{%
K input (keystroke) format
12620 \ifx\Fld@keystroke@code\@empty
12621 \else
12622   /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12623 \fi

```

F display format

```

12624 \ifx\Fld@format@code\@empty
12625 \else
12626   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12627 \fi

```

V validation

```

12628 \ifx\Fld@validate@code\@empty
12629 \else
12630   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12631 \fi

```

C calculation

```

12632 \ifx\Fld@calculate@code\@empty
12633 \else
12634   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12635 \fi

```

Fo receiving the input focus

```

12636 \ifx\Fld@onfocus@code\@empty
12637 \else
12638   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12639 \fi

```

Bl loosing the input focus (blurred)

```

12640 \ifx\Fld@onblur@code\@empty
12641 \else
12642   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12643 \fi

```

D pressing the mouse button (down)

```

12644 \ifx\Fld@onmousedown@code\@empty
12645 \else
12646   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12647 \fi

```

U releasing the mouse button (up)

```

12648 \ifx\Fld@onmouseup@code\@empty

```



```

12649 \else
12650   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12651 \fi

```

E cursor enters the annotation's active area.

```

12652 \ifx\Fld@onenter@code\@empty
12653 \else
12654   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12655 \fi

```

X cursor exits the annotation's active area.

```

12656 \ifx\Fld@onexit@code\@empty
12657 \else
12658   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12659 \fi
12660 }
12661 \def\Fld@additionalactions{%
12662 \if\Fld@@additionalactions-%
12663 \else
12664   \ifHy@pdfa
12665   \else
12666     /AA<<\Fld@@additionalactions>>%
12667   \fi
12668 \fi
12669 }

```

\PDFForm@List

```

12670 \def\PDFForm@List{%
12671 /Subtype/Widget%
12672 \Fld@annotflags
12673 /T(\Fld@name)%
12674 /FT/Ch%
12675 \Fld@flags
12676 /Q \Fld@align
12677 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12678 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12679   \ifx\Fld@bordercolor\relax\else 1\fi
12680   \ifx\Fld@bcolor\relax \else 1\fi
12681   \space
12682 \else
12683 /MK<<%
12684   \ifnum\Fld@rotation=\z@
12685   \else
12686     /R \Fld@rotation
12687   \fi
12688   \ifx\Fld@bordercolor\relax
12689   \else
12690     /BC[\Fld@bordercolor]%
12691   \fi
12692   \ifx\Fld@bcolor\relax
12693   \else
12694     /BG[\Fld@bcolor]%
12695   \fi
12696 >>%
12697 \fi
12698 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12699   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12700 \Fld@choices

```

```

12701 \Fld@additionalactions
12702 }

```

\PDFForm@Radio

```

12703 \def\PDFForm@Radio{%
12704   /Subtype/Widget%
12705   \Fld@annotflags
12706   /T(\Fld@name)%
12707   /FT/Btn%
12708   \Fld@flags
12709   /H/P%
12710   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12711   /MK<<%
12712     \ifnum\Fld@rotation=\z@
12713     \else
12714       /R \Fld@rotation
12715     \fi
12716     \ifx\Fld@bordercolor\relax
12717     \else
12718       /BC[\Fld@bordercolor]%
12719     \fi
12720     \ifx\Fld@bcolor\relax
12721     \else
12722       /BG[\Fld@bcolor]%
12723     \fi
12724     /CA(\Fld@radiosymbol)%
12725   >>%
12726   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12727     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12728   \ifx\@currValue\Fld@default
12729     /V/\Fld@default
12730   \else
12731     /V/Off%
12732   \fi
12733   \Fld@additionalactions
12734 }

```

\PDFForm@Text

```

12735 \def\PDFForm@Text{%
12736   /Subtype/Widget%
12737   \Fld@annotflags
12738   /T(\Fld@name)%
12739   /FT/Tx%
12740   \Fld@flags
12741   /Q \Fld@align
12742   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12743   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12744     \ifx\Fld@bordercolor\relax\else 1\fi
12745     \ifx\Fld@bcolor\relax \else 1\fi
12746     \space
12747   \else
12748     /MK<<%
12749     \ifnum\Fld@rotation=\z@
12750     \else
12751       /R \Fld@rotation
12752     \fi
12753     \ifx\Fld@bordercolor\relax

```

```

12754     \else
12755         /BC[\Fld@bordercolor]%
12756     \fi
12757     \ifx\Fld@bcolor\relax
12758     \else
12759         /BG[\Fld@bcolor]%
12760     \fi
12761     >>%
12762 \fi
12763 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12764     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12765 /DV(\Hy@escapestring{\Fld@default})%
12766 /V(\Hy@escapestring{\Fld@value})%
12767 \Fld@additionalactions
12768 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12769 }

```

\PDFForm@Submit

```

12770 \def\PDFForm@Submit{%
12771     /Subtype/Widget%
12772     \Fld@annotflags
12773     /T(\Fld@name)%
12774     /FT/Btn%
12775     \Fld@flags
12776     /H/P%
12777     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12778     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12779         \ifx\Fld@bordercolor\relax\else 1\fi
12780         \space
12781     \else
12782         /MK<<%
12783         \ifnum\Fld@rotation=\z@
12784         \else
12785             /R \Fld@rotation
12786         \fi
12787         \ifx\Fld@bordercolor\relax
12788         \else
12789             /BC[\Fld@bordercolor]%
12790         \fi
12791         >>%
12792     \fi
12793     /A<<%
12794     /S/SubmitForm%
12795     /F<<%
12796     /FS/URL%
12797     /F(\Hy@escapestring{\Form@action})%
12798     >>%
12799     \Fld@submitflags
12800     >>%
12801 }

```

\PDFForm@Reset

```

12802 \ifHy@pdfa
12803 \else
12804     \def\PDFForm@Reset{%
12805         /Subtype/Widget%
12806         \Fld@annotflags

```

```

12807 /T(\Fld@name)%
12808 /FT/Btn%
12809 \Fld@flags
12810 /H/P%
12811 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12812 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12813 \ifx\Fld@bordercolor\relax\else 1\fi
12814 \space
12815 \else
12816 /MK<<%
12817 \ifnum\Fld@rotation=\z@
12818 \else
12819 /R \Fld@rotation
12820 \fi
12821 \ifx\Fld@bordercolor\relax
12822 \else
12823 /BC[\Fld@bordercolor]%
12824 \fi
12825 % /CA (Clear)
12826 % /AC (Done)
12827 >>%
12828 \fi
12829 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12830 /A<</S/ResetForm>>%
12831 }%
12832 \fi

12833 </pdfform>
12834 <*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`

```

12835 \def\phantomsection{%
12836 \Hy@MakeCurrentHrefAuto{section*}%
12837 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12838 }
12839 </package>

```

48.1 Bookmarks

```
12840 <*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.

```

12841 \def\Hy@writebookmark#1#2#3#4#5{%
12842   % section number, text, label, level, file
12843   \ifx\WriteBookmarks\relax%
12844   \else
12845     \ifnum#4>\Hy@bookmarksdepth\relax
12846     \else
12847       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12848     \fi
12849   \fi
12850 }
12851 \def\Hy@currentbookmarklevel{0}
12852 \def\Hy@numberline#1{#1 }
12853 \def\@@writetorep#1#2#3#4#5{%
12854   \begingroup
12855     \edef\Hy@tempa{#5}%
12856     \ifx\Hy@tempa\Hy@bookmarkstype
12857       \edef\Hy@level{#4}%
12858       \ifx\Hy@levelcheck Y%
12859         \@tempcnta\Hy@level\relax
12860         \advance\@tempcnta by -1 %
12861         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12862           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12863           \advance\@tempcnta by 1 %
12864           \Hy@Warning{%
12865             Difference (\the\@tempcnta) between bookmark levels is %
12866             greater \MessageBreak than one, level fixed%
12867           }%
12868           \@tempcnta\Hy@currentbookmarklevel
12869           \advance\@tempcnta by 1 %
12870           \edef\Hy@level{\the\@tempcnta}%
12871         \fi
12872       \else
12873         \global\let\Hy@levelcheck Y%
12874       \fi
12875       \global\let\Hy@currentbookmarklevel\Hy@level
12876       \@tempcnta\Hy@level\relax
12877       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12878       \advance\@tempcnta by -1 %
12879       \edef\Hy@tempa{#3}%
12880       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12881       \ifx\Hy@tempa\Hy@tempb
12882         \Hy@Warning{%
12883           The anchor of a bookmark and its parent's must not%
12884           \MessageBreak be the same. Added a new anchor%
12885         }%
12886       \phantomsection
12887     \fi
12888     \ifHy@bookmarksnumbered
12889       \let\numberline\Hy@numberline
12890       \let\booknumberline\Hy@numberline

```

```

12891 \let\partnumberline\Hy@numberline
12892 \let\chapternumberline\Hy@numberline
12893 \else
12894 \let\numberline\@gobble
12895 \let\booknumberline\@gobble
12896 \let\partnumberline\@gobble
12897 \let\chapternumberline\@gobble
12898 \fi
12899 \HyPsd@XeTeXBigCharstrue
12900 \pdfstringdef\Hy@tempa{#2}%
12901 \HyPsd@SanitizeForOutFile\Hy@tempa
12902 \if@filesw
12903 \stepcounter{bookmark@seq@number}%
12904 \@ifundefined{@outlinefile}{%
12905 }{%
12906 \protected@write\@outlinefile{}{%
12907 \protect\BOOKMARK
12908 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12909 {\Hy@tempa}{\Hy@tempb}%
12910 \@percentchar\space\thebookmark@seq@number
12911 }%
12912 }%
12913 \fi
12914 \fi
12915 \endgroup
12916 }
12917 \newcounter{bookmark@seq@number}

12918 \begingroup
12919 \lccode'('= '{%
12920 \lccode'=' '{%
12921 \lccode'1=\z@
12922 \lccode'2=\z@
12923 \lccode'3=\z@
12924 \lccode'5=\z@
12925 \lccode'7=\z@
12926 \lccode'#= \z@
12927 \lccode'\=' \z@
12928 \lccode'\{=\z@
12929 \lccode'\}=\z@
12930 \lowercase{%
12931 \endgroup
12932 \def\HyPsd@SanitizeForOutFile#1{%
12933 \@onelevel@sanitize\Hy@tempa
12934 \escapechar'\%
12935 \edef\Hy@tempa{%
12936 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12937 }%
12938 \edef\Hy@tempa{%
12939 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12940 }%
12941 }%
12942 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12943 #1%
12944 \ifx\#2\%
12945 \expandafter\ltx@gobble
12946 \else
12947 \expandafter\ltx@firstofone

```

```

12948 \fi
12949 {%
12950 \string\173%
12951 \HyPsd@SanitizeOut@BraceLeft#2\@nil
12952 }%
12953 }%
12954 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12955 #1%
12956 \ifx\#2\%
12957 \expandafter\ltx@gobble
12958 \else
12959 \expandafter\ltx@firstofone
12960 \fi
12961 {%
12962 \string\175%
12963 \HyPsd@SanitizeOut@BraceRight#2\@nil
12964 }%
12965 }%
12966 }

```

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

```

12967 \newcommand{\currentpdfbookmark}{%
12968 \pdfbookmark[\Hy@currentbookmarklevel]%
12969 }
12970 \newcommand{\subpdfbookmark}{%
12971 \@tempcnta\Hy@currentbookmarklevel
12972 \Hy@StepCount\@tempcnta
12973 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12974 }
12975 \newcommand{\belowpdfbookmark}[2]{%
12976 \@tempcnta\Hy@currentbookmarklevel
12977 \Hy@StepCount\@tempcnta
12978 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12979 \advance\@tempcnta by -1 %
12980 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12981 }

```

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.

```

12982 \renewcommand\pdfbookmark[3][0]{%
12983 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12984 \hyper@anchorstart{#3.#1}\hyper@anchorend
12985 }
12986 \def\BOOKMARK{%
12987 \@ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}%
12988 }
12989 \def\@BOOKMARK[#1]{%
12990 \@ifnextchar[\@@BOOKMARK[{#1}]{\@@BOOKMARK[{#1}][-]}%
12991 }

```

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
```

```

12992 \RequirePackage{rerunfilecheck}[2009/12/10]
12993 \def\Hy@OutlineRerunCheck{%

```

```

12994 \RerunFileCheck{\jobname.out}{}%
12995 \immediate\closeout\@outlinefile
12996 }{%
12997 Rerun to get outlines right\MessageBreak
12998 or use package 'bookmark'%
12999 }%
13000 }

```

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.

```

13001 <*vtex>
13002 \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.

```

13003 \begingroup
13004 \catcode'\'=12 %
13005 \ifnum\Hy@VTeXversion<650 %
13006 \catcode'\ "=12 %
13007 \gdef\hv@pdf@char#1#2#3{%
13008 \char
13009 \ifcase'#1#2#3 %
13010 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13011 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13012 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13013 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13014 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13015 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13016 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13017 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13018 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13019 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13020 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13021 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13022 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13023 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13024 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
13025 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13026 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13027 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13028 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13029 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13030 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13031 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13032 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13033 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13034 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13035 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13036 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13037 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13038 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%

```



```

13039 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13040 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13041 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13042 \fi
13043 }%
13044 \else
13045 \gdef\hv@pdf@char{\char'}%
13046 \fi
13047 \endgroup

```

\@@BOOKMARK

```

13048 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13049 \expandafter\edef\csname @count@#3\endcsname{%
13050 \the\@serial@counter
13051 }%
13052 \edef\@mycount{\the\@serial@counter}%
13053 \Hy@StepCount\@serial@counter
13054 \edef\@parcount{%
13055 \expandafter\ifx\csname @count@#5\endcsname\relax
13056 0%
13057 \else
13058 \csname @count@#5\endcsname
13059 \fi
13060 }%
13061 \immediate\special{%
13062 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13063 s=\ifx#2-c\else o\fi,t=#4%
13064 }%
13065 }%

```

\ReadBookmarks

```

13066 \def\ReadBookmarks{%
13067 \begingroup
13068 \def\0{\hv@pdf@char 0}%
13069 \def\1{\hv@pdf@char 1}%
13070 \def\2{\hv@pdf@char 2}%
13071 \def\3{\hv@pdf@char 3}%
13072 \def\({}%
13073 \def\)}%
13074 \def\do##1{%
13075 \ifnum\catcode'##1=\active
13076 \@makeother##1%
13077 \else
13078 \ifnum\catcode'##1=6 %
13079 \@makeother##1%
13080 \fi
13081 \fi
13082 }%
13083 \dospecials
13084 \Hy@safe@activetrue
13085 \InputIfFileExists{\jobname.out}{-}{-}%
13086 \endgroup
13087 \ifx\WriteBookmarks\relax
13088 \else
13089 \if@filesw
13090 \newwrite\@outlinefile
13091 \Hy@OutlineRerunCheck

```

```

13092 \immediate\openout\@outlinefile=\jobname.out\relax
13093 \ifHy@typexml
13094 \immediate\write\@outlinefile{<relaxxml>\relax}%
13095 \fi
13096 \fi
13097 \fi
13098 }

13099 </vtx>
13100 <!*vtx>
13101 \def\ReadBookmarks{%
13102 \begingroup
13103 \def\do##1{%
13104 \ifnum\catcode'##1=\active
13105 \@makeother##1%
13106 \else
13107 \ifnum\catcode'##1=6 %
13108 \@makeother##1%
13109 \fi
13110 \fi
13111 }%
13112 \dospecials
13113 \Hy@safe@activetrue
13114 \escapechar='\%
13115 \let\escapechar\@gobble %
13116 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13117 \calc@bm@number{##5}%
13118 }%
13119 \InputIfFileExists{\jobname.out}{-}{-}%
13120 \ifx\WriteBookmarks\relax
13121 \global\let\WriteBookmarks\relax
13122 \fi
13123 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13124 \def\Hy@temp{##4}%
13125 <*pdfTex>
13126 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13127 \Hy@OutlineName{\Hy@pstringName{%
13128 ##2\check@bm@number{##3}}%
13129 }{%
13130 \expandafter\strip@prefix\meaning\Hy@temp
13131 }%
13132 </pdfTex>
13133 <*pdfmark>
13134 \pdfmark{%
13135 pdfmark=/OUT,%
13136 Count={##2\check@bm@number{##3}},%
13137 Dest={##3},%
13138 Title=\expandafter\strip@prefix\meaning\Hy@temp
13139 }%
13140 </pdfmark>
13141 <*dvipdfm | xetex>
13142 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13143 \@pdfm@mark{%
13144 outline \ifHy@DvipdfmxOutlineOpen
13145 [%
13146 \ifnum##21>\z@
13147 \else
13148 -%

```

```

13149         \fi
13150     ] %
13151     \fi
13152     ##1<<%
13153     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13154     /A<<%
13155     /S/GoTo%
13156     /D(\Hy@pstringName)%
13157     >>%
13158     >>%
13159     }%
13160 </dvipdfm | xetex>
13161 }%
13162 {%
13163     \def\WriteBookmarks{0}%
13164     \InputIfFileExists{\jobname.out}{\relax}%
13165 }%
13166 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
13167 \ifx\WriteBookmarks\relax
13168 \else
13169     \if@files
13170         \newwrite\@outlinefile
13171         \Hy@OutlineRerunCheck
13172         \immediate\openout\@outlinefile=\jobname.out\relax
13173         \ifHy@typexml
13174             \immediate\write\@outlinefile{<relaxxml>\relax}%
13175         \fi
13176     \fi
13177 \fi
13178 \endgroup
13179 }
13180 <*pdfTeX>
13181 \def\Hy@OutlineName#1#2#3#4{%
13182     \pdfoutline goto name{#2}count#3{#4}%
13183 }
13184 </pdfTeX>
13185 \def\check@bm@number#1{%
13186     \expandafter\ifx\csname B_#1\endcsname\relax
13187         0%
13188     \else
13189         \csname B_#1\endcsname
13190     \fi
13191 }
13192 \def\calc@bm@number#1{%
13193     \@tempcnta=\check@bm@number{#1}\relax
13194     \advance\@tempcnta by 1 %
13195     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13196 }
13197 </!vTeX>

13198 \ifHy@implicit
13199 \else
13200     \expandafter\endinput
13201 \fi

13202 </outlines>
13203 <*outlines | hypertex>
13204 \newlength\Hy@SectionHShift

```

```

13205 \def\Hy@SectionAnchorHref#1{%
13206   \ifx\protect\@typeset@protect
13207     \Hy@@@SectionAnchor{#1}%
13208   \fi
13209 }
13210 \DeclareRobustCommand*\Hy@@@SectionAnchor}[1]{%
13211   \leavevmode
13212   \hbox to 0pt{%
13213     \kern-\Hy@SectionHShift
13214     \Hy@raisedlink{%
13215       \hyper@anchorstart{#1}\hyper@anchorend
13216     }%
13217     \hss
13218   }%
13219 }
13220 \let\H@old@ssect\@ssect
13221 \def\@ssect#1#2#3#4#5{%
13222   \Hy@MakeCurrentHrefAuto{section*}%
13223   \setlength{\Hy@SectionHShift}{#1}%
13224   \begingroup
13225     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13226     \toks\tw@\expandafter{%
13227       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13228       #5%
13229     }%
13230   \edef\x{\endgroup
13231     \the\toks@{\the\toks\tw@}%
13232   }\x
13233 }
13234 \let\H@old@schapter\@schapter
13235 \def\@schapter#1{%
13236   \begingroup
13237     \let\@mkboth\@gobbletwo
13238     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13239     \Hy@raisedlink{%
13240       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13241     }%
13242   \endgroup
13243   \H@old@schapter{#1}%
13244 }

```

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:

```

13245 \ltx@ifundefined{chapter}{-}{%
13246   \let\Hy@org@chapter\@chapter
13247   \def\@chapter{%
13248     \def\Hy@next{%
13249       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13250       \Hy@raisedlink{%
13251         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13252       }%
13253     }%
13254     \ifnum\c@secnumdepth>\m@ne
13255       \ltx@ifundefined{if@mainmatter}%
13256       \iftrue{\csname if@mainmatter\endcsname}%
13257       \let\Hy@next\relax
13258     \fi

```

```

13259 \fi
13260 \Hy@next
13261 \Hy@org@chapter
13262 }%
13263 }

13264 \let\H@old@part\@part
13265 \begingroup\expandafter\expandafter\expandafter\endgroup
13266 \expandafter\ifx\csname chapter\endcsname\relax
13267 \let\Hy@secnum@part\z@
13268 \else
13269 \let\Hy@secnum@part\m@ne
13270 \fi
13271 \def\@part{%
13272 \ifnum\Hy@secnum@part>\c@secnumdepth
13273 \phantomsection
13274 \fi
13275 \H@old@part
13276 }

13277 \let\H@old@spart\@spart
13278 \def\@spart#1{%
13279 \Hy@MakeCurrentHrefAuto{part*}%
13280 \Hy@raisedlink{%
13281 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13282 }%
13283 \H@old@spart{#1}%
13284 }

13285 \let\H@old@sect\@sect
13286 \def\@sect#1#2#3#4#5#6[#7]#8{%
13287 \ifnum #2>\c@secnumdepth
13288 \expandafter\@firstoftwo
13289 \else
13290 \expandafter\@secondoftwo
13291 \fi
13292 {%
13293 \Hy@MakeCurrentHrefAuto{section*}%
13294 \setlength{\Hy@SectionHShift}{#3}%
13295 \begingroup
13296 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13297 \toks\tw@\expandafter{%
13298 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13299 #8%
13300 }%
13301 \edef\x{\endgroup
13302 \the\toks@\the\toks\tw@}%
13303 }\x
13304 }{%
13305 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13306 }%
13307 }

13308 </outlines | hypertex>
13309 <*outlines>

13310 \expandafter\def\csname Parent-4\endcsname{}
13311 \expandafter\def\csname Parent-3\endcsname{}
13312 \expandafter\def\csname Parent-2\endcsname{}
13313 \expandafter\def\csname Parent-1\endcsname{}
13314 \expandafter\def\csname Parent0\endcsname{}

```

```

13315 \expandafter\def\csname Parent1\endcsname{}
13316 \expandafter\def\csname Parent2\endcsname{}
13317 \expandafter\def\csname Parent3\endcsname{}
13318 \expandafter\def\csname Parent4\endcsname{}
13319 </outlines>

```

49 Compatibility with koma-script classes

```
13320 <*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.

```

13321 \def\Hy@tempa{%
13322   \def\@addchap{##1}##2{%
13323     \typeout{##2}%
13324     \if@twoside
13325       \@mkboth{##1}{}%
13326     \else
13327       \@mkboth{}{##1}%
13328     \fi
13329     \addtocontents{lof}{\protect\addvspace{10\p@}}%
13330     \addtocontents{lot}{\protect\addvspace{10\p@}}%
13331     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13332     \Hy@raisedlink{%
13333       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13334     }%
13335     \if@twocolumn
13336       \@topnewpage[\@makeschapterhead{##2}]%
13337     \else
13338       \@makeschapterhead{##2}%
13339       \@afterheading
13340     \fi
13341     \addcontentsline{toc}{chapter}{##1}%
13342   }%
13343 }
13344 \@ifclassloaded{scrbook}{%
13345   \@ifclasslater{scrbook}{2001/01/01}{%
13346     \let\Hy@tempa\@empty
13347   }{}%
13348 }{%
13349   \@ifclassloaded{scrreprt}{%
13350     \@ifclasslater{scrreprt}{2001/01/01}{%
13351       \let\Hy@tempa\@empty
13352     }{}%
13353   }{%
13354     \let\Hy@tempa\@empty
13355   }%
13356 }%
13357 \Hy@tempa
13358 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

13359 `(*pdlenc)`

13360 `\DeclareFontEncoding{PD1}{-}{-}`

Accents

13361 `\DeclareTextAccent{'}{PD1}{\textasciigrave}`
13362 `\DeclareTextAccent{'}{PD1}{\textacute}`
13363 `\DeclareTextAccent{^}{PD1}{\textasciicircum}`
13364 `\DeclareTextAccent{~}{PD1}{\texttilde}`
13365 `\DeclareTextAccent{¨}{PD1}{\textasciidieresis}`
13366 `\DeclareTextAccent{r}{PD1}{\textring}`
13367 `\DeclareTextAccent{v}{PD1}{\textasciicaron}`
13368 `\DeclareTextAccent{.}{PD1}{\textdotaccent}`
13369 `\DeclareTextAccent{c}{PD1}{\textcedilla}`
13370 `\DeclareTextAccent{=}{PD1}{\textasciimacron}`
13371 `\DeclareTextAccent{b}{PD1}{\textmacronbelow}`
13372 `\DeclareTextAccent{d}{PD1}{\textdotbelow}`
13373 `\DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}`
13374 `\DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}`
13375 `\DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}`
13376 `\DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}`
13377 `\DeclareTextCompositeCommand{¨}{PD1}{\@empty}{\textasciidieresis}`
13378 `\DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}`
13379 `\DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}`
13380 `\DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}`
13381 `\DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}`
13382 `\DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}`
13383 `\DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}`
13384 `\DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}`
13385 `\DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}`
13386 `\DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}`
13387 `\DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}`
13388 `\DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}`
13389 `\DeclareTextCompositeCommand{¨}{PD1}{\ }{\textasciidieresis}`
13390 `\DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}`
13391 `\DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}`
13392 `\DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}`
13393 `\DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}`
13394 `\DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}`
13395 `\DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}`
13396 `\DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}`
13397 `\DeclareTextCommand{k}{PD1}[1]{\TextSymbolUnavailable{k{#1}}{#1}}`
13398 `\DeclareTextCommand{t}{PD1}[1]{\TextSymbolUnavailable{t{#1}}{#1}}`
13399 `\DeclareTextCommand{\newtie}{PD1}[1]{%`
13400 `\TextSymbolUnavailable{\newtie{#1}}{#1}%`
13401 `}`

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

13402 `% U+0009 (CHARACTER TABULATION)`
13403 `\DeclareTextCommand{textHT}{PD1}{\011}% U+0009`
13404 `% U+000A (LINE FEED)`
13405 `\DeclareTextCommand{textLF}{PD1}{\012}% U+000A`
13406 `% U+000D (CARRIAGE RETURN)`
13407 `\DeclareTextCommand{textCR}{PD1}{\015}% U+000D`

Accent glyph names

13408 `% U+02D8 BREVE; breve`
13409 `\DeclareTextCommand{textasciibreve}{PD1}{\030}% U+02D8`
13410 `% U+02C7 CARON; caron`

13411 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 13412 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 13413 \DeclareTextCommand{\textcirc{}}{PD1}{\032}% U+02C6
 13414 % U+02D9 DOT ABOVE; dotaccent
 13415 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 13416 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13417 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 13418 % U+02DB OGONEK; ogonek
 13419 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 13420 % U+02DA RING ABOVE; ring
 13421 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 13422 % U+02DC SMALL TILDE; ilde, *tilde
 13423 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 13424 % U+0022 QUOTATION MARK; quotedbl
 13425 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 13426 % U+0023 NUMBER SIGN; numbersign
 13427 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 13428 % U+0024 DOLLAR SIGN; dollar
 13429 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 13430 % U+0025 PERCENT SIGN; percent
 13431 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 13432 % U+0026 AMPERSAND; ampersand
 13433 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 13434 % U+0028 LEFT PARENTHESIS; parenleft
 13435 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 13436 % U+0029 RIGHT PARENTHESIS; parenright
 13437 \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
 13438 % U+002E FULL STOP; period
 13439 \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
 13440 % U+003C LESS-THAN SIGN; less
 13441 \DeclareTextCommand{\textless}{PD1}{\string<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13442 % U+003E GREATER-THAN SIGN; greater
 13443 \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
 13444 % U+005C REVERSE SOLIDUS; backslash
 13445 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13446 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13447 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13448 % U+005F LOW LINE; underscore
 13449 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13450 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13451 % U+0060 GRAVE ACCENT; grave
 13452 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13453 % U+0069 LATIN SMALL LETTER I; i
 13454 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13455 % U+007B LEFT CURLY BRACKET; braceleft
 13456 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13457 % U+007C VERTICAL LINE; *bar, verticalbar
 13458 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13459 % U+007D RIGHT CURLY BRACKET; braceright
 13460 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13461 % U+007E TILDE; asciitilde
 13462 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13463 % U+2022 BULLET; bullet
 13464 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13465 % U+2020 DAGGER; dagger
 13466 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13467 % U+2021 DOUBLE DAGGER; daggerdbl
 13468 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13469 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13470 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13471 % U+2014 EM DASH; emdash
 13472 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13473 % U+2013 EN DASH; endash
 13474 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13475 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13476 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13477 % U+2044 FRACTION SLASH; fraction
 13478 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13479 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 13480 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 13481 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 13482 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 13483 % U+2212 MINUS SIGN; minus
 13484 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13485 % U+2030 PER MILLE SIGN; perthousand
 13486 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13487 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

13488 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13489 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13490 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13491 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13492 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13493 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13494 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13495 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13496 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13497 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13498 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13499 % U+2122 TRADE MARK SIGN; trademark
13500 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13501 % U+FB01 LATIN SMALL LIGATURE FI; fi
13502 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13503 % U+FB02 LATIN SMALL LIGATURE FL; fl
13504 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13505 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13506 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13507 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13508 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13509 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13510 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13511 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13512 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
13513 \DeclareTextCommand{\IJ}{PD1}{\230}
13514 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13515 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13516 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13517 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13518 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13519 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13520 % U+0153 LATIN SMALL LIGATURE OE; oe
13521 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13522 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13523 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13524 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13525 \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.

13526 % U+20AC EURO SIGN; *Euro, euro
13527 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
13528 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
13529 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
13530 % U+00A2 CENT SIGN; cent
13531 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
13532 % U+00A3 POUND SIGN; sterling
13533 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
13534 % U+00A4 CURRENCY SIGN; currency
13535 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
13536 % U+00A5 YEN SIGN; yen
13537 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
13538 % U+00A6 BROKEN BAR; brokenbar
13539 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
13540 % U+00A7 SECTION SIGN; section
13541 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
13542 % U+00A8 DIAERESIS; dieresis

13543 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
13544 % U+00A9 COPYRIGHT SIGN; copyright
13545 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
13546 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13547 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
13548 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
13549 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
13550 % U+00AC NOT SIGN; logicalnot
13551 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
13552 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
13553 % U+00AE REGISTERED SIGN; registered
13554 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
13555 % U+00AF MACRON; *macron, overscore
13556 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
13557 % U+00B0 DEGREE SIGN; degree
13558 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
13559 % U+00B1 PLUS-MINUS SIGN; plusminus
13560 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
13561 % U+00B2 SUPERSCRIFT TWO; twosuperior
13562 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
13563 % U+00B3 SUPERSCRIFT THREE; threesuperior
13564 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
13565 % U+00B4 ACUTE ACCENT; acute
13566 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
13567 % U+00B5 MICRO SIGN; mu, mul
13568 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
13569 % U+00B6 PILCROW SIGN; paragraph
13570 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
13571 % U+00B7 MIDDLE DOT; middot, *periodcentered
13572 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
13573 % U+00B8 CEDILLA; cedilla
13574 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
13575 % U+00B9 SUPERSCRIFT ONE; onesuperior
13576 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13577 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13578 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13579 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13580 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13581 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13582 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13583 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13584 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13585 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13586 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13587 % U+00BF INVERTED QUESTION MARK; questiondown
13588 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13589 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13590 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13591 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13592 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13593 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13594 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13595 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13596 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3

13597 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13598 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
13599 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13600 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13601 % U+00C6 LATIN CAPITAL LETTER AE; AE
13602 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13603 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13604 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13605 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13606 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13607 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13608 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13609 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13610 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13611 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13612 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
13613 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13614 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13615 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13616 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13617 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13618 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13619 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13620 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
13621 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13622 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13623 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13624 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13625 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13626 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13627 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13628 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13629 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13630 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13631 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13632 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13633 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13634 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13635 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13636 % U+00D7 MULTIPLICATION SIGN; multiply
13637 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13638 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13639 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13640 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13641 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13642 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13643 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13644 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13645 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13646 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13647 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13648 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13649 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13650 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13651 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13652 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13653 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF

13654 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13655 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13656 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13657 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13658 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13659 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13660 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13661 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13662 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13663 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13664 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13665 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13666 % U+00E6 LATIN SMALL LETTER AE; ae
13667 \DeclareTextCompositeCommand{\ae}{PD1}{\346}% U+00E6
13668 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13669 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13670 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13671 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13672 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13673 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13674 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13675 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13676 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13677 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13678 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13679 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13680 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13681 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13682 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13683 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
13684 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13685 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13686 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13687 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13688 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13689 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13690 % U+00F0 LATIN SMALL LETTER ETH; eth
13691 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13692 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13693 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13694 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13695 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13696 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13697 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13698 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13699 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13700 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13701 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
13702 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13703 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13704 % U+00F7 DIVISION SIGN; divide
13705 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13706 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13707 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13708 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13709 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13710 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute

```

13711 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13712 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13713 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
13714 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13715 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13716 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13717 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13718 % U+00FE LATIN SMALL LETTER THORN; thorn
13719 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13720 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13721 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13722 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

13723 \DeclareTextCommand{\SS}{PD1}{SS}
13724 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

13725 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13726 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13727 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13728 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
13729 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13730 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13731 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13732 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

13733 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13734 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13735 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13736 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13737 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13738 \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).

```

13739 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13740 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13741 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13742 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13743 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13744 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13745 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13746 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13747 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13748 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13749 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13750 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13751 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13752 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

13753 </pd1enc>

```

50.2 PU encoding

```

13754 <*puenc>
13755 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

13756 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13757 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
 13758 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13759 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
 13760 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13761 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13762 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13763 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13764 % U+0304 COMBINING MACRON; macroncmb
 13765 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13766 % U+0306 COMBINING BREVE; brevecmb
 13767 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13768 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13769 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13770 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13771 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13772 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13773 % U+030A COMBINING RING ABOVE; ringcmb
 13774 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13775 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13776 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13777 % U+030C COMBINING CARON; caroncmb
 13778 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13779 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13780 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13781 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13782 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13783 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13784 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13785 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13786 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13787 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13788 % U+0327 COMBINING CEDILLA; cedillacmb
 13789 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13790 % U+0328 COMBINING OGONEK; ogonekcmb
 13791 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13792 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13793 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13794 % U+20DD COMBINING ENCLOSING CIRCLE
 13795 \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.

13796 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
 13797 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
 13798 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
 13799 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13800 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
 13801 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
 13802 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
 13803 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
 13804 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
 13805 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
 13806 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
 13807 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
 13808 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
 13809 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
 13810 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}

```

13811 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13812 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13813 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13814 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13815 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13816 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13817 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
13818 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13819 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidiieresis}
13820 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13821 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13822 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13823 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13824 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13825 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13826 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13827 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13828 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13829 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13830 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13831 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13832 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13833 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13834 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13835 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13836 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13837 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13838 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13839 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13840 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13841 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13842 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13843 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13844 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13845 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13846 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13847 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13848 \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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13849 % U+0009 (CHARACTER TABULATION)
13850 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13851 % U+000A (LINE FEED)
13852 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13853 % U+000D (CARRIAGE RETURN)
13854 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
13855 % U+0022 QUOTATION MARK; quotedbl
13856 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13857 % U+0023 NUMBER SIGN; numbersign
13858 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13859 % U+0024 DOLLAR SIGN; dollar
13860 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

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13861 % U+0025 PERCENT SIGN; percent
 13862 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 13863 % U+0026 AMPERSAND; ampersand
 13864 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 13865 % U+0027 APOSTROPHE; quotesingle
 13866 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 13867 % U+0028 LEFT PARENTHESIS; parenleft
 13868 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 13869 % U+0029 RIGHT PARENTHESIS; parenright
 13870 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 13871 % U+002A ASTERISK; asterisk
 13872 \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
 13873 % U+003C LESS-THAN SIGN; less
 13874 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 13875 % U+003E GREATER-THAN SIGN; greater
 13876 \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
 13877 % U+005C REVERSE SOLIDUS; backslash
 13878 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13879 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13880 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13881 % U+005F LOW LINE; underscore
 13882 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13883 % U+0060 GRAVE ACCENT; grave
 13884 \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
 13885 % U+0069 LATIN SMALL LETTER I; i
 13886 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 13887 \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
 13888 % U+007B LEFT CURLY BRACKET; braceleft

13889 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13890 % U+007C VERTICAL LINE; *bar, verticalbar
 13891 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13892 % U+007D RIGHT CURLY BRACKET; braceright
 13893 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13894 % U+007E TILDE; asciitilde
 13895 \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
 13896 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13897 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13898 % U+00A2 CENT SIGN; cent
 13899 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13900 % U+00A3 POUND SIGN; sterling
 13901 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13902 % U+00A4 CURRENCY SIGN; currency
 13903 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13904 % U+00A5 YEN SIGN; yen
 13905 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13906 % U+00A6 BROKEN BAR; brokenbar
 13907 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13908 % U+00A7 SECTION SIGN; section
 13909 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13910 % U+00A8 DIAERESIS; dieresis
 13911 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13912 % U+00A9 COPYRIGHT SIGN; copyright
 13913 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13914 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13915 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13916 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13917 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13918 % U+00AC NOT SIGN; logicalnot
 13919 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13920 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13921 % U+00AE REGISTERED SIGN; registered
 13922 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13923 % U+00AF MACRON; *macron, overscore
 13924 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13925 % U+00B0 DEGREE SIGN; degree
 13926 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13927 % U+00B1 PLUS-MINUS SIGN; plusminus
 13928 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13929 % U+00B2 SUPERSCRIFT TWO; twosuperior
 13930 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13931 % U+00B3 SUPERSCRIFT THREE; threesuperior
 13932 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13933 % U+00B4 ACUTE ACCENT; acute
 13934 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13935 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13936 % U+00B5 MICRO SIGN; mu, mu1
 13937 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13938 % U+00B6 PILCROW SIGN; paragraph
 13939 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

13940 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13941 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 13942 % U+00B8 CEDILLA; cedilla
 13943 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 13944 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13945 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 13946 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13947 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 13948 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13949 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 13950 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13951 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 13952 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13953 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 13954 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13955 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 13956 % U+00BF INVERTED QUESTION MARK; questiondown
 13957 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 13958 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13959 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 13960 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13961 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 13962 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13963 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 13964 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13965 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 13966 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13967 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 13968 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13969 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 13970 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13971 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13972 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 13973 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 13974 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 13975 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 13976 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 13977 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 13978 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 13979 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 13980 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 13981 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 13982 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 13983 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 13984 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 13985 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 13986 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 13987 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 13988 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 13989 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
 13990 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 13991 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
 13992 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 13993 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
 13994 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 13995 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

13996 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13997 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13998 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13999 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
14000 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14001 \DeclareTextCompositeCommand{\-}{PU}{O}{\80\325}% U+00D5
14002 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14003 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
14004 % U+00D7 MULTIPLICATION SIGN; multiply
14005 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14006 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14007 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14008 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14009 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
14010 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14011 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14012 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14013 \DeclareTextCompositeCommand{\~}{PU}{U}{\80\333}% U+00DB
14014 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14015 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
14016 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14017 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14018 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14019 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14020 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14021 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
14022 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14023 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
14024 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14025 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14026 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14027 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
14028 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14029 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}% U+00E3
14030 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14031 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14032 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14033 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14034 % U+00E6 LATIN SMALL LETTER AE; ae
14035 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14036 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14037 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14038 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14039 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
14040 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14041 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14042 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14043 \DeclareTextCompositeCommand{\~}{PU}{e}{\80\352}% U+00EA
14044 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14045 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14046 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14047 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14048 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14049 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14050 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14051 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14052 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

14053 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
14054 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14055 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14056 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14057 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14058 % U+00F0 LATIN SMALL LETTER ETH; eth
14059 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14060 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14061 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
14062 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14063 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14064 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14065 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\363}% U+00F3
14066 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14067 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
14068 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14069 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
14070 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14071 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
14072 % U+00F7 DIVISION SIGN; divide
14073 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
14074 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14075 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
14076 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14077 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
14078 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14079 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\372}% U+00FA
14080 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14081 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
14082 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14083 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
14084 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14085 \DeclareTextCompositeCommand{\`}{PU}{y}{\80\375}% U+00FD
14086 % U+00FE LATIN SMALL LETTER THORN; thorn
14087 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
14088 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14089 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

14090 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
14091 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
14092 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
14093 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
14094 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
14095 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
14096 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
14097 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
14098 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
14099 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
14100 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
14101 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
14102 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
14103 \DeclareTextCompositeCommand{\`}{PU}{C}{\81\006}% U+0106
14104 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
14105 \DeclareTextCompositeCommand{\`}{PU}{c}{\81\007}% U+0107
14106 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex

14107 \DeclareTextCompositeCommand{\~}{PU}{C}{\81\010}% U+0108
14108 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
14109 \DeclareTextCompositeCommand{\~}{PU}{c}{\81\011}% U+0109
14110 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
14111 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
14112 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
14113 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
14114 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
14115 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
14116 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
14117 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
14118 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
14119 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
14120 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
14121 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
14122 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14123 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14124 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14125 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14126 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14127 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14128 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14129 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14130 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14131 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14132 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14133 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14134 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14135 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14136 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14137 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14138 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14139 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14140 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14141 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14142 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14143 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14144 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14145 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14146 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14147 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14148 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14149 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14150 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14151 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14152 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14153 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14154 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14155 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14156 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14157 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14158 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
14159 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14160 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14161 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14162 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex

14163 \DeclareTextCompositeCommand{\~}{PU}{H}{\81\044}% U+0124
14164 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14165 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14166 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14167 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14168 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14169 \DeclareTextCommand{\textthslash}{PU}{\81\047}% U+0127
14170 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14171 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14172 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14173 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
14174 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
14175 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14176 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14177 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14178 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14179 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14180 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14181 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14182 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14183 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14184 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14185 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14186 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14187 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14188 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14189 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14190 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14191 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14192 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14193 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14194 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14195 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14196 % U+0133 LATIN SMALL LIGATURE IJ; ij
14197 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14198 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14199 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
14200 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14201 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14202 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14203 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
14204 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14205 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14206 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

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

14207 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14208 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14209 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14210 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14211 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14212 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14213 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
14214 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B

14215 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14216 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14217 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14218 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14219 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14220 \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.
 14221 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14222 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14223 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14224 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14225 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14226 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14227 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14228 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14229 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14230 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14231 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14232 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14233 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14234 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14235 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14236 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14237 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14238 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14239 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14240 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14241 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14242 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14243 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14244 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14245 % U+014B LATIN SMALL LETTER ENG; eng
 14246 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14247 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14248 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 14249 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14250 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14251 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14252 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14253 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14254 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14255 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 14256 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14257 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 14258 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14259 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14260 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 14261 % U+0153 LATIN SMALL LIGATURE OE; oe
 14262 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 14263 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14264 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14265 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

14266 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14267 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14268 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14269 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14270 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14271 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14272 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14273 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14274 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14275 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14276 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14277 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14278 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14279 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14280 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14281 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14282 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14283 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14284 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14285 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14286 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14287 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14288 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14289 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14290 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14291 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14292 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14293 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14294 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14295 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14296 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14297 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14298 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14299 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14300 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14301 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14302 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14303 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14304 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14305 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14306 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14307 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14308 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14309 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14310 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14311 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14312 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14313 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14314 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14315 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14316 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14317 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14318 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14319 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut

14320 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14321 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhun-
 garumlaut
 14322 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14323 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14324 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14325 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14326 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14327 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14328 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14329 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14330 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14331 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14332 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14333 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14334 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14335 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14336 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14337 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14338 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14339 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14340 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14341 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14342 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14343 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14344 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14345 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14346 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14347 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14348 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14349 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14350 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

14351 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14352 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14353 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14354 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14355 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14356 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14357 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14358 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14359 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14360 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14361 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14362 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14363 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14364 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14365 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14366 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14367 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14368 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 14369 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14370 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14371 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14372 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14373 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

14374 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14375 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14376 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14377 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14378 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14379 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14380 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14381 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14382 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14383 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14384 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14385 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14386 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14387 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14388 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14389 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14390 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14391 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14392 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14393 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14394 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14395 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14396 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14397 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14398 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
14399 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14400 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
14401 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14402 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
14403 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14404 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
14405 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14406 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14407 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14408 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14409 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14410 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14411 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14412 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14413 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14414 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14415 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14416 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14417 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14418 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14419 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14420 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
14421 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
14422 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
14423 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
14424 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
14425 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
14426 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
14427 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
14428 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave

14429 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14430 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14431 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14432 % U+021F LATIN SMALL LETTER H WITH CARON
 14433 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14434 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14435 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14436 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14437 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14438 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14439 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14440 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14441 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14442 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14443 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14444 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14445 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14446 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14447 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14448 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14449 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14450 % U+0237 LATIN SMALL LETTER DOTLESS J
 14451 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

14452 % U+02C7 CARON; caron
 14453 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14454 % U+02D8 BREVE; breve
 14455 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14456 % U+02D9 DOT ABOVE; dotaccent
 14457 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14458 % U+02DA RING ABOVE; ring
 14459 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14460 % U+02DB OGONEK; ogonek
 14461 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14462 % U+02DC SMALL TILDE; ilde, *tilde
 14463 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14464 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14465 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14466 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14467 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14468 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14469 % U+02F7 MODIFIER LETTER LOW TILDE
 14470 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

14471 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14472 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14473 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14474 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14475 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14476 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14477 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14478 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14479 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14480 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

14481 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
14482 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
14483 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
14484 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
14485 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
14486 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
14487 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
14488 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
14489 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
14490 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
14491 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
14492 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
14493 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
14494 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
14495 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
14496 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
14497 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
14498 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
14499 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
14500 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
14501 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
14502 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
14503 % U+0392 GREEK CAPITAL LETTER BETA; Beta
14504 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
14505 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
14506 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
14507 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
14508 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
14509 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
14510 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
14511 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14512 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14513 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14514 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14515 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14516 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14517 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14518 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14519 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14520 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14521 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14522 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14523 % U+039C GREEK CAPITAL LETTER MU; Mu
14524 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14525 % U+039D GREEK CAPITAL LETTER NU; Nu
14526 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14527 % U+039E GREEK CAPITAL LETTER XI; Xi
14528 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14529 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14530 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14531 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14532 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14533 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14534 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1

14535 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14536 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14537 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14538 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14539 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14540 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14541 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14542 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14543 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14544 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14545 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14546 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14547 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14548 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14549 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14550 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14551 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14552 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
14553 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14554 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14555 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14556 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
14557 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14558 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
14559 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14560 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotonos
14561 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14562 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilonondieresis
14563 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
14564 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14565 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14566 % U+03B2 GREEK SMALL LETTER BETA; beta
14567 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
14568 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14569 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14570 % U+03B4 GREEK SMALL LETTER DELTA; delta
14571 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14572 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14573 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14574 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14575 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14576 % U+03B7 GREEK SMALL LETTER ETA; eta
14577 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14578 % U+03B8 GREEK SMALL LETTER THETA; theta
14579 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14580 % U+03B9 GREEK SMALL LETTER IOTA; iota
14581 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14582 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14583 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14584 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14585 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14586 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14587 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14588 % U+03BD GREEK SMALL LETTER NU; nu
14589 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD

14590 % U+03BE GREEK SMALL LETTER XI; xi
14591 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14592 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14593 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14594 % U+03C0 GREEK SMALL LETTER PI; pi
14595 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14596 % U+03C1 GREEK SMALL LETTER RHO; rho
14597 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14598 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14599 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14600 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14601 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14602 % U+03C4 GREEK SMALL LETTER TAU; tau
14603 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14604 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14605 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14606 % U+03C6 GREEK SMALL LETTER PHI; phi
14607 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14608 % U+03C7 GREEK SMALL LETTER CHI; chi
14609 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14610 % U+03C8 GREEK SMALL LETTER PSI; psi
14611 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14612 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14613 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14614 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
14615 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14616 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silonudieresis
14617 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14618 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14619 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14620 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14621 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14622 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14623 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
14624 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
14625 % U+03DA GREEK LETTER STIGMA; Stigmagreek
14626 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
14627 % U+03DB GREEK SMALL LETTER STIGMA
14628 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
14629 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
14630 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
14631 % U+03DD GREEK SMALL LETTER DIGAMMA
14632 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
14633 % U+03DE GREEK LETTER KOPPA; Koppagreek
14634 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
14635 % U+03DF GREEK SMALL LETTER KOPPA
14636 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
14637 % U+03E0 GREEK LETTER SAMPI; Sampigreek
14638 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
14639 % U+03E1 GREEK SMALL LETTER SAMPI
14640 \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.

14641 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE

14642 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14643 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
14644 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14645 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
14646 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14647 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14648 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14649 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14650 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
14651 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14652 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14653 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14654 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
14655 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14656 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
14657 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14658 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
14659 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14660 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14661 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14662 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14663 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14664 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14665 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14666 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14667 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14668 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14669 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14670 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14671 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
14672 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14673 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14674 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14675 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14676 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14677 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14678 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14679 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14680 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14681 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14682 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14683 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14684 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14685 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14686 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14687 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14688 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14689 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14690 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14691 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14692 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrillic, *afii10026
14693 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14694 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrrillic, *afii10027
14695 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14696 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14697 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrrillic, *afii10028

14698 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14699 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14700 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14701 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14702 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14703 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14704 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14705 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14706 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14707 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14708 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14709 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14710 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14711 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14712 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14713 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14714 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14715 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14716 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14717 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14718 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14719 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14720 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14721 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14722 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14723 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14724 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14725 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14726 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14727 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14728 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14729 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14730 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14731 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14732 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14733 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14734 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14735 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14736 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14737 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14738 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14739 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14740 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14741 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14742 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14743 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14744 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14745 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14746 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14747 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14748 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14749 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14750 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14751 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14752 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14753 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14754 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436

14755 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
 14756 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
 14757 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
 14758 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
 14759 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
 14760 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
 14761 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
 14762 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
 14763 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
 14764 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
 14765 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
 14766 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
 14767 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
 14768 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
 14769 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
 14770 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
 14771 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
 14772 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
 14773 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
 14774 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
 14775 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
 14776 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
 14777 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
 14778 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
 14779 \DeclareTextCommand{\cyrte}{PU}{\84\102}% U+0442
 14780 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
 14781 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
 14782 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
 14783 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
 14784 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
 14785 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
 14786 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
 14787 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
 14788 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
 14789 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
 14790 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
 14791 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
 14792 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
 14793 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
 14794 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
 14795 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
 14796 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
 14797 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
 14798 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
 14799 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
 14800 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
 14801 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
 14802 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
 14803 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
 14804 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 14805 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 14806 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 14807 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
 14808 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 14809 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 14810 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 14811 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic

14812 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14813 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14814 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14815 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14816 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14817 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14818 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14819 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14820 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14821 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14822 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14823 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
14824 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14825 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14826 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14827 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14828 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14829 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14830 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14831 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14832 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14833 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14834 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14835 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
14836 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14837 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14838 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14839 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14840 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14841 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14842 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14843 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14844 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14845 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14846 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14847 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14848 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14849 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14850 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14851 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14852 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14853 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14854 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14855 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14856 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14857 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14858 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14859 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14860 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14861 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14862 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14863 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14864 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B

14865 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-cyrillic
 14866 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14867 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbgiotifiedcyrillic
 14868 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14869 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14870 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14871 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14872 \DeclareTextCommand{\cyrkxi}{PU}{\84\157}% U+046F
 14873 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14874 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14875 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14876 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14877 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 14878 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14879 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 14880 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 14881 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 14882 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14883 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 14884 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14885 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 14886 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14887 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 14888 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14889 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14890 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14891 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14892 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14893 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 14894 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14895 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14896 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14897 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 14898 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14899 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 14900 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14901 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14902 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14903 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14904 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14905 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14906 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14907 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14908 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14909 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14910 \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
 14911 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14912 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14913 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14914 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14915 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14916 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14917 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14918 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14919 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14920 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14921 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14922 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14923 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afi10050
 14924 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14925 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afi10098, gheupturncyrillic
 14926 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14927 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14928 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14929 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14930 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14931 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14932 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14933 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14934 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14935 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14936 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14937 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14938 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14939 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14940 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14941 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14942 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14943 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 14944 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14945 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14946 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14947 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 14948 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 14949 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic

14950 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
14951 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
ticalstrokecyrillic
14952 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
14953 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
14954 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
14955 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
14956 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
14957 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
14958 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
14959 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
14960 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
14961 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
14962 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
14963 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
14964 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
14965 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
14966 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
14967 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
14968 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
14969 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
14970 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
14971 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
14972 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
14973 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
14974 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
14975 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
14976 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14977 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
14978 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14979 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14980 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
cyrillic
14981 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
14982 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
14983 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
14984 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14985 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-
cyrillic
14986 \DeclareTextCommand{\cyrttdsc}{PU}{\84\255}% U+04AD
14987 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14988 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14989 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14990 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
14991 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
14992 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14993 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
14994 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

14995 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hades-
 dencyrillic
 14996 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 14997 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dencyrillic
 14998 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 14999 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 15000 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 15001 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 15002 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 15003 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescen-
 dencyrillic
 15004 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 15005 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dencyrillic
 15006 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 15007 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 erticalstrokecyrillic
 15008 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 15009 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 erticalstrokecyrillic
 15010 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 15011 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 15012 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 15013 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 15014 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 15015 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 15016 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 15017 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 15018 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 15019 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 15020 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 15021 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 15022 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 15023 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 15024 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 15025 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 15026 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 15027 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 15028 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 15029 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15030 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15031 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15032 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15033 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15034 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15035 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15036 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15037 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15038 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 15039 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15040 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15041 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic

15042 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15043 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 15044 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15045 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 15046 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15047 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15048 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15049 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15050 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15051 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15052 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15053 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15054 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15055 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15056 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 15057 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15058 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 15059 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15060 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15061 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15062 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15063 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 15064 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15065 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 15066 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15067 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15068 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15069 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 15070 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15071 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 15072 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 15073 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
 15074 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 15075 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
 15076 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 15077 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-cyrillic
 15078 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 15079 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-cyrillic
 15080 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 15081 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresis-cyrillic
 15082 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 15083 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 15084 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15085 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15086 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15087 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15088 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2

15089 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15090 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
15091 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
15092 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15093 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
15094 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
15095 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
15096 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15097 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
15098 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15099 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
15100 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
15101 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
15102 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
15103 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
15104 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
15105 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
15106 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
15107 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
15108 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
15109 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
15110 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
15111 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
15112 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
15113 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
15114 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
15115 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
15116 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
15117 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
15118 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
15119 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
15120 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
15121 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
15122 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
15123 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
15124 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
15125 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
15126 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
15127 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
15128 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
15129 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
15130 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
15131 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
15132 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
15133 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
15134 \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

15135 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15136 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15137 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15138 \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

15139 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15140 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

15141 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15142 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15143 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15144 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15145 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15146 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15147 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15148 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15149 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15150 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15151 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15152 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15153 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15154 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15155 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15156 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15157 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15158 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 15159 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 15160 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 15161 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 15162 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 15163 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 15164 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 15165 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 15166 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 15167 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 15168 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 15169 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 15170 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 15171 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 15172 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 15173 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 15174 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 15175 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 15176 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 15177 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 15178 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 15179 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
 15180 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
 15181 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 15182 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 15183 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 15184 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31

15185 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15186 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15187 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15188 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15189 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15190 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15191 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15192 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15193 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15194 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15195 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15196 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15197 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15198 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15199 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15200 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15201 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15202 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15203 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15204 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15205 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15206 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15207 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15208 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15209 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15210 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15211 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15212 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15213 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15214 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15215 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15216 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15217 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15218 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15219 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15220 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15221 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15222 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15223 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15224 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15225 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15226 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15227 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15228 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15229 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15230 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15231 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15232 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15233 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15234 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15235 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15236 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15237 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15238 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\200}% U+1E80
15239 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15240 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
15241 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute

15242 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 15243 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 15244 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 15245 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 15246 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
 15247 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 15248 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
 15249 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 15250 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 15251 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 15252 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 15253 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 15254 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 15255 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 15256 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 15257 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 15258 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 15259 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 15260 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 15261 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 15262 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
 15263 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 15264 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
 15265 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15266 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
 15267 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15268 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 15269 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15270 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15271 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15272 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15273 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15274 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15275 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15276 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15277 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15278 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15279 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15280 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15281 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15282 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15283 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15284 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15285 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15286 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15287 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15288 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15289 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15290 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15291 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15292 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15293 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15294 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

15295 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner

15296 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15297 % U+2013 EN DASH; endash
 15298 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15299 % U+2014 EM DASH; emdash
 15300 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15301 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15302 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15303 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15304 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15305 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15306 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15307 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15308 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15309 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15310 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 15311 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15312 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15313 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15314 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15315 % U+2020 DAGGER; dagger
 15316 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15317 % U+2021 DOUBLE DAGGER; daggerdbl
 15318 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15319 % U+2022 BULLET; bullet
 15320 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15321 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15322 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15323 % U+2030 PER MILLE SIGN; perthousand
 15324 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15325 % U+2031 PER TEN THOUSAND SIGN
 15326 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15327 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15328 \DeclareTextCommand{\guillemleft}{PU}{\9040\071}% U+2039
 15329 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 15330 \DeclareTextCommand{\guillemright}{PU}{\9040\072}% U+203A
 15331 % U+203B REFERENCE MARK; referencemark
 15332 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15333 % U+203D INTERROBANG
 15334 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15335 % U+2044 FRACTION SLASH; fraction
 15336 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15337 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15338 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15339 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15340 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15341 % U+2052 COMMERCIAL MINUS SIGN
 15342 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

15343 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15344 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15345 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15346 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15347 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15348 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075

15349 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15350 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15351 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15352 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15353 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15354 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15355 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15356 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15357 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15358 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15359 % U+207B SUPERSCRIPT MINUS
 15360 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15361 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15362 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 15363 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15364 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15365 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15366 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15367 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15368 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15369 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15370 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15371 % U+2081 SUBSCRIPT ONE; oneinferior
 15372 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15373 % U+2082 SUBSCRIPT TWO; twoinferior
 15374 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15375 % U+2083 SUBSCRIPT THREE; threeinferior
 15376 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15377 % U+2084 SUBSCRIPT FOUR; fourinferior
 15378 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15379 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15380 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15381 % U+2086 SUBSCRIPT SIX; sixinferior
 15382 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15383 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15384 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15385 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15386 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15387 % U+2089 SUBSCRIPT NINE; nineinferior
 15388 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15389 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15390 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15391 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15392 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

15393 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15394 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15395 % U+20A4 LIRA SIGN; afi08941, *lira
 15396 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15397 % U+20A6 NAIRA SIGN
 15398 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15399 % U+20A7 PESETA SIGN; peseta
 15400 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15401 % U+20A9 WON SIGN; won
 15402 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15403 % U+20AB DONG SIGN; dong

15404 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15405 % U+20AC EURO SIGN; *Euro, euro
 15406 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15407 % U+20B1 PESO SIGN
 15408 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15409 % U+20B2 GUARANI SIGN
 15410 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

15411 % U+2103 DEGREE CELSIUS; centigrade
 15412 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15413 % U+2116 NUMERO SIGN; *afi61352, numero
 15414 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15415 % U+2117 SOUND RECORDING COPYRIGHT
 15416 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15417 % U+211E PRESCRIPTION TAKE; prescription
 15418 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15419 % U+2120 SERVICE MARK
 15420 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15421 % U+2122 TRADE MARK SIGN; trademark
 15422 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15423 % U+2126 OHM SIGN; Ohm, Omega
 15424 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15425 % U+2127 INVERTED OHM SIGN
 15426 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15427 % U+212B ANGSTROM SIGN; angstrom
 15428 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15429 % U+212E ESTIMATED SYMBOL; estimated
 15430 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15431 % U+2135 ALEF SYMBOL; aleph
 15432 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15433 % U+2190 LEFTWARDS ARROW; arrowleft
 15434 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15435 % U+2191 UPWARDS ARROW; arrowup
 15436 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15437 % U+2192 RIGHTWARDS ARROW; arrowright
 15438 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15439 % U+2193 DOWNWARDS ARROW; arrowdown
 15440 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

15441 % U+2212 MINUS SIGN; minus
 15442 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15443 % U+221A SQUARE ROOT; radical
 15444 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

15445 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15446 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15447 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15448 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

15449 % U+2422 BLANK SYMBOL
 15450 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422

15451 % U+2423 OPEN BOX; blank
 15452 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

15453 % U+2460 CIRCLED DIGIT ONE; onecircle
 15454 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15455 % U+2461 CIRCLED DIGIT TWO; twocircle
 15456 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15457 % U+2462 CIRCLED DIGIT THREE; threecircle
 15458 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15459 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15460 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15461 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15462 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15463 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15464 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15465 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 15466 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15467 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15468 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15469 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15470 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15471 % U+2469 CIRCLED NUMBER TEN; tencircle
 15472 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15473 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15474 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15475 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15476 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15477 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15478 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15479 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15480 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15481 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15482 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15483 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15484 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15485 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15486 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15487 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15488 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15489 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15490 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15491 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15492 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15493 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15494 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15495 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15496 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15497 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15498 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15499 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15500 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15501 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15502 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15503 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15504 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15505 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

15506 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15507 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15508 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15509 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15510 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15511 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15512 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15513 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15514 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15515 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15516 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15517 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
15518 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15519 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15520 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15521 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15522 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15523 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15524 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15525 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15526 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15527 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15528 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15529 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15530 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15531 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15532 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
15533 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15534 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15535 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15536 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15537 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15538 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15539 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15540 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15541 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15542 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15543 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15544 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15545 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15546 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15547 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15548 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15549 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15550 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15551 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15552 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15553 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15554 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15555 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15556 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15557 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15558 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15559 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15560 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15561 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15562 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

15563 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15564 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15565 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15566 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15567 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15568 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15569 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15570 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15571 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15572 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15573 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15574 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15575 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15576 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15577 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15578 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15579 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15580 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15581 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15582 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15583 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15584 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15585 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15586 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15587 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15588 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15589 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15590 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15591 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15592 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15593 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15594 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15595 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15596 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15597 % U+24EA CIRCLED DIGIT ZERO
 15598 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15599 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15600 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15601 % U+25EF LARGE CIRCLE; largecircle
 15602 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

15603 % U+266A EIGHTH NOTE; musicalnote
 15604 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15605 % U+26AD MARRIAGE SYMBOL
 15606 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15607 % U+26AE DIVORCE SYMBOL
 15608 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

15609 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15610 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15611 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15612 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

```
15613 % U+FB01 LATIN SMALL LIGATURE FI; fi
15614 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
15615 % U+FB02 LATIN SMALL LIGATURE FL; fl
15616 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
15617 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
15618 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15619 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15620 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15621 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15622 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15623 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15624 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15625 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
15626 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15627 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15628 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15629 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15630 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
15631 </puenc>
```

50.3 PU encoding, additions for VnT_EX

This file is provided by Han The Thanh.

```
15632 <*puvnenc>
15633 \DeclareTextCommand{\abreve}{PU}{\81\003}
15634 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15635 \DeclareTextCommand{\dj}{PU}{\81\021}
15636 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15637 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15638 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15639 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15640 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15641 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15642 \DeclareTextCommand{\DJ}{PU}{\81\020}
15643 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15644 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15645 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15646 \DeclareTextCommand{\UHORN}{PU}{\81\257}
15647 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15648 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15649 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15650 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15651 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15652 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15653 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15654 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15655 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
```

15656 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15657 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15658 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15659 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15660 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15661 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15662 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15663 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15664 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15665 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15666 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15667 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15668 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15669 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15670 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15671 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15672 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15673 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15674 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15675 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15676 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15677 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15678 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15679 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15680 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15681 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15682 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15683 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15684 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15685 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15686 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15687 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15688 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15689 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15690 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15691 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15692 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15693 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15694 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15695 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15696 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15697 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15698 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15699 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15700 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15701 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15702 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15703 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15704 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15705 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15706 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15707 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15708 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15709 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15710 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15711 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15712 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}

15713 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15714 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15715 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15716 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15717 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15718 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15719 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15720 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15721 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15722 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15723 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15724 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15725 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15726 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15727 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15728 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15729 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15730 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15731 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15732 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15733 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15734 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15735 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15736 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15737 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15738 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15739 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15740 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15741 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15742 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
15743 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
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15766 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15767 </puvnenc>

50.4 PU encoding, additions for Arabi

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15768 (*puarenc)
15769 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
    TER HAMZA
15770 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
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15771 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
    TER ALEF WITH HAMZA ABOVE
15772 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
    TER WAW WITH HAMZA ABOVE
15773 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
    TER ALEF WITH HAMZA BELOW
15774 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
    TER YEH WITH HAMZA ABOVE
15775 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
15776 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
15777 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
15778 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
15779 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
    TER THEH
15780 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
    TER JEEM
15781 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
15782 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
15783 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
15784 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
15785 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
15786 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
15787 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
15788 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
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15789 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
15790 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
15791 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
15792 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
15793 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
15794 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
    TER GHAIN
15795 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
15796 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
15797 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
15798 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
15799 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
15800 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LET-
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15801 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
15802 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
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15806 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
15807 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
15808 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
15809 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
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15811 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15812 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15813 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

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15814 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15815 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
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15816 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15817 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
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15818 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15819 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
    TER YEH

15820 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15821 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15822 \puarenc

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51 End of file hyccheck.tex

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15823 \*check)
15824 \typeout{}
15825 \begin{document}
15826 \end{document}
15827 \check)

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