

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

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

```

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

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}
```

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


```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

\HyC@edef
125 \def\HyC@def#1#{%
126   \HyC@Toks={#1}%

```

```

127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

181 \def\Hy@SetCatcodes{%
182   \makeother\'%
183   \makeother\=%
184   \catcode'\$=3 %
185   \catcode'\&=4 %
186   \catcode'\^=7 %
187   \catcode'\_ =8 %
188   \makeother\| %
189   \makeother\: %
190   \makeother\(%
191   \makeother\)%
192   \makeother\[ %
193   \makeother\] %
194   \makeother\/ %
195   \makeother\! %
196   \makeother\< %
197   \makeother\> %
198   \makeother\. %
199   \makeother\; %
200   \makeother\+ %
201   \makeother\- %
202   \makeother\" %
203   \makeother\' %
204 }

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
210   \x\&%
211   \x\^%
212   \x\_ %
213   \x\| %
214   \x\: %
215   \x\(%

```

```

216 \x\)%
217 \x\[%
218 \x\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       \HyCal@ReturnAfterFi{%
376         \HyCal@do#2\@nil
377       }%
378     \fi
379   }%
380 \def\HyCal@do#1#2\@nil{%
381   \ifpackageloaded{calc}{}%
382   \HyCal@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 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
421 \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).

```

422 \@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).

```

423 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

424 \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.

```

425 \let\{\textbraceleft
426 \let\}\textbraceright
427 \let\\textbackslash
428 \let\#\textnumbersign

```

```

429 \let\$ \textdollar
430 \let\%\textpercent
431 \let\&\textampersand
432 % \let\~\textasciitilde
433 \let\_ \textunderscore
434 \let\P\textparagraph
435 \let\ldots\textellipsis
436 \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.

```

437 \def\{\pdfstringdefWarn\\}%
438 \def\newline{\pdfstringdefWarn\newline}%

```

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

```

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

```

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

```

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

```

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

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

```

Disable \cyr, used in russianb.ldf.

```

509 \let\cyr\relax

```

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

```

510 \let\es@roman\@Roman

```

Package german.

```

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

519 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

520 \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.

```

521 \let\hspace\HyPsd@hspace

```

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

```

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

```

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

```

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

```

Miscellaneous commands.

```

531 \let\leavevmode\@empty
532 \let\mbox\@empty

```

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

```

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

```

Patch for cjk bookmarks.

```

536 \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`).

```
537 \Hy@pdfstringtrue
538 \pdfstringdefPreHook
```

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

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

Package `xspace`.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
551 \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:

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

Support for package 'xargs':

```
556 \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 T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. T_EX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

\edef This version uses this standard form for expansion. It is stronger than L^AT_EX's `\protected@edef`. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of L^AT_EX doesn't work within an `\edef`, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see `\texorpdfstring`). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with `\csname`. However a PDF reader isn't T_EX, so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via `\xdef` the `\Generic...` messages don't work and causes problems (error messages, invalid .out file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, `\pdfstringdef` is slow enough).

```

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

```

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

```

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

```

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

```

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

```

6.2.3 Postprocessing

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

```
574 \ifx#1\@empty
575 \else
```

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

- \TeX does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by \TeX 's argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.
- \TeX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

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

```
576 \HyPsd@ProtectSpaces#1%
577 \let\HyPsd@String\@empty
578 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
579 \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 $\backslash\text{HyPsd@CheckCatcodes}$ the command $\backslash\text{HyPsd@RemoveMask}$ is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if $\backslash\text{HyPsd@CheckCatcodes}$ is called.

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

```
580 \let\HyPsd@SPACEOPTI\relax
581 {%
582 \let\HyPsd@String\@empty
583 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
584 \global\let#1\HyPsd@String
585}%
586 \expandafter\HyPsd@RemoveMask\expandafter
587 \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.

```
588 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
589 \let\HyPsd@String\@empty
590 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
591 \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.

```
592 \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.

```
593 \ifHy@unicode
594 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
595 \HyPsd@SPACEOPTI#1%
596 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
597 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
598 {\HyPsd@SPACEOPTI\80\273}#1%
599 \else
600 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
601 \expandafter\HyPsd@Subst\expandafter{%
602 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
603 \string\273}{\HyPsd@SPACEOPTI\273}#1%
604 \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.

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

```

615      \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
616      \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.

```

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

```

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

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

```

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

```

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

```

632      \let\HyPsd@empty\@empty

```

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

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

```

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

```

```

637 \HyPsd@StringSubst\({\050}#1%
638 \HyPsd@Subst({\050}#1%
639 \HyPsd@StringSubst{\050}{\string\{ }#1%
640 \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.

```

641 \ifHy@unicode
642 \edef\HyPsd@SPACEOPTI{\80\040}%
643 \else
644 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
645 \fi
646 \xdef#1{#1\@empty}%
647 \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.

```

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

```

Try conversion back to PDFDocEncoding.

```

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

```

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

```
680 \pdfstringdefPostHook#1%
681 \endgroup
682 }
```

`\Hy@pdfstringdef`

```
683 \def\Hy@pdfstringdef#1#2{%
684 \pdfstringdef\Hy@gtemp{#2}%
685 \let#1\Hy@gtemp
686 }
```

6.3 Encodings

6.3.1 XeTeX

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

```

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

```

6.3.2 Workaround for package linguex

```

760 \ifpackageloaded{linguex}{%
761 \let\HyLinguex@OrgB\b
762 \let\HyLinguex@OrgC\c
763 \let\HyLinguex@OrgD\d
764 \def\HyLinguex@Restore{%
765 \let\b\HyLinguex@OrgB
766 \let\c\HyLinguex@OrgC
767 \let\d\HyLinguex@OrgD
768 }%
769 \Hy@AtEndOfPackage{%
770 \pdfstringdefDisableCommands{%
771 \let\IfUndefined{oldb}{\let\b\oldb}%
772 \let\IfUndefined{oldc}{\let\c\oldc}%
773 \let\IfUndefined{oldd}{\let\d\oldd}%
774 }%
775 }%
776 }{%
777 \let\HyLinguex@Restore\relax
778 }%

```

6.3.3 PD1 encoding

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

preting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as T_EX does not process it anyway. So use CM.

```

779 \ifundefined{T@PD1}{%
780   \input{pdlenc.def}%
781   \HyLinguex@Restore
782 }{}
783 \DeclareFontFamily{PD1}{pdf}{}
784 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
785 \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.

```

786 \def\HyPsd@InitUnicode{%
787   \ifundefined{T@PU}{%
788     \input{puenc.def}%
789     \HyLinguex@Restore
790   }{}%
791   \DeclareFontFamily{PU}{pdf}{}%
792   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
793   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
794   \let\HyPsd@InitUnicode\relax
795 }

```

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.

```

796 \def\texorpdfstring{%
797   \ifHy@pdfstring
798     \expandafter\@secondoftwo
799   \else
800     \expandafter\@firstoftwo
801   \fi
802 }

```

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`.

```

803 \ifundefined{pdfstringdefPreHook}{%
804   \let\pdfstringdefPreHook\@empty
805 }{}

```

```

806 \@ifundefined{pdfstringdefPostHook}{%
807   \let\pdfstringdefPostHook\@gobble
808 }{}

```

`\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 \LaTeX commands like `\@gobble` or `\@firstofone`.

```

809 \def\pdfstringdefDisableCommands{%
810   \begingroup
811   \makeatletter
812   \HyPsd@DisableCommands
813 }

```

`\HyPsd@DisableCommands`

```

814 \long\def\HyPsd@DisableCommands#1{%
815   \toks0=\expandafter{\pdfstringdefPreHook}%
816   \toks1={#1}%
817   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
818   \endgroup
819 }

```

`\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`.

```

820 \def\pdfstringdefWarn#1{%
821   \expandafter\noexpand\csname<>-string#1\endcsname
822 }

```

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.

```

823 \begingroup

```

```

824 \catcode0=12 %
825 \def\x{\endgroup
826 \def\HyPsd@ignorespaces{%
827 \romannumeral\expandafter'\expandafter^^@%
828 \romannumeral'^^@%
829 }%
830 }%
831 \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`.

```

832 \def\HyPsd@BabelPatch{%
833 \let\HyOrg@languageshorthands\languageshorthands
834 \let\languageshorthands\HyPsd@LanguageShorthands
835 }
836 \RequirePackage{pdftexcmds}[2009/04/10]
837 \begingroup\expandafter\expandafter\expandafter\endgroup
838 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
839 \let\HyPsd@langshort@system\@empty
840 \def\HyPsd@LanguageShorthands#1{%
841 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
842 \HyPsd@langshort@system
843 \expandafter\@gobble
844 \else
845 \expandafter\@firstofone
846 \fi
847 {%
848 \HyOrg@languageshorthands{#1}%
849 }%
850 }%
851 \else
852 \def\HyPsd@LanguageShorthands#1{%
853 \ifnum\pdf@strcmp{#1}{system}=\z@
854 \expandafter\@gobble
855 \else
856 \expandafter\@firstofone
857 \fi
858 {%
859 \HyOrg@languageshorthands{#1}%
860 }%
861 }%
862 \fi
863 \def\Hy@temp{%
864 \@ifpackageloaded{babel}{%
865 \@ifpackagelater{babel}{2008/03/16}{%
866 \let\Hy@temp\@empty
867 }{%

```



```

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

Nothing to do for english.
877 \ltx@ifundefined{danish@sh@.sel}{}{}%
878 \def\HyPsd@babel@danish{%
879 \declare@shorthand{danish}{"}{}%
880 \declare@shorthand{danish}{"}{}%
881 }%
882 }
883 \ltx@ifundefined{dutch@sh@.sel}{}{}%
884 \def\HyPsd@babel@dutch{%
885 \declare@shorthand{dutch}{"}{}%
886 \declare@shorthand{dutch}{"}{}%
887 }%
888 }
889 \ltx@ifundefined{finnish@sh@.sel}{}{}%
890 \def\HyPsd@babel@finnish{%
891 \declare@shorthand{finnish}{"}{}%
892 }%
893 }
894 \ltx@ifundefined{french@sh@.sel}{}{}%
895 \def\HyPsd@babel@frenchb{%
896 \def\guill@spacing{ }%
897 }%
898 }
899 \ltx@ifundefined{german@sh@.sel}{}{}%
900 \def\HyPsd@babel@german{%
901 \declare@shorthand{german}{f}{f}%
902 \declare@shorthand{german}{"}{}%
903 \declare@shorthand{german}{"}{}%
904 }%
905 }
906 \ltx@ifundefined{macedonian@sh@.sel}{}{}%
907 \def\HyPsd@babel@macedonian{%
908 \declare@shorthand{macedonian}{"}{}%
909 \declare@shorthand{macedonian}{"}{}%
910 }%
911 }{}
912 \ltx@ifundefined{ngerman@sh@.sel}{}{}%
913 \def\HyPsd@babel@ngerman{%
914 \declare@shorthand{ngerman}{"}{}%
915 \declare@shorthand{ngerman}{"}{}%
916 }%
917 }
918 \ltx@ifundefined{portuges@sh@.sel}{}{}%
919 \def\HyPsd@babel@portuges{%
920 \declare@shorthand{portuges}{"}{}%
921 }%
922 }

```

```

923 \ltx@ifundefined{russian@sh@"@sel}{-}{%
924   \def\HyPsd@babel@russian{%
925     \declare@shorthand{russian}{-}{-}%
926     \declare@shorthand{russian}{-}{-}%
927   }%
928 }
929 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
930   \def\HyPsd@babel@slovene{%
931     \declare@shorthand{slovene}{-}{-}%
932   }%
933 }

```

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

```

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

```

```

979 \@arabic{#2}%
980 \else
981 \ifnum#2<1000000 %
982 \HyPsd@@GreekNum#1{#2}%
983 \else
984 \@arabic{#2}%
985 \fi
986 \fi
987 \else
988 \@arabic{#2}%
989 \fi
990 }
991 \def\HyPsd@@GreekNum#1#2{%
992 \ifnum#2<\@m
993 \ifnum#2<10 %
994 \expandafter\HyPsd@GreekNumI
995 \expandafter\@gobble\expandafter#1\number#2%
996 \else
997 \ifnum#2<100 %
998 \expandafter\HyPsd@GreekNumII
999 \expandafter\@gobble\expandafter#1\number#2%
1000 \else
1001 \expandafter\HyPsd@GreekNumIII
1002 \expandafter\@gobble\expandafter#1\number#2%
1003 \fi
1004 \fi
1005 \ifnum#2>\z@
1006 \textnumeralsigngreek
1007 \fi
1008 \else
1009 \ifnum#2<\@M
1010 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1011 \else
1012 \ifnum#2<100000 %
1013 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1014 \else
1015 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1016 \fi
1017 \fi
1018 \fi
1019 }
1020 \def\HyPsd@GreekNumI#1#2#3{%
1021 #1{%
1022 \ifnum#3>\z@
1023 \textnumeralsignlowergreek
1024 \fi
1025 }%
1026 \expandafter#2%
1027 \ifcase#3 %
1028 {}{}%
1029 \or\textalpha\textAlpha
1030 \or\textbeta\textBeta
1031 \or\textgamma\textGamma
1032 \or\textdelta\textDelta
1033 \or\textepsilon\textEpsilon
1034 \or\textstigmagreek\textStigmagreek
1035 \or\textzeta\textZeta

```

```

1036 \or\texteta\textEta
1037 \or\texttheta\textTheta
1038 \else
1039   {}{}%
1040 \fi
1041 }
1042 \def\HyPsd@GreekNumII#1#2#3#4{%
1043   #1{%
1044     \ifnum#3>\z@
1045       \textnumeralsignlowergreek
1046     \fi
1047   }%
1048   \expandafter#2%
1049   \ifcase#3 %
1050     {}{}%
1051   \or\textiota\textIota
1052   \or\textkappa\textKappa
1053   \or\textlambda\textLambda
1054   \or\textmu\textMu
1055   \or\textnu\textNu
1056   \or\textxi\textXi
1057   \or\textomicron\textOmicron
1058   \or\textpi\textPi
1059   \or\textkoppagreek\textKoppagreek
1060   \else
1061     {}{}%
1062   \fi
1063   \HyPsd@GreekNumI#1#2#4%
1064 }
1065 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1066   #1{%
1067     \ifnum#3>\z@
1068       \textnumeralsignlowergreek
1069     \fi
1070   }%
1071   \expandafter#2%
1072   \ifcase#3 %
1073     {}{}%
1074   \or\textrho\textRho
1075   \or\textsigma\textSigma
1076   \or\texttau\textTau
1077   \or\textupsilon\textUpsilon
1078   \or\textphi\textPhi
1079   \or\textchi\textChi
1080   \or\textpsi\textPsi
1081   \or\textomega\textOmega
1082   \or\textsampigreek\textSampigreek
1083   \else
1084     {}{}%
1085   \fi
1086   \HyPsd@GreekNumII#1#2#4#5%
1087 }
1088 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1089   \HyPsd@GreekNumI\@firstofone#1#2%
1090   \HyPsd@@GreekNum#1{#3#4#5}%
1091 }
1092 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%

```

```

1093 \HyPsd@GreekNumII\@firstofone#1#2#3%
1094 \HyPsd@@GreekNum#1{#4#5#6}%
1095 }
1096 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1097 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1098 \HyPsd@@GreekNum#1{#5#6#7}%
1099 }

1100 \def\HyPsd@SpanishPatch{%
1101 \ltx@ifundefined{es@save@dot}{%
1102 }{%
1103 \let\.\es@save@dot
1104 }%
1105 }

```

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

```

1106 \def\HyPsd@RussianPatch{%
1107 \ltx@ifundefined{russian@sh@"@-@}{%
1108 }{%
1109 \@namedef{russian@sh@"@-@}{-}%
1110 }%
1111 }

```

6.5.3 CJK patch

```

1112 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1113 \def\HyPsd@CJKhook{%
1114 \ltx@ifpackageloaded{CJK}{%
1115 \let\CJK@kern\relax
1116 \let\CJKkern\relax
1117 \let\CJK@CJK\relax
1118 \ifHy@CJKbookmarks
1119 \HyPsd@CJKhook@bookmarks
1120 \fi
1121 \HyPsd@CJKhook@unicode
1122 }{%
1123 }

```

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).

```

1124 \begingroup
1125 \catcode"7F=\active
1126 \toks@{%
1127 \let\CJK@ignorespaces\empty
1128 \def\CJK@char#1{\@gobbletwo}%

```

```

1129 \let\CJK@charx\@gobblefour
1130 \let\CJK@punctchar\@gobblefour
1131 \def\CJK@punctcharx#1{\@gobblefour}%
1132 \catcode"7F=\active
1133 \def^^7f#1^^7f#2^^7f{%
1134   \string #1\HyPsd@DecimalToOctal{#2}%
1135 }%
1136 % ... ?
1137 \ifHy@unicode
1138   \def\Hy@cjku{\80}%
1139 \else
1140   \let\Hy@cjku\@empty
1141 \fi
1142 \HyPsd@CJKActiveChars
1143 }%
1144 \count@=127 %
1145 \@whilenum\count@<255 \do{%
1146   \advance\count@ by 1 %
1147   \lccode'\~=\count@
1148   \lowercase{%
1149     \toks@\expandafter{\the\toks@ ~}%
1150   }%
1151 }%
1152 \toks@\expandafter{\the\toks@ !}%
1153 \xdef\HyPsd@CJKhook@bookmarks{%
1154   \the\toks@
1155 }%
1156 \endgroup

```

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

```

1157 \def\HyPsd@CJKActiveChars#1{%
1158   \ifx#1!%
1159     \let\HyPsd@CJKActiveChars\relax
1160   \else
1161     \edef#1{\noexpand\Hy@cjku\string#1}%
1162   \fi
1163   \HyPsd@CJKActiveChars
1164 }

```

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

```

1165 \def\HyPsd@DecimalToOctal#1{%
1166   \ifcase #1 %
1167     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1168     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1169     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1170     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1171     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1172     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1173     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1174     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1175     \or @\or A\or B\or C\or D\or E\or F\or G%
1176     \or H\or I\or J\or K\or L\or M\or N\or O%
1177     \or P\or Q\or R\or S\or T\or U\or V\or W%
1178     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1179     \or \140\or a\or b\or c\or d\or e\or f\or g%
1180     \or h\or i\or j\or k\or l\or m\or n\or o%

```

```

1181 \or p\or q\or r\or s\or t\or u\or v\or w%
1182 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1183 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1184 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1185 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1186 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1187 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1188 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1189 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1190 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1191 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1192 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1193 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1194 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1195 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1196 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1197 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1198 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1199 \fi
1200 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1201 \def\HyPsd@CJKhook@unicode{%
1202 \let\Unicode\HyPsd@CJK@Unicode
1203 \let\CJKnumber\HyPsd@CJKnumber
1204 \let\CJKdigits\HyPsd@CJKdigits
1205 }

```

\HyPsd@CJK@Unicode

```

1206 \def\HyPsd@CJK@Unicode#1#2{%
1207 \ifnum#1<256 %
1208 \HyPsd@DecimalToOctalFirst{#1}%
1209 \HyPsd@DecimalToOctalSecond{#2}%
1210 \else
1211 \933%
1212 \expandafter\expandafter\expandafter\HyPsd@HighA
1213 \intcalcDiv{#1}{4}!%
1214 \933%
1215 \ifcase\intcalcMod{#1}{4} %
1216 4\or 5\or 6\or 7%
1217 \fi
1218 \HyPsd@DecimalToOctalSecond{#2}%
1219 \fi
1220 }

1221 \def\HyPsd@HighA#1!{%
1222 \expandafter\expandafter\expandafter\HyPsd@HighB
1223 \IntCalcDiv#1!64!!%
1224 \expandafter\expandafter\expandafter\HyPsd@HighD
1225 \IntCalcMod#1!64!!%
1226 }
1227 \def\HyPsd@HighB#1!{%
1228 \expandafter\expandafter\expandafter\HyPsd@HighC
1229 \IntCalcDec#1!!%
1230 }

```

```

1231 \def\HyPsd@HighC#1!{%
1232   \IntCalcDiv#1!4!%
1233   \@backslashchar
1234   \IntCalcMod#1!4!%
1235 }
1236 \def\HyPsd@HighD#1!{%
1237   \ifcase\IntCalcDiv#1!8! %
1238     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1239   \fi
1240   \ifcase\IntCalcMod#1!8! %
1241     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1242   \fi
1243 }
1244 \def\HyPsd@DecimalToOctalFirst#1{%
1245   \9%
1246   \ifcase#1 %
1247     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1248     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1249     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1250     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1251     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1252     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1253     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1254     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1255     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1256     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1257     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1258     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1259     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1260     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1261     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1262     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1263     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1264     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1265     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1266     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1267     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1268     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1269     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1270     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1271     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1272     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1273     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1274     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1275     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1276     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1277     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1278     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1279   \fi
1280 }
1281 \def\HyPsd@DecimalToOctalSecond#1{%
1282   \ifcase #1 %
1283     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1284     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1285     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1286     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1287     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%

```



```

1288 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1289 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1290 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1291 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1292 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1293 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1294 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1295 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1296 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1297 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1298 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1299 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1300 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1301 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1302 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1303 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1304 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1305 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1306 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1307 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1308 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1309 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1310 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1311 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1312 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1313 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1314 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1315 \fi
1316 }

1317 \def\HyPsd@CJKNnumber#1{%
1318 \ifnum#1<\z@
1319 \CJK@minus
1320 \expandafter\HyPsd@@CJKNnumber\expandafter{\number-\number#1}%
1321 \else
1322 \expandafter\HyPsd@@CJKNnumber\expandafter{\number#1}%
1323 \fi
1324 }

1325 \def\HyPsd@@CJKNnumber#1{%
1326 \ifcase#1 %
1327 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1328 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1329 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1330 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1331 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1332 \CJK@ten\CJK@nine
1333 \else
1334 \ifnum#1<10000 %
1335 \HyPsd@CJKNnumberFour#1!\@empty{20}%
1336 \@empty
1337 \else
1338 \ifnum#1<100000000 %
1339 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1340 \IntCalcDiv#1!10000!%
1341 !\@empty{20}%
1342 \CJK@tenthousand
1343 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1344 \IntCalcMod#1!10000!%

```

```

1345      !\CJK@zero{10}%
1346      \@empty
1347      \else
1348      \expandafter\HyPsd@CJKnumberLarge
1349      \number\IntCalcDiv#1!100000000!\expandafter!%
1350      \number\IntCalcMod#1!100000000!!%
1351      \fi
1352      \fi
1353      \fi
1354  }
1355  \def\HyPsd@CJKnumberLarge#1!#2!{%
1356  \HyPsd@CJKnumberFour#1!{}{20}%
1357  \CJK@hundredmillion
1358  \ifnum#2=\z@
1359  \else
1360  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1361  \IntCalcDiv#2!10000!%
1362  !\CJK@zero{10}%
1363  \CJK@tenthousand
1364  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1365  \IntCalcMod#2!10000!%
1366  !\CJK@zero{10}%
1367  \@empty
1368  \fi
1369  }
1370  \def\HyPsd@CJKnumberFour#1!#2#3{%
1371  \ifnum#1=\z@
1372  \expandafter\@gobble
1373  \else
1374  \ifnum#1<1000 %
1375  #2%
1376  \HyPsd@CJKnumberThree#1!{}{#3}%
1377  \else
1378  \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1379  \CJK@thousand
1380  \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1381  \IntCalcMod#1!1000!%
1382  !\CJK@zero{10}%
1383  \fi
1384  \fi
1385  }
1386  \def\HyPsd@CJKnumberThree#1!#2#3{%
1387  \ifnum#1=\z@
1388  \else
1389  \ifnum#1<100 %
1390  #2%
1391  \HyPsd@CJKnumberTwo#1!{}{#3}%
1392  \else
1393  \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1394  \CJK@hundred
1395  \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1396  \IntCalcMod#1!100!%
1397  !\CJK@zero{10}%
1398  \fi
1399  \fi
1400  }
1401  \def\HyPsd@CJKnumberTwo#1!#2#3{%

```

```

1402 \ifnum#1=\z@
1403 \else
1404 \ifnum#1<#3 %
1405   #2%
1406   \HyPsd@@CJKnumber{#1}%
1407 \else
1408 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1409 \CJK@ten
1410 \ifnum\IntCalcMod#1!10!=\z@
1411 \else
1412 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1413 \fi
1414 \fi
1415 \fi
1416 }

1417 \def\HyPsd@CJKdigits#1{%
1418 \ifx*#1\relax
1419 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1420 \else
1421 \HyPsd@@CJKdigits\CJK@null{#1}%
1422 \fi
1423 }

1424 \def\HyPsd@@CJKdigits#1#2{%
1425 \ifx\#2\%
1426 \else
1427 \HyPsd@@@CJKdigits#1#2\@nil
1428 \fi
1429 }%

1430 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1431 \HyPsd@CJKdigit#1{#2}%
1432 \ifx\#3\%
1433 \expandafter\@gobble
1434 \else
1435 \expandafter\@firstofone
1436 \fi
1437 {%
1438 \HyPsd@@@CJKdigits#1#3\@nil
1439 }%
1440 }

1441 \def\HyPsd@CJKdigit#1#2{%
1442 \ifcase#2 %
1443   #1\or
1444   \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1445   \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1446 \fi
1447 }

```

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}

1448 \def\HyPsd@inmathwarn#1#2{%
1449   \ifx#2\expandafter
1450     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1451       \HyPsd@GLYPHERR
1452       \expandafter\@gobble\string#1%
1453       >%
1454       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1455     \else
1456       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1457     \fi
1458   \else
1459     \expandafter#2%
1460   \fi
1461 }
1462 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1463 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1464 \def\HyPsd@add@accent#1#2{%
1465   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1466   #2%
1467 }%

```

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`.

```
1468 \def\HyPsd@LetUnexpandableSpace#1{%
1469   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1470 }
```

`\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.

```
1471 \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.

```
1472 \edef\HyPsd@XSPACE{\string#\string X}
1473 \edef\HyPsd@ITALCORR{\string#\string I}
1474 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1475 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1476 \def\HyPsd@@hspace#1*#2\END{%
1477   \ifx\#2\%
1478     \HyPsd@hspacetest{#1}%
1479   \else
1480     \expandafter\HyPsd@hspacetest
1481   \fi
1482 }
```

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

```
1483 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1484 \ltx@ifundefined{tocsection}{%
1485   \let\HyPsd@AMSclassfix\relax
1486 }{%
1487   \def\HyPsd@AMSclassfix{%
1488     \let\tocpart\HyPsd@tocsection
1489     \let\tocchapter\HyPsd@tocsection
1490     \let\tocappendix\HyPsd@tocsection
```

```

1491 \let\tocsection\HyPsd@tocsection
1492 \let\tocsubsection\HyPsd@tocsection
1493 \let\tocsubsubsection\HyPsd@tocsection
1494 \let\tocparagraph\HyPsd@tocsection
1495 }%
1496 \def\HyPsd@tocsection#1#2#3{%
1497 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1498 #3%
1499 }%
1500 }

```

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.

```

1501 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1502 \def\HyPsd@@ref#1*#2\END{%
1503 \ifx\#2\%
1504 \HyPsd@@@ref{#1}%
1505 \else
1506 \expandafter\HyPsd@@@ref
1507 \fi
1508 }%

```

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

```

1509 \def\HyPsd@@@ref#1{%
1510 \expandafter\ifx\csname r@#1\endcsname\relax
1511 ??%
1512 \else
1513 \expandafter\expandafter\expandafter
1514 \@car\csname r@#1\endcsname\@nil
1515 \fi
1516 }

```

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

```

1517 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1518 \def\HyPsd@@pageref#1*#2\END{%
1519 \ifx\#2\%
1520 \HyPsd@@@pageref{#1}%
1521 \else
1522 \expandafter\HyPsd@@@pageref
1523 \fi
1524 }

```

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

```

1525 \def\HyPsd@@@pageref#1{%
1526 \expandafter\ifx\csname r@#1\endcsname\relax
1527 ??%
1528 \else
1529 \expandafter\expandafter\expandafter\expandafter
1530 \expandafter\expandafter\expandafter\@car
1531 \expandafter\expandafter\expandafter\@gobble

```

```

1532 \csname r@#1\endcsname{}\@nil
1533 \fi
1534 }

```

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

```

1535 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1536 \def\HyPsd@@nameref#1*#2\END{%
1537 \ifx\#2\%
1538 \HyPsd@@@nameref{#1}%
1539 \else
1540 \expandafter\HyPsd@@@nameref
1541 \fi
1542 }

```

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

```

1543 \def\HyPsd@@@nameref#1{%
1544 \expandafter\ifx\csname r@#1\endcsname\relax
1545 ??%
1546 \else
1547 \expandafter\expandafter\expandafter\expandafter
1548 \expandafter\expandafter\expandafter\@car
1549 \expandafter\expandafter\expandafter\@gobbletwo
1550 \csname r@#1\endcsname{}\}\@nil
1551 \fi
1552 }

```

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

```

1553 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1554 \def\HyPsd@@autoref#1*#2\END{%
1555 \ifx\#2\%
1556 \HyPsd@@@autoref{#1}%
1557 \else
1558 \expandafter\HyPsd@@@autoref
1559 \fi
1560 }

```

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

```

1561 \def\HyPsd@@@autoref#1{%
1562 \expandafter\ifx\csname r@#1\endcsname\relax
1563 ??%
1564 \else
1565 \expandafter\expandafter\expandafter\HyPsd@autorefname
1566 \csname r@#1\endcsname{}\}\}\@nil
1567 \expandafter\expandafter\expandafter
1568 \@car\csname r@#1\endcsname\@nil
1569 \fi
1570 }

```

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

```

1571 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%

```

```

1572 \ifx\#4\%
1573 \else
1574 \HyPsd@@autorefname#4.\@nil
1575 \fi
1576 }

```

\HyPsd@@autorefname

```

1577 \def\HyPsd@@autorefname#1.#2\@nil{%
1578 \ltx@ifundefined{#1autorefname}{%
1579 \ltx@ifundefined{#1name}{%
1580 }{%
1581 \csname#1name\endcsname\space
1582 }%
1583 }{%
1584 \csname#1autorefname\endcsname\space
1585 }%
1586 }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

\HyPsd@DefCommand

\HyPsd@LetCommand

```

1587 \begingroup
1588 \def\x#1#2{%
1589 \endgroup
1590 \let#1\def
1591 \def\HyPsd@DefCommand##1##2##{%
1592 #1%
1593 \expandafter\noexpand

```



```

1594     \csname\expandafter\@gobble\string##1\@empty\endcsname
1595     \@gobble
1596 }%
1597 \let#2\let
1598 \def\HyPsd@@LetCommand##1{%
1599     \expandafter\ifx\csname##1\expandafter\endcsname
1600         \csname iftrue\endcsname
1601         \pdfstringdefWarn\let
1602         \expandafter\@gobble
1603     \else
1604         \expandafter\ifx\csname##1\expandafter\endcsname
1605             \csname iffalse\endcsname
1606             \pdfstringdefWarn\let
1607             \expandafter\expandafter\expandafter\@gobble
1608         \else
1609             #2%
1610             \expandafter\noexpand
1611             \csname##1\expandafter\expandafter\expandafter\endcsname
1612         \fi
1613     \fi
1614 }%
1615 }%
1616 \expandafter\x\csname <def>-command\expandafter\endcsname
1617     \csname <let>-command\endcsname
1618 \def\HyPsd@LetCommand#1{%
1619     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1620     \expandafter\expandafter\expandafter{%
1621     \expandafter\@gobble\string#1\@empty
1622 }%
1623 }

```

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).

```

1624 \def\HyPsd@ifnextchar#1{%
1625     \pdfstringdefWarn#1%
1626     \expandafter\@gobbletwo\@gobble
1627 }

```

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`.

```

1628 \def\HyPsd@protected@testopt#1{%

```

```

1629 \pdfstringdefWarn#1%
1630 \@gobbletwo
1631 }

```

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:

```

1632 \def\HyPsd@Warning#1{%
1633 \begingroup
1634 \def\space{ }%
1635 \Hy@Warning{#1}%
1636 \endgroup
1637 }

```

6.6.2 Protecting spaces

```

1638 \RequirePackage{etexcmds}[2007/09/09]
1639 \ifetex@unexpanded
1640 \expandafter\@secondoftwo
1641 \else
1642 \expandafter\@firstoftwo
1643 \fi
1644 {%

```

`\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`.

```

1645 \def\HyPsd@ProtectSpaces#1{%
1646 \iftrue
1647 \expandafter\HyPsd@@ProtectSpacesFi
1648 \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1649 \fi
1650 }%

```

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

```

1651 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1652 \fi
1653 \ifx\scrollmode#2\scrollmode
1654 \HyPsd@RemoveMask#1\HyPsd@End#3%
1655 \else
1656 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1657 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1658 \fi
1659 }%

```

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.

```

1660 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1661 \toks@{\expandafter{#1}%
1662 \xdef#2{\the\toks@}%
1663 }%

```

```

1664 }{%
1665   \let\HyPsd@fi\fi
1666   \def\HyPsd@ProtectSpaces#1{%
1667     \xdef#1{%
1668       \iftrue
1669         \expandafter\HyPsd@@ProtectSpacesFi
1670         \expandafter|\expandafter\@empty#1| %
1671       \HyPsd@fi
1672     }%
1673     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1674   }%
1675   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1676     \fi
1677     \etex@unexpanded{#1}%
1678     \ifx\scrollmode#2\scrollmode
1679     \else
1680       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1681     \HyPsd@fi
1682   }%
1683   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1684     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1685   }%
1686 }

```

6.6.3 Remove grouping braces

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

```

1687 \def\HyPsd@RemoveBraces#1{%
1688   \ifx\scrollmode#1\scrollmode
1689   \else
1690     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1691   \fi
1692 }

```

`\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`.

```

1693 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1694   \fi
1695   \def\Hy@temp@A{#1#2}%
1696   \def\Hy@temp@B{#3}%
1697   \ifx\Hy@temp@A\Hy@temp@B
1698     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1699       \HyPsd@String#1%
1700     }%
1701     \ifx\scrollmode#2\scrollmode
1702     \else
1703       \Hy@ReturnAfterFiFiEnd{%
1704         \HyPsd@RemoveBraces{#2}%
1705       }%

```

```

1706 \fi
1707 \else
1708 \def\Hy@temp@A{#1}%
1709 \HyPsd@AppendItalcrr\HyPsd@String
1710 \ifx\Hy@temp@A\@empty
1711 \Hy@ReturnAfterElseFiFiEnd{%
1712 \HyPsd@RemoveBraces{#2}%
1713 }%
1714 \else
1715 \HyPsd@ProtectSpaces\Hy@temp@A
1716 \HyPsd@AppendItalcrr\Hy@temp@A
1717 \Hy@ReturnAfterFiFiEnd{%
1718 \expandafter\HyPsd@RemoveBraces\expandafter
1719 {\Hy@temp@A#2}%
1720 }%
1721 \fi
1722 \fi
1723 \Hy@ReturnEnd
1724 }

```

\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.

```

1725 \def\HyPsd@AppendItalcrr#1{%
1726 \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1}%
1727 }
1728 \def\HyPsd@@AppendItalcrr#1#2{%
1729 \expandafter\def\expandafter#2\expandafter{#2#1}%
1730 }

```

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).

```

1731 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1732 \global\let\HyPsd@Rest\relax
1733 \ifcat\relax\noexpand#1\relax
1734 \ifx#1\protect
1735 \else
1736 \ifx#1\penalty
1737 \setbox\z@=\hbox{%
1738 \afterassignment\HyPsd@AfterCountRemove
1739 \count@=#2\HyPsd@End
1740 }%
1741 \else
1742 \ifx#1\kern
1743 \setbox\z@=\hbox{%
1744 \afterassignment\HyPsd@AfterDimenRemove

```

```

1745         \dimen@=#2\HyPsd@End
1746     }%
1747 \else
1748     \ifx#1\hskip
1749         \setbox\z@=\hbox{%
1750             \afterassignment\HyPsd@AfterSkipRemove
1751             \skip@=#2\HyPsd@End
1752         }%
1753     \else
1754         \HyPsd@CatcodeWarning{#1}%
1755     \fi
1756 \fi
1757 \fi
1758 \fi
1759 \else
1760     \ifcat#1A% letter
1761         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1762             \HyPsd@String#1%
1763         }%
1764     \else
1765         \ifcat#1 % SPACE
1766             \expandafter\def\expandafter\HyPsd@String\expandafter{%
1767                 \HyPsd@String\HyPsd@SPACEOPTI
1768             }%
1769         \else
1770             \ifcat$#1%
1771                 \HyPsd@CatcodeWarning{math shift}%
1772             \else
1773                 \ifcat&#1%
1774                     \HyPsd@CatcodeWarning{alignment tab}%
1775                 \else
1776                     \ifcat^#1%
1777                         \HyPsd@CatcodeWarning{superscript}%
1778                     \else
1779                         \ifcat_#1%
1780                             \HyPsd@CatcodeWarning{subscript}%
1781                         \else
1782                             \expandafter\def\expandafter\HyPsd@String\expandafter{%
1783                                 \HyPsd@String#1%
1784                             }%
1785                         \fi
1786                     \fi
1787                 \fi
1788             \fi
1789         \fi
1790     \fi
1791 \fi
1792 \ifx\HyPsd@Rest\relax
1793     \ifx\scrollmode#2\scrollmode
1794     \else
1795         \Hy@ReturnAfterFiFiEnd{%
1796             \HyPsd@CheckCatcodes#2\HyPsd@End
1797         }%
1798     \fi
1799 \else
1800     \ifx\HyPsd@Rest\@empty
1801     \else

```

```

1802 \Hy@ReturnAfterFiFiEnd{%
1803 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1804 }%
1805 \fi
1806 \fi
1807 \Hy@ReturnEnd
1808 }

```

Remove counts, dimens, skips.

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

```

1809 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1810 \gdef\HyPsd@Rest{#1}%
1811 }

```

`\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.

```

1812 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1813 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1814 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1815 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1816 \else
1817 \ifdim\dimen@=\z@
1818 \else
1819 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1820 \fi
1821 \gdef\HyPsd@Rest{#1}%
1822 \fi
1823 }

```

`\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).

```

1824 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1825 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@\fi>1ex %
1826 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1827 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1828 \else
1829 \ifdim\skip@=\z@
1830 \else
1831 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1832 \fi
1833 \gdef\HyPsd@Rest{#1}%
1834 \fi
1835 }

```

Catcode warnings.

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

```

1836 \def\HyPsd@CatcodeWarning#1{%
1837 \HyPsd@Warning{%
1838 Token not allowed in a PDF string (%
1839 \ifHy@unicode
1840 Unicode%
1841 \else

```

```

1842     PDFDocEncoding%
1843     \fi
1844   ):%
1845   \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1846 }%
1847 }
1848 \begingroup
1849 \catcode‘\|=0 %
1850 \catcode‘\|=12 %
1851 |gdef|HyPsd@RemoveCmdPrefix#1{%
1852 |expandafter|HyPsd@@RemoveCmdPrefix
1853 |string#1|@empty\<>-|@empty|@empty
1854 }%
1855 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1856 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1857 \def\HyPsd@RemoveSpaceWarning#1{%
1858   \HyPsd@Warning{%
1859     Token not allowed in a PDF string (%)
1860     \ifHy@unicode
1861       Unicode%
1862     \else
1863       PDFDocEncoding%
1864     \fi
1865   ):%
1866   \MessageBreak #1\MessageBreak
1867   removed%
1868 }%
1869 }

```

\HyPsd@ReplaceSpaceWarning

```

1870 \def\HyPsd@ReplaceSpaceWarning#1{%
1871   \HyPsd@Warning{%
1872     Token not allowed in a PDF string (%)
1873     \ifHy@unicode
1874       Unicode%
1875     \else
1876       PDFDocEncoding%
1877     \fi
1878   ):%
1879   \MessageBreak #1\MessageBreak
1880   replaced by space%
1881 }%
1882 }

```

6.6.5 Check for wrong glyphs

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

```

1883 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1884   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1885     \HyPsd@String#1%
1886   }%
1887   \ifx\\#2\\%
1888   \else
1889     \Hy@ReturnAfterFi{%

```

```

1890 \HyPsd@GlyphProcessWarning#2\@empty
1891 }%
1892 \fi
1893 }
1894 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1895 \HyPsd@@GlyphProcessWarning#1++>%
1896 \HyPsd@GlyphProcess#2\@empty
1897 }
1898 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1899 \ifx\#2\%
1900 \HyPsd@Warning{%
1901 Glyph not defined in %
1902 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1903 removing \@backslashchar#1'%
1904 }%
1905 \else
1906 \HyPsd@Warning{%
1907 Composite letter \@backslashchar#1+#2'\MessageBreak
1908 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1909 \MessageBreak
1910 removing \@backslashchar#1'%
1911 }%
1912 \fi
1913 }

```

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.

```

1914 \def\HyPsd@spaceopti#1{ % first space
1915 \ifx\HyPsd@spaceopti#1%
1916 \040%
1917 \else
1918 #1%
1919 \fi
1920 }%

```

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.

1921 \def\HyPsd@Subst#1#2#3{%
1922 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1923 \fi
1924 ##1%
1925 \ifx\scrollmode##2\scrollmode
1926 \else
1927 #2%
1928 \HyPsd@@ReplaceFi##2\END
1929 \fi
1930 }%

```



```

1931 \xdef#3{%
1932   \iftrue
1933     \expandafter\HyPsd@@ReplaceFi#3#1\END
1934   \fi
1935 }%
1936 }

```

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

```

1937 \def\HyPsd@StringSubst#1{%
1938   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1939 }

```

`\HyPsd@EscapeTeX`

```

1940 \begingroup
1941   \lccode'\!='\%%
1942   \lccode'\|='\%%
1943   \lccode'\(='\{%
1944   \lccode'\)='\}%
1945   \lccode'0=\ltx@zero
1946   \lccode'1=\ltx@zero
1947   \lccode'3=\ltx@zero
1948   \lccode'4=\ltx@zero
1949   \lccode'5=\ltx@zero
1950   \lccode'7=\ltx@zero
1951 \lowercase{\endgroup
1952 \def\HyPsd@EscapeTeX#1{%
1953   \HyPsd@Subst!{|045}#1%
1954   \HyPsd@Subst({|173}#1%
1955   \HyPsd@Subst){|175}#1%
1956 }%
1957 }

```

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.

```

1958 \def\HyPsd@doxspace#1{%
1959   \ifx#1\relax\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                     \ifx#1'\else
1969                       \HyPsd@SPACEOPTI
1970                     \fi
1971                   \fi
1972                 \fi
1973               \fi
1974             \fi
1975           \fi

```

```

1976  \fi
1977  \fi
1978  \fi
1979  \fi
1980  #1%
1981 }%

```

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.

```

1982 \begingroup
1983 \catcode'\|=0 %
1984 \catcode'\=12 %

```

\HyPsd@ConvertToUnicode

```

1985 |gdef|HyPsd@ConvertToUnicode#1{%
1986 |xdef#1{%
1987 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1988 }%
1989 |ifx#1|@empty
1990 |else
1991 |xdef#1{%
1992 \376\377%
1993 #1%
1994 }%
1995 |fi
1996 }%

```

\HyPsd@DoConvert

```

1997 |gdef|HyPsd@DoConvert#1{%
1998 |ifx#1|@empty
1999 |else
2000 |Hy@ReturnAfterFi{%
2001 |ifx#1\%%
2002 \%%
2003 |expandafter|HyPsd@DoEscape
2004 |else
2005 |HyPsd@Char{#1}%
2006 |expandafter|HyPsd@DoConvert
2007 |fi
2008 }%
2009 |fi
2010 }%

```

\HyPsd@DoEscape

```

2011 |gdef|HyPsd@DoEscape#1{%
2012 |ifx#19%
2013 |expandafter|HyPsd@GetTwoBytes
2014 |else
2015 |Hy@ReturnAfterFi{%
2016 |ifx#18%
2017 00%
2018 |expandafter|HyPsd@GetTwoBytes
2019 |else

```

```

2020     #1%
2021     |expandafter|HyPsd@GetOneByte
2022     |fi
2023     }%
2024     |fi
2025     }%

```

\HyPsd@GetTwoBytes

```

2026 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2027   #1\#2#3#4%
2028   |HyPsd@DoConvert
2029   }%

```

\HyPsd@GetOneByte

```

2030 |gdef|HyPsd@GetOneByte#1#2{%
2031   #1#2%
2032   |HyPsd@DoConvert
2033   }%
2034 |endgroup

```

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

```

2035 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2036   \xdef#4{#4#1#2}%
2037   \HyPsd@@ConvertToUnicode#3\END#4%
2038 }

```

\HyPsd@Char

```

2039 \begingroup
2040 \catcode0=9 %
2041 \catcode'\^=7 %
2042 \catcode'\^^=12 %
2043 \def\x{^^^0000}%
2044 \expandafter\endgroup
2045 \ifx\x\@empty
2046   \def\HyPsd@Char#1{%
2047     \ifnum'#1<128 %
2048       \@backslashchar 000#1%
2049     \else
2050       \ifnum'#1<65536 %
2051         \expandafter\HyPsd@CharTwoByte\number'#1!%
2052       \else
2053         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2054         \intcalcSub{'#1}{65536}!%
2055       \fi
2056     \fi
2057   }%
2058 \def\HyPsd@CharTwoByte#1!{%
2059   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2060   \IntCalcDiv#1!256!!%
2061   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2062   \IntCalcMod#1!256!!%
2063 }%
2064 \def\HyPsd@CharOctByte#1!{%
2065   \@backslashchar
2066   \IntCalcDiv#1!64!%
2067   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2068   \IntCalcMod#1!8!%

```

```

2069 }%
2070 \def\HyPsd@CharSurrogate#1!{%
2071 \@@backslashchar 33%
2072 \IntCalcDiv#1!262144!%
2073 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2074 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2075 \@@backslashchar 33%
2076 \expandafter\expandafter\expandafter\IntCalcAdd
2077 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2078 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2079 \IntCalcMod#1!256!!%
2080 }%
2081 \else
2082 \def\HyPsd@Char#1{%
2083 \@@backslashchar 000#1%
2084 }%
2085 \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`

```

2086 \begingroup\expandafter\expandafter\expandafter\endgroup
2087 \expandafter\ifx\csname numexpr\endcsname\relax
2088 \let\HyPsd@UTFviii\relax
2089 \else
2090 \begingroup
2091 \lccode'\~='^f4\relax
2092 \lowercase{\endgroup
2093 \def\HyPsd@UTFviii{%
2094 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2095 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2096 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2097 \ifx~\HyPsd@UTFviii@ccxliv@undef
2098 \let~\HyPsd@UTFviii@ccxliv@def
2099 \fi
2100 \let\unichar\HyPsd@unichar
2101 }%
2102 }%
2103 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2104 \edef\HyPsd@UTFviii@ccxliv@def{%
2105 \noexpand\UTFviii@four@octets\string ^^f4%
2106 }%

```

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.

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

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

```

2107 \def\HyPsd@UTFviii@two#1#2{%
2108 \expandafter\HyPsd@UTFviii@@two
2109 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2110 \number'#1\expandafter| %
2111 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2112 \number'#2 \@nil
2113 }%
2114 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2115 \expandafter\8%
2116 \number\numexpr #1-48\expandafter\relax
2117 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2118 \number\numexpr #3-8*%
2119 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2120 \number\numexpr #4-8*#3\relax
2121 }%

```

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

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

```

2122 \def\HyPsd@UTFviii@three#1#2#3{%
2123 \expandafter\HyPsd@UTFviii@@three
2124 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2125 \number'#1\expandafter| %
2126 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2127 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2128 \number'#2\expandafter| %
2129 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2130 \number'#3 \@nil
2131 }%
2132 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2133 \expandafter\9%
2134 \number\numexpr #1-56\expandafter\relax
2135 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2136 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2137 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2138 \number\numexpr #6-16\expandafter\relax
2139 \number\numexpr #7-8*#6\relax
2140 }%

```

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

```

```

2141 \def\HyPsd@UTFviii@four#1#2{%
2142 \expandafter\HyPsd@@UTFviii@four\number
2143 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2144 \expandafter|\number
2145 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2146 }%
2147 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2148 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2149 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2150 \ifodd#2 %
2151 \number\dimexpr(#2-1)/2\relax
2152 \else
2153 \number\dimexpr#2/2\relax
2154 \fi
2155 \number\dimexpr\ifodd#2 4+\fi
2156 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2157 \933%
2158 \expandafter\HyPsd@@@UTFviii@four\number
2159 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2160 }%
2161 \def\HyPsd@@@UTFviii@four#1|#2{%
2162 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2163 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2164 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2165 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2166 }%

```

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

```

2167 \def\HyPsd@unichar#1{%
2168 \ifHy@unicode
2169 \ifnum#1>"10FFFF %
2170 \HyPsd@UnicodeReplacementCharacter % illegal
2171 \else
2172 \ifnum#1>"FFFF %

```

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

```

2173 \expandafter\HyPsd@unichar\expandafter{%
2174 \number\dimexpr 55296+
2175 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2176 \relax\relax\relax
2177 }%

```

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

```

2178 \expandafter\HyPsd@unichar\expandafter{%
2179 \number\dimexpr#1-9216%
2180 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2181 \relax\relax\relax
2182 }%
2183 \else
2184 \ifnum#1>"7FF %
2185 \9%
2186 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2187 \number
2188 \dimexpr.00390625\dimexpr\number#1sp\relax\relax

```

```

2189     }%
2190     \else
2191     \8%
2192     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2193     \fi
2194     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2195     \number
2196     \numexpr#1-256*\number
2197     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2198     }%
2199     \fi
2200     \fi
2201     \else
2202     .% unsupported (Unicode -> PDF Doc Encoding)
2203     \fi
2204     }%
2205     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2206     \def\HyPsd@unichar@first@byte#1{%
2207     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2208     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2209     \number
2210     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2211     \relax\relax\relax
2212     }%
2213     }%
2214     \def\HyPsd@unichar@second@byte#1{%
2215     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2216     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2217     \number
2218     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2219     \relax\relax\relax
2220     }%
2221     }%
2222     \def\HyPsd@unichar@octtwo#1{%
2223     \number\dimexpr.125\dimexpr#1sp\relax\relax
2224     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2225     \relax\relax\relax
2226     }%
2227     \fi

```

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

```

2228 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2229 \ifx\@gobble#1%
2230 \else
2231 [Please insert \textbackslash PrerenderUnicode%
2232 \textbraceleft#1\textbraceright\space
2233 into preamble]%
2234 \fi
2235 }%

```

7 Support of other packages

7.1 Class memoir

```

2236 \@ifclassloaded{memoir}{%
2237 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%

```

```
2238 }{}
```

7.2 Package subfigure

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

```
2239 \ifpackageloaded{subfigure}{%
2240   \ltx@ifundefined{sub@label}{%
2241     \Hy@hypertextnamesfalse
2242   }{%
2243     \renewcommand*{\sub@label}[1]{%
2244       \@bsphack
2245       \subfig@oldlabel{#1}%
2246       \if@filesw
2247         \begingroup
2248         \edef\@currentlabstr{%
2249           \expandafter\strip@prefix\meaning\@currentlabelname
2250         }%
2251         \protected@write\@auxout{}{%
2252           \string\newlabel{sub@#1}{%
2253             {\@nameuse{\@thesub\@capytype}}%
2254             {\thepage}%
2255             {%
2256               \expandafter\strip@period\@currentlabstr
2257               \relax.\relax\@@@%
2258             }%
2259             {\@currentHref}%
2260             {}%
2261           }%
2262         }%
2263         \endgroup
2264       \fi
2265       \@esphack
2266     }%
2267   \ifpackagelater{subfigure}{2002/03/26}{%
2268     \providecommand*\toclevel@subfigure{1}%
2269     \providecommand*\toclevel@subtable{1}%
2270   }%
2271 }%
2272 }{}
```

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:

```
2273 \ltx@ifundefined{XR@addURL}{%
2274 }{%
```

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.

```
2275 \def\XR@addURL#1{\XR@@dURL#1{}{}{}\\}%
2276 \def\XR@@dURL#1#2#3#4#5\\{%
2277   {#1}{#2}%
2278   \if!#4!%
2279   \else
2280     {#3}{#4}{\XR@URL}%
2281   \fi
2282 }%
2283 }
```



```

2284 \def\Hy@true{true}
2285 \def\Hy@false{false}

    Providing dummy definitions.

2286 \let\literalps@out\@gobble
2287 \newcommand\pdfbookmark[3][]{ }
2288 \def\Acrobatmenu#1#2{\leavevmode#2}
2289 \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

```

2290 \let\HyperRaiseLinkHook\@empty
2291 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2292 \def\Hy@raisedlink#1{%
2293   \ifvmode
2294     #1%
2295   \else
2296     \penalty\@M
2297     \smash{%
2298       \begingroup
2299         \let\HyperRaiseLinkLength\@tempdima
2300         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2301         \HyperRaiseLinkHook
2302         \expandafter\endgroup
2303         \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2304       }%
2305   \fi
2306 }

```

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

```

2307 \def\Hy@SaveLastskip{%
2308   \let\Hy@RestoreLastskip\relax
2309   \ifvmode
2310     \ifdim\lastskip=\z@
2311       \let\Hy@RestoreLastskip\nobreak
2312     \else
2313       \begingroup
2314         \skip@=-\lastskip
2315         \edef\x{%
2316           \endgroup
2317         \def\noexpand\Hy@RestoreLastskip{%
2318           \noexpand\ifvmode
2319             \noexpand\nobreak

```

```

2320         \vskip\the\skip@
2321         \vskip\the\lastskip\relax
2322         \noexpand\fi
2323     }%
2324 }%
2325 \x
2326 \fi
2327 \else
2328     \ifhmode
2329         \ifdim\lastskip=\z@
2330             \let\Hy@RestoreLastskip\nobreak
2331         \else
2332             \begingroup
2333                 \skip@=-\lastskip
2334                 \edef\x{%
2335                     \endgroup
2336                     \def\noexpand\Hy@RestoreLastskip{%
2337                         \noexpand\ifhmode
2338                         \noexpand\nobreak
2339                         \hskip\the\skip@
2340                         \hskip\the\lastskip\relax
2341                         \noexpand\fi
2342                     }%
2343                 }%
2344             \x
2345         \fi
2346     \fi
2347 \fi
2348 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2349 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2350 \def\Hy@@boolkey[#1]#2#3{%
2351     \edef\Hy@tempa{#3}%
2352     \lowercase\expandafter{%
2353         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2354     }%
2355     \ifx\Hy@tempa\@empty
2356         \let\Hy@tempa\Hy@true
2357     \fi
2358     \ifx\Hy@tempa\Hy@true
2359     \else
2360         \ifx\Hy@tempa\Hy@false
2361         \else
2362             \let\Hy@tempa\relax
2363         \fi
2364     \fi
2365     \ifx\Hy@tempa\relax
2366         \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2367     \else
2368         \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2369         \csname Hy@#2\Hy@tempa\endcsname

```

```

2370 \fi
2371 }

```

\Hy@WarnOptionValue

```

2372 \def\Hy@WarnOptionValue#1#2#3{%
2373 \Hy@Warning{%
2374   Unexpected value '#1'\MessageBreak
2375   of option '#2' instead of\MessageBreak
2376   #3%
2377 }%
2378 }

```

\Hy@DisableOption

```

2379 \def\Hy@DisableOption#1{%
2380 \ifundefined{KV@Hyp@#1@default}{%
2381 \define@key{Hyp}{#1}%
2382 }{%
2383 \define@key{Hyp}{#1}[]%
2384 }%
2385 {\Hy@WarnOptionDisabled{#1}}%
2386 }

```

\Hy@WarnOptionDisabled

```

2387 \def\Hy@WarnOptionDisabled#1{%
2388 \Hy@Warning{%
2389   Option '#1' has already been used,\MessageBreak
2390   setting the option has no effect%
2391 }%
2392 }

```

\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.

```

2393 \def\Hy@CheckOptionValue#1#2#3{%
2394 \begingroup
2395 \edef\x{#1}%
2396 \@onelevel@sanitize\x
2397 \let\y=y%
2398 \def\do##1##2{%
2399 \def\z{##1}%
2400 \@onelevel@sanitize\z
2401 \ifx\x\z
2402 \let\y=n%
2403 \let\do\@gobbletwo
2404 \fi
2405 }%
2406 #3%
2407 \ifx\y y%
2408 \def\do##1##2{%
2409 * '##1'%
2410 \ifx\##2\\else\space(##2)\fi
2411 \MessageBreak
2412 }%
2413 \Hy@Warning{%
2414   Values of option '#2':\MessageBreak
2415   #3%
2416   * An empty value disables the option.\MessageBreak
2417   Unknown value '\x'%

```

```

2418     }%
2419     \fi
2420 \endgroup
2421 }

```

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

```

2422 \def\Hy@DefNameKey#1{%
2423   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2424 }

```

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

```

2425 \def\Hy@@DefNameKey#1#2#3{%
2426   \define@key{Hyp}{#2}{%
2427     \edef#1{##1}%
2428     \ifx#1\@empty
2429       \else
2430         \Hy@CheckOptionValue{##1}{#2}{#3}%
2431       \fi
2432   }%
2433   \let#1\@empty
2434 }

```

`\Hy@UseNameKey`

```

2435 \def\Hy@UseNameKey#1#2{%
2436   \ifx#2\@empty
2437     \else
2438       /#1/#2%
2439   \fi
2440 }

```

9.2 Defining the options

```

2441 \define@key{Hyp}{implicit}[true]{%
2442   \Hy@boolkey{implicit}{#1}%
2443 }
2444 \define@key{Hyp}{draft}[true]{%
2445   \Hy@boolkey{draft}{#1}%
2446 }
2447 \define@key{Hyp}{final}[true]{%
2448   \Hy@boolkey{final}{#1}%
2449 }
2450 \let\KV@Hyp@nolinks\KV@Hyp@draft
2451 \def\Hy@ObsoletePaperOption#1{%
2452   \Hy@WarningNoLine{%
2453     Option ‘#1’ is no longer used%
2454   }%
2455   \define@key{Hyp}{#1}[true]{}%
2456 }
2457 \def\Hy@temp#1{%
2458   \define@key{Hyp}{#1}[true]{%
2459     \Hy@ObsoletePaperOption{#1}%
2460   }%

```

```

2461 }
2462 \Hy@temp{a4paper}
2463 \Hy@temp{a5paper}
2464 \Hy@temp{b5paper}
2465 \Hy@temp{letterpaper}
2466 \Hy@temp{legalpaper}
2467 \Hy@temp{executivepaper}

2468 \define@key{Hyp}{setpagesize}[true]{%
2469   \Hy@boolkey{setpagesize}{#1}%
2470 }
2471 \define@key{Hyp}{debug}[true]{%
2472   \Hy@boolkey{debug}{verbose}{#1}%
2473 }
2474 \define@key{Hyp}{linktocpage}[true]{%
2475   \Hy@boolkey{linktocpage}{#1}%
2476   \ifHy@linktocpage
2477     \let\Hy@linktoc\Hy@linktoc@page
2478   \else
2479     \let\Hy@linktoc\Hy@linktoc@section
2480   \fi
2481 }
2482 \chardef\Hy@linktoc@none=0 %
2483 \chardef\Hy@linktoc@section=1 %
2484 \chardef\Hy@linktoc@page=2 %
2485 \chardef\Hy@linktoc@all=3 %
2486 \ifHy@linktocpage
2487   \let\Hy@linktoc\Hy@linktoc@page
2488 \else
2489   \let\Hy@linktoc\Hy@linktoc@section
2490 \fi
2491 \define@key{Hyp}{linktoc}{%
2492   \@ifundefined{Hy@linktoc@#1}{%
2493     \Hy@Warning{%
2494       Unexpected value ‘#1’ of\MessageBreak
2495       option ‘linktoc’ instead of ‘none’,\MessageBreak
2496       ‘section’, ‘page’ or ‘all’%
2497     }%
2498   }{%
2499     \expandafter\let\expandafter\Hy@linktoc
2500     \csname Hy@linktoc@#1\endcsname
2501   }%
2502 }
2503 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2504 \let\XR@ext\relax
2505 \define@key{Hyp}{verbose}[true]{%
2506   \Hy@boolkey{verbose}{#1}%
2507 }
2508 \define@key{Hyp}{typexml}[true]{%
2509   \Hy@boolkey{typexml}{#1}%
2510 }

```

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.

```

2511 \define@key{Hyp}{raiselinks}[true]{%
2512   \Hy@boolkey{raiselinks}{#1}%

```

2513 }

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

```
2514 \def\Hy@setbreaklinks#1{%
2515   \csname breaklinks#1\endcsname
2516 }

2517 \def\Hy@breaklinks@unsupported{%
2518   \ifx\Hy@setbreaklinks\@gobble
2519     \ifHy@breaklinks
2520       \Hy@WarningNoLine{%
2521         You have enabled option 'breaklinks'.\MessageBreak
2522         But driver '\Hy@driver.def' does not support this.\MessageBreak
2523         Expect trouble with the link areas of broken links%
2524       }%
2525     \fi
2526   \fi
2527 }

2528 \define@key{Hyp}{breaklinks}[true]{%
2529   \Hy@boolkey{breaklinks}{#1}%
2530   \let\Hy@setbreaklinks\@gobble
2531 }

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

Determines whether an automatic anchor is put on each page

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

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.

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

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

```
2541 \define@key{Hyp}{naturalnames}[true]{%
2542   \Hy@boolkey{naturalnames}{#1}%
2543 }
```

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

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

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

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

2550 \define@key{Hyp}{unicode}[true]{%
2551   \Hy@boolkey{unicode}{#1}%
2552   \ifHy@unicode
2553     \def\HyPsd@pdfencoding{unicode}%
2554     \HyPsd@LoadUnicode
2555   \else
2556     \def\HyPsd@pdfencoding{pdfdoc}%
2557   \fi
```

```

2558 }
2559 \def\HyPsd@LoadUnicode{%
2560   \ifundefined{T@PU}{%
2561     \input{puenc.def}%
2562     \HyLinguex@Restore
2563   }{}%
2564   \DeclareFontFamily{PU}{pdf}{}%
2565   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2566   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2567   \global\let\HyPsd@LoadUnicode\relax
2568 }
2569 \Hy@AtBeginDocument{%
2570   \ifx\HyPsd@LoadUnicode\relax
2571     \else
2572       \def\HyPsd@LoadUnicode{%
2573         \PackageError{hyperref}{%
2574           Unicode support for bookmarks is not available.\MessageBreak
2575           Activate unicode support by using one of the options\MessageBreak
2576           ‘unicode’, ‘pdfencoding=unicode’, ‘pdfencoding=auto’\MessageBreak
2577           in the preamble%
2578         }\@ehc
2579         \global\let\HyPsd@LoadUnicode\relax
2580         \global\Hy@unicodedefalse
2581         \global\let\Hy@unicodetrue\Hy@unicodedefalse
2582       }%
2583     \fi
2584 }
2585 \define@key{Hyp}{pdfencoding}{%
2586   \edef\HyPsd@temp{#1}%
2587   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2588     \let\HyPsd@pdfencoding\HyPsd@temp
2589     \Hy@unicodedefalse
2590   \else
2591     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2592       \z@
2593     \else
2594       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2595         \z@
2596       \else
2597         \@ne
2598       \fi
2599     \fi
2600     \let\HyPsd@pdfencoding\HyPsd@temp
2601     \hypersetup{unicode}%
2602     \ifHy@unicode
2603       \def\HyPsd@pdfencoding{#1}%
2604       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2605         \HyPsd@LoadStringEnc
2606       \fi
2607     \else
2608       \Hy@Warning{Cannot switch to unicode bookmarks}%
2609       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2610     \fi
2611   \else
2612     \@onelevel@sanitize\HyPsd@temp
2613     \Hy@Warning{%
2614       Values of option ‘pdfencoding’: \MessageBreak

```

```

2615     'pdfdoc', 'unicode', 'auto'.\MessageBreak
2616     Ignoring unknown value '\HyPsd@temp'%
2617   }%
2618 \fi
2619 \fi
2620 }
2621 \def\HyPsd@pdfencoding@auto{auto}
2622 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2623 \def\HyPsd@pdfencoding@unicode{unicode}
2624 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2625 \def\HyPsd@LoadStringEnc{%
2626   \RequirePackage{stringenc}[2009/12/15]%
2627   \let\HyPsd@LoadStringEnc\relax
2628 }
2629 \Hy@AtBeginDocument{%
2630   \ifpackageloaded{stringenc}{%
2631     \let\HyPsd@LoadStringEnc\relax
2632   }{%
2633     \def\HyPsd@LoadStringEnc{%
2634       \Hy@WarningNoLine{%
2635         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2636         in the preamble or load the package there%
2637       }%
2638     }%
2639   }%
2640 }

2641 \def\hypersetup{\kvsetkeys{Hyp}}

2642 \newif\ifHy@setpdfversion
2643 \define@key{Hyp}{pdfversion}{%
2644   \ifundefined{Hy@pdfversion@#1}{%
2645     \PackageWarning{hyperref}{%
2646       Unsupported PDF version '#1'.\MessageBreak
2647       Valid values: 1.2 until 1.9%
2648     }%
2649   }{%
2650     \Hy@setpdfversiontrue
2651     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2652   }%
2653 }
2654 \@namedef{Hy@pdfversion@1.2}{2}%
2655 \@namedef{Hy@pdfversion@1.3}{3}%
2656 \@namedef{Hy@pdfversion@1.4}{4}%
2657 \@namedef{Hy@pdfversion@1.5}{5}%
2658 \@namedef{Hy@pdfversion@1.6}{6}%
2659 \@namedef{Hy@pdfversion@1.7}{7}%
2660 \@namedef{Hy@pdfversion@1.8}{8}%
2661 \@namedef{Hy@pdfversion@1.9}{9}%
2662 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2663 \define@key{Hyp}{hyperref}[true]{}
2664 \define@key{Hyp}{tex4ht}[true]{}
2665 \Hy@texhttrue
2666 \kvsetkeys{Hyp}{colorlinks=true}%
2667 \def\BeforeTeXIVht{\usepackage{color}}%
2668 \def\Hy@driver{htex4ht}%

```



```

2669 \def\MaybeStopEarly{%
2670 \typeout{Hyperref stopped early}%
2671 \Hy@AtBeginDocument{%
2672 \PDF@FinishDoc
2673 \gdef\PDF@FinishDoc{%}
2674 }%
2675 \endinput
2676 }%
2677 }
2678 \define@key{Hyp}{pdfetex}[true]{%
2679 \def\Hy@driver{hpdtex}%
2680 }
2681 \define@key{Hyp}{nativepdf}[true]{%
2682 \def\Hy@driver{hdvips}%
2683 }
2684 \define@key{Hyp}{dvipdfm}[true]{%
2685 \def\Hy@driver{hdvipdfm}%
2686 }
2687 \define@key{Hyp}{dvipdfmx}[true]{%
2688 \def\Hy@driver{hdvipdfm}%
2689 }
2690 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2691 \expandafter\ifx\csname if#1\expandafter\endcsname
2692 \csname iftrue\endcsname
2693 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2694 \else
2695 \chardef\SpecialDvipdfmxOutlineOpen\z@
2696 \fi
2697 }
2698 \define@key{Hyp}{xetex}[true]{%
2699 \def\Hy@driver{hxetex}%
2700 }
2701 \define@key{Hyp}{pdfmark}[true]{%
2702 \def\Hy@driver{hdvips}%
2703 }
2704 \define@key{Hyp}{dvips}[true]{%
2705 \def\Hy@driver{hdvips}%
2706 }
2707 \define@key{Hyp}{hypertex}[true]{%
2708 \def\Hy@driver{hypertex}%
2709 }
2710 \let\Hy@MaybeStopNow\relax
2711 \define@key{Hyp}{vtex}[true]{%
2712 \begingroup\expandafter\expandafter\expandafter\endgroup
2713 \expandafter\ifx\csname OpMode\endcsname\relax
2714 \@latex@error{Non-VTeX processor}{}%
2715 \global\let\Hy@MaybeStopNow\endinput
2716 \endinput
2717 \else
2718 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2719 \def\Hy@driver{hvtex}%
2720 \else
2721 \ifnum\OpMode=10\relax
2722 \def\Hy@driver{hvtexhtm}%
2723 \def\MaybeStopEarly{%
2724 \typeout{Hyperref stopped early}%
2725 \Hy@AtBeginDocument{%

```

```

2726         \PDF@FinishDoc
2727         \gdef\PDF@FinishDoc{}}%
2728     }%
2729     \endinput
2730 }%
2731 \else
2732     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2733     \global\let\Hy@MaybeStopNow\endinput
2734     \endinput
2735 \fi
2736 \fi
2737 \fi
2738 }
2739 \define@key{Hyp}{vtexpdfmark}[true]{%
2740 \begingroup\expandafter\expandafter\expandafter\endgroup
2741 \expandafter\ifx\csname OpMode\endcsname\relax
2742     \@latex@error{Non-VTeX processor}{}%
2743     \let\Hy@MaybeStopNow\endinput
2744     \endinput
2745 \else
2746     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2747     \def\Hy@driver{hvtexmrk}%
2748     \else
2749         \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2750         \let\Hy@MaybeStopNow\endinput
2751         \endinput
2752     \fi
2753 \fi
2754 }
2755 \define@key{Hyp}{dviwindo}[true]{%
2756 \def\Hy@driver{hdviwind}%
2757 \kvsetkeys{Hyp}{colorlinks}%
2758 \ifpdf
2759 \else
2760     \ifxetex
2761     \else
2762         \PassOptionsToPackage{dviwindo}{color}%
2763     \fi
2764 \fi
2765 }
2766 \define@key{Hyp}{dvipsone}[true]{%
2767 \def\Hy@driver{hdvipson}%
2768 }
2769 \define@key{Hyp}{textures}[true]{%
2770 \def\Hy@driver{htexture}%
2771 }
2772 \define@key{Hyp}{latex2html}[true]{%
2773 \Hy@AtBeginDocument{\@@@latextohtmlX}%
2774 }

```

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

```

2775 \define@key{Hyp}{ps2pdf}[true]{%
2776 \def\Hy@driver{hdvips}%
2777 \providecommand*\@pdfborder{0 0 1}%
2778 }

```

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.

```
2779 \define@key{Hyp}{hyperfigures}[true]{%
2780   \Hy@boolkey[hyperfigures]{figures}{#1}%
2781 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2782 \define@key{Hyp}{hyperfootnotes}[true]{%
2783   \Hy@boolkey[hyperfootnotes]{#1}%
2784 }
```

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

```
2785 \def\back@none{none}
2786 \def\back@section{section}
2787 \def\back@page{page}
2788 \def\back@slide{slide}
2789 \define@key{Hyp}{backref}[section]{%
2790   \lowercase{\def\Hy@tempa{#1}}%
2791   \ifx\Hy@tempa\@empty
2792     \let\Hy@tempa\back@section
2793   \fi
2794   \ifx\Hy@tempa\Hy@false
2795     \let\Hy@tempa\back@none
2796   \fi
2797   \ifx\Hy@tempa\back@slide
2798     \let\Hy@tempa\back@section
2799   \fi
2800   \ifx\Hy@tempa\back@page
2801     \PassOptionsToPackage{hyperpageref}{backref}%
2802     \Hy@backreftrue
2803   \else
2804     \ifx\Hy@tempa\back@section
2805       \PassOptionsToPackage{hyperref}{backref}%
2806       \Hy@backreftrue
2807     \else
2808       \ifx\Hy@tempa\back@none
2809         \Hy@backreffalse
2810       \else
2811         \Hy@WarnOptionValue{#1}{backref}{%
2812           'section', 'slide', 'page', 'none',\MessageBreak
2813           or 'false'}%
2814       \fi
2815     \fi
2816   \fi
2817 }
2818 \define@key{Hyp}{pagebackref}[true]{%
2819   \edef\Hy@tempa{#1}%
2820   \lowercase\expandafter{%
2821     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2822   }%
2823   \ifx\Hy@tempa\@empty
2824     \let\Hy@tempa\Hy@true
2825   \fi
2826   \ifx\Hy@tempa\Hy@true
2827     \PassOptionsToPackage{hyperpageref}{backref}%
2828     \Hy@backreftrue
```

```

2829 \else
2830 \ifx\Hy@tempa\Hy>false
2831 \Hy@backreffalse
2832 \else
2833 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
2834 \fi
2835 \fi
2836 }

```

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

```

2837 \define@key{Hyp}{hyperindex}[true]{%
2838 \Hy@boolkey{hyperindex}{#1}%
2839 }

```

Configuration of encap char.

```

2840 \define@key{Hyp}{encap}[|]{%
2841 \def\HyInd@EncapChar{#1}%
2842 }

```

12 Language options

The \autoref feature depends on the language.

```

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

```

```

2877 \def\pageautorefname{page}%
2878 }
2879 \def\HyLang@french{%
2880 \def\equationautorefname{'Equation}%
2881 \def\footnoteautorefname{note}%
2882 \def\itemautorefname{item}%
2883 \def\figureautorefname{Figure}%
2884 \def\tableautorefname{Tableau}%
2885 \def\partautorefname{Partie}%
2886 \def\appendixautorefname{Appendice}%
2887 \def\chapterautorefname{chapitre}%
2888 \def\sectionautorefname{section}%
2889 \def\subsectionautorefname{sous-section}%
2890 \def\subsubsectionautorefname{sous-sous-section}%
2891 \def\paragraphautorefname{paragraphe}%
2892 \def\subparagraphautorefname{sous-paragraphe}%
2893 \def\FancyVerbLineautorefname{ligne}%
2894 \def\theoremautorefname{Th\'eor\`eme}%
2895 \def\pageautorefname{page}%
2896 }
2897 \def\HyLang@german{%
2898 \def\equationautorefname{Gleichung}%
2899 \def\footnoteautorefname{Fu\ss note}%
2900 \def\itemautorefname{Punkt}%
2901 \def\figureautorefname{Abbildung}%
2902 \def\tableautorefname{Tabelle}%
2903 \def\partautorefname{Teil}%
2904 \def\appendixautorefname{Anhang}%
2905 \def\chapterautorefname{Kapitel}%
2906 \def\sectionautorefname{Abschnitt}%
2907 \def\subsectionautorefname{Unterabschnitt}%
2908 \def\subsubsectionautorefname{Unterunterabschnitt}%
2909 \def\paragraphautorefname{Absatz}%
2910 \def\subparagraphautorefname{Unterabsatz}%
2911 \def\FancyVerbLineautorefname{Zeile}%
2912 \def\theoremautorefname{Theorem}%
2913 \def\pageautorefname{Seite}%
2914 }
2915 \def\HyLang@italian{%
2916 \def\equationautorefname{Equazione}%
2917 \def\footnoteautorefname{nota}%
2918 \def\itemautorefname{punto}%
2919 \def\figureautorefname{Figura}%
2920 \def\tableautorefname{Tabella}%
2921 \def\partautorefname{Parte}%
2922 \def\appendixautorefname{Appendice}%
2923 \def\chapterautorefname{Capitolo}%
2924 \def\sectionautorefname{sezione}%
2925 \def\subsectionautorefname{sottosezione}%
2926 \def\subsubsectionautorefname{sottosottosezione}%
2927 \def\paragraphautorefname{paragrafo}%
2928 \def\subparagraphautorefname{sottoparagrafo}%
2929 \def\FancyVerbLineautorefname{linea}%
2930 \def\theoremautorefname{Teorema}%
2931 \def\pageautorefname{Pag.\@}%
2932 }
2933 \def\HyLang@magyar{%

```

```

2934 \def\equationautorefname{Egyenlet}%
2935 \def\footnoteautorefname{l\'abjegyzet}%
2936 \def\itemautorefname{Elem}%
2937 \def\figureautorefname{\'Abra}%
2938 \def\tableautorefname{T\'abl\'azat}%
2939 \def\partautorefname{R\'esz}%
2940 \def\appendixautorefname{F\'uggel\'ek}%
2941 \def\chapterautorefname{fejezet}%
2942 \def\sectionautorefname{szakasz}%
2943 \def\subsectionautorefname{alszakasz}%
2944 \def\subsubsectionautorefname{alalszakasz}%
2945 \def\paragraphautorefname{bekezd\'es}%
2946 \def\subparagraphautorefname{albekezd\'es}%
2947 \def\FancyVerbLineautorefname{sor}%
2948 \def\theoremautorefname{T\'etel}%
2949 \def\pageautorefname{oldal}%
2950 }
2951 \def\HyLang@portuges{%
2952 \def\equationautorefname{Equa\c c\~ao}%
2953 \def\footnoteautorefname{Nota de rodap\'e}%
2954 \def\itemautorefname{Item}%
2955 \def\figureautorefname{Figura}%
2956 \def\tableautorefname{Tabela}%
2957 \def\partautorefname{Parte}%
2958 \def\appendixautorefname{Ap\~endice}%
2959 \def\chapterautorefname{Cap\'itulo}%
2960 \def\sectionautorefname{Se\c c\~ao}%
2961 \def\subsectionautorefname{Subse\c c\~ao}%
2962 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2963 \def\paragraphautorefname{par\'agrafo}%
2964 \def\subparagraphautorefname{subpar\'agrafo}%
2965 \def\FancyVerbLineautorefname{linha}%
2966 \def\theoremautorefname{Teorema}%
2967 \def\pageautorefname{P\'agina}%
2968 }

```

Next commented section for Russian is provided by Olga Lapko.

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

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

```

2969 \def\HyLang@russian{%

```

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

```

2970 \def\equationautorefname{\cyr\cyrv\cyrery\cyrr.}%

```

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

```

2971 % \def\equationautorefname{%
2972 % \cyr\cyrv\cyrery\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
2973 % }%

```

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

```
2974 \def\footnoteautorefname{%
2975   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2976 }%
```

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

```
2977 % \def\footnoteautorefname{%
2978 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2979 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2980 % }%
```

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

```
2981 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2982 % \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.

```
2983 \def\itemautorefname{\cyr\cyrp.}%
2984 % \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.

```
2985 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2986 \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.

```
2987 \def\partautorefname{\cyr\cyrch.}%
2988 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2989 \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.

```
2990 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2991 % \def\appendixautorefname{%
2992 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2993 % }%
```

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.

```
2994 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2995 \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.

```
2996 \def\paragraphautorefname{\cyr\cyrp.}%
2997 \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.

```
2998 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2999 % \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.

```
3000 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3001 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
3002 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3003 % \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 . . .

```
3004 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3005 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
3006 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3007 \def\pageautorefname{\cyr\cyrs.}%
```

```
3008 }
```

```
3009 \def\HyLang@spanish{%
```

```
3010 \def\equationautorefname{Ecuaci'on}%
```

```
3011 \def\footnoteautorefname{Nota a pie de p'agina}%
```

```
3012 \def\itemautorefname{Elemento}%
```

```
3013 \def\figureautorefname{Figura}%
```

```
3014 \def\tableautorefname{Tabla}%
```

```
3015 \def\partautorefname{Parte}%
```

```
3016 \def\appendixautorefname{Ap'endice}%
```

```
3017 \def\chapterautorefname{Cap'itulo}%
```

```
3018 \def\sectionautorefname{Secci'on}%
```

```
3019 \def\subsectionautorefname{Subsecci'on}%
```

```
3020 \def\subsubsectionautorefname{Subsubsecci'on}%
```

```
3021 \def\paragraphautorefname{P'arrafo}%
```

```
3022 \def\subparagraphautorefname{Subp'arrafo}%
```

```
3023 \def\FancyVerbLineautorefname{L'inea}%
```

```
3024 \def\theoremautorefname{Teorema}%
```

```
3025 \def\pageautorefname{P'agina}%
```

```
3026 }
```

```
3027 \def\HyLang@vietnamese{%
```

```
3028 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr\inh}%
```

```
3029 \def\footnoteautorefname{Ch'u th'ich}%
```

```
3030 \def\itemautorefname{m\du{c}}%
```

```
3031 \def\figureautorefname{H\inh}%
```

```
3032 \def\tableautorefname{B\h{a}ng}%
```

```
3033 \def\partautorefname{Ph'\acircumflex{}n}%
```

```
3034 \def\appendixautorefname{Ph\du{ }l\du{c}}%
```

```
3035 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
```

```
3036 \def\sectionautorefname{m\du{c}}%
```

```
3037 \def\subsectionautorefname{m\du{c}}%
```

```
3038 \def\subsubsectionautorefname{m\du{c}}%
```

```
3039 \def\paragraphautorefname{\dj{ }o\da{n}}%
```



```

3040 \def\subparagraphautorefname{\dj{ }o\ d{a}n}%
3041 \def\FancyVerbLineautorefname{d\'ong}%
3042 \def\theoremautorefname{\DJ{ }\ d{i}nh l\'y}%
3043 \def\pageautorefname{Trang}%
3044 }

```

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

```

3045 \def\HyLang@addto#1#2{%
3046   #2%
3047   \@temptokena{#2}%
3048   \ifx#1\relax
3049     \let#1\@empty
3050   \fi
3051   \ifx#1\@undefined
3052     \edef#1{\the\@temptokena}%
3053   \else
3054     \toks@\expandafter{#1}%
3055     \edef#1{\the\toks@\the\@temptokena}%
3056   \fi
3057   \@temptokena{}\toks@\@temptokena
3058 }

3059 \def\HyLang@DeclareLang#1#2#3{%
3060   \ifpackagewith{babel}{#1}{%
3061     \expandafter\HyLang@addto
3062       \csname extras#1\expandafter\endcsname
3063       \csname HyLang@#2\endcsname
3064     \begingroup
3065       \edef\x{\endgroup
3066         #3%
3067       }%
3068       \x
3069       \@namedef{HyLang@#1@done}{}%
3070     }{%
3071       \begingroup
3072       \edef\x##1##2{%
3073         \noexpand\ifx##2\relax
3074           \errmessage{No definitions for language #2' found!}%
3075         \noexpand\fi
3076       \endgroup
3077       \noexpand\define@key{Hyp}{#1}[]{%
3078         \noexpand\@ifundefined{HyLang@#1@done}{%
3079           \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3080           #3%
3081         \noexpand\@namedef{HyLang@#1@done}{}%
3082       }{%
3083       }%
3084     }%
3085     \expandafter\x\csname extras#1\expandafter\endcsname
3086       \csname HyLang@#2\endcsname
3087   }

3088 \HyLang@DeclareLang{english}{english}{}
3089 \HyLang@DeclareLang{UKenglish}{english}{}
3090 \HyLang@DeclareLang{british}{english}{}
3091 \HyLang@DeclareLang{USenglish}{english}{}
3092 \HyLang@DeclareLang{american}{english}{}
3093 \HyLang@DeclareLang{german}{german}{}

```

```

3094 \HyLang@DeclareLang{austrian}{german}{}
3095 \HyLang@DeclareLang{ngerman}{german}{}
3096 \HyLang@DeclareLang{naustrian}{german}{}
3097 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3098 \HyLang@DeclareLang{brazil}{portuges}{}
3099 \HyLang@DeclareLang{brazilian}{portuges}{}
3100 \HyLang@DeclareLang{portuguese}{portuges}{}
3101 \HyLang@DeclareLang{spanish}{spanish}{}
3102 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3103 \HyLang@DeclareLang{french}{french}{}
3104 \HyLang@DeclareLang{frenchb}{french}{}
3105 \HyLang@DeclareLang{francais}{french}{}
3106 \HyLang@DeclareLang{acadian}{french}{}
3107 \HyLang@DeclareLang{canadien}{french}{}
3108 \HyLang@DeclareLang{italian}{italian}{}
3109 \HyLang@DeclareLang{magyar}{magyar}{}
3110 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3111 \define@key{Hyp}{vietnamese}[]{}%
3112 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3113 \Hy@AtEndOfPackage{%
3114 \ifundefined{T@PU}{}{}%
3115 \input{puvnenc.def}%
3116 }%
3117 }%
3118 }
3119 \define@key{Hyp}{vietnam}[]{}%
3120 \HyLang@addto\extravietnam\HyLang@vietnamese
3121 \Hy@AtEndOfPackage{%
3122 \ifundefined{T@PU}{}{}%
3123 \input{puvnenc.def}%
3124 }%
3125 }%
3126 }

```

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

```

3127 \define@key{Hyp}{arabic}[]{}%
3128 \Hy@AtEndOfPackage{%
3129 \ifundefined{T@PU}{}{}%
3130 \input{puarenc.def}%
3131 }%
3132 }%
3133 }

```

13 Options to change appearance of links

Colouring links at the \LaTeX level is useful for debugging, perhaps.

```

3134 \define@key{Hyp}{colorlinks}[true]{}%
3135 \Hy@boolkey{colorlinks}{#1}%
3136 }
3137 \define@key{Hyp}{ocgcolorlinks}[true]{}%
3138 \Hy@boolkey{ocgcolorlinks}{#1}%
3139 }
3140 \Hy@AtBeginDocument{%
3141 \begingroup
3142 \ifundefined{OBJ@OCG@view}{}%

```

```

3143 \ifHy@ocgcolorlinks
3144 \Hy@Warning{%
3145     Driver does not support 'ocgcolorlinks',\MessageBreak
3146     using 'colorlinks' instead%
3147 }%
3148 \fi
3149 }{}%
3150 \endgroup
3151 }
3152 \define@key{Hyp}{frenchlinks}[true]{%
3153 \Hy@boolkey{frenchlinks}{#1}%
3154 }

```

14 Bookmarking

```

3155 \begingroup\expandafter\expandafter\expandafter\endgroup
3156 \expandafter\ifx\csname chapter\endcsname\relax
3157 \def\toclevel@part{0}%
3158 \else
3159 \def\toclevel@part{-1}%
3160 \fi
3161 \def\toclevel@chapter{0}
3162 \def\toclevel@section{1}
3163 \def\toclevel@subsection{2}
3164 \def\toclevel@subsubsection{3}
3165 \def\toclevel@paragraph{4}
3166 \def\toclevel@subparagraph{5}
3167 \def\toclevel@figure{0}
3168 \def\toclevel@table{0}
3169 \@ifpackageloaded{listings}{%
3170 \providecommand*\theHlstlisting{\thelstlisting}%
3171 \providecommand*\toclevel@lstlisting{0}%
3172 }{}
3173 \@ifpackageloaded{listing}{%
3174 \providecommand*\theHlisting{\thelisting}%
3175 \providecommand*\toclevel@listing{0}%
3176 }{}

3177 \define@key{Hyp}{bookmarks}[true]{%
3178 \Hy@boolkey{bookmarks}{#1}%
3179 }

3180 \define@key{Hyp}{bookmarksopen}[true]{%
3181 \Hy@boolkey{bookmarksopen}{#1}%
3182 }

```

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.

```

3183 \let\Hy@bookmarksdepth\c@tocdepth

```

```

3184 \define@key{Hyp}{bookmarksdepth}[]{}%
3185 \begingroup
3186 \edef\x{#1}%
3187 \ifx\x\empty
3188 \global\let\Hy@bookmarksdepth\c@tocdepth
3189 \else
3190 \@ifundefined{toclevel@x}{%
3191 \@onelevel@sanitize\x
3192 \edef\y{\expandafter\@car\x\@nil}%
3193 \ifcase 0\expandafter\ifx\y-1\fi
3194 \expandafter\ifnum\expandafter\y>47 %
3195 \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
3196 \Hy@Warning{Unknown document division name (\x)}%
3197 \else
3198 \setbox\z@=\hbox{%
3199 \count@=\x
3200 \xdef\Hy@bookmarksdepth{\the\count@}%
3201 }%
3202 \fi
3203 }{%
3204 \setbox\z@=\hbox{%
3205 \count@=\csname toclevel@x\endcsname
3206 \xdef\Hy@bookmarksdepth{\the\count@}%
3207 }%
3208 }%
3209 \fi
3210 \endgroup
3211 }

```

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

```

3212 \define@key{Hyp}{bookmarksopenlevel}{%
3213 \def\@bookmarksopenlevel{#1}%
3214 }
3215 \def\@bookmarksopenlevel{\maxdimen}
3216 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3217 \define@key{Hyp}{bookmarkstype}{%
3218 \def\Hy@bookmarkstype{#1}%
3219 }
3220 \def\Hy@bookmarkstype{toc}

```

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

```

3221 \define@key{Hyp}{bookmarksnumbered}[true]{%
3222 \Hy@boolkey{bookmarksnumbered}{#1}%
3223 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3224 \define@key{Hyp}{CJKbookmarks}[true]{%
3225 \Hy@boolkey{CJKbookmarks}{#1}%
3226 }
3227 \def\Hy@temp#1{%
3228 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3229 }
3230 \def\Hy@@temp#1#2#3{%
3231 \define@key{Hyp}{#2color}{%
3232 \Hy@Color@HyperrefColor{##1}#1%
3233 }%
3234 \def#1{#3}%

```

```

3235 }
3236 \Hy@temp{link}{red}
3237 \Hy@temp{anchor}{black}
3238 \Hy@temp{cite}{green}
3239 \Hy@temp{file}{cyan}
3240 \Hy@temp{url}{magenta}
3241 \Hy@temp{menu}{red}
3242 \Hy@temp{run}{\@filecolor}
3243 \define@key{Hyp}{pagecolor}{%
3244   \Hy@WarningPageColor
3245 }
3246 \def\Hy@WarningPageColor{%
3247   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3248   \global\let\Hy@WarningPageColor\relax
3249 }

3250 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3251 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3252 \let\@baseurl\@empty
3253 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3254 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3255 \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.

```

3256 \let\@pdfpagetransition\relax
3257 \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.

```

3258 \let\@pdfpageduration\relax
3259 \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.

```

3260 \newif\ifHy@useHidKey
3261 \Hy@useHidKeyfalse
3262 \define@key{Hyp}{pdfpagehidden}[true]{%
3263   \Hy@boolkey{pdfpagehidden}{#1}%
3264   \ifHy@pdfpagehidden
3265     \global\Hy@useHidKeytrue
3266   \fi
3267 }

```

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).

```

3268 \def\Hy@ColorList{cite,file,link,menu,run,url}
3269 \@for\Hy@temp:=\Hy@ColorList\do{%
3270   \edef\Hy@temp{%
3271     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3272       \noexpand\HyColor@HyperrefBorderColor
3273       {##1}%
3274       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3275       {hyperref}%
3276       {\Hy@temp bordercolor}%
3277     }%
3278   }%
3279   \Hy@temp
3280 }
3281 \define@key{Hyp}{pagebordercolor}{%
3282   \Hy@WarningPageBorderColor
3283 }
3284 \def\Hy@WarningPageBorderColor{%
3285   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3286   \global\let\Hy@WarningPageBorderColor\relax
3287 }

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

```

```

3325 \do{R2L}{Right to left}%
3326 }
3327 \Hy@DefNameKey{pdfviewarea}{%
3328 \do{MediaBox}{}%
3329 \do{CropBox}{}%
3330 \do{BleedBox}{}%
3331 \do{TrimBox}{}%
3332 \do{ArtBox}{}%
3333 }
3334 \Hy@DefNameKey{pdfviewclip}{%
3335 \do{MediaBox}{}%
3336 \do{CropBox}{}%
3337 \do{BleedBox}{}%
3338 \do{TrimBox}{}%
3339 \do{ArtBox}{}%
3340 }
3341 \Hy@DefNameKey{pdfprintarea}{%
3342 \do{MediaBox}{}%
3343 \do{CropBox}{}%
3344 \do{BleedBox}{}%
3345 \do{TrimBox}{}%
3346 \do{ArtBox}{}%
3347 }
3348 \Hy@DefNameKey{pdfprintclip}{%
3349 \do{MediaBox}{}%
3350 \do{CropBox}{}%
3351 \do{BleedBox}{}%
3352 \do{TrimBox}{}%
3353 \do{ArtBox}{}%
3354 }
3355 \Hy@DefNameKey{pdfprintscaling}{%
3356 \do{AppDefault}{}%
3357 \do{None}{}%
3358 }
3359 \Hy@DefNameKey{pdfduplex}{%
3360 \do{Simplex}{}%
3361 \do{DuplexFlipShortEdge}{}%
3362 \do{DuplexFlipLongEdge}{}%
3363 }
3364 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3365 \do{true}{}%
3366 \do{false}{}%
3367 }
3368 \define@key{Hyp}{pdfprintpagerange}{%
3369 \def\@pdfprintpagerange{#1}%
3370 }
3371 \Hy@DefNameKey{pdfnumcopies}{%
3372 \do{2}{two copies}%
3373 \do{3}{three copies}%
3374 \do{4}{four copies}%
3375 \do{5}{five copies}%
3376 }
3377 \define@key{Hyp}{pdfusetitle}[true]{%
3378 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3379 }
3380 \def\HyXeTeX@CheckUnicode{%
3381 \ifxetex

```

```

3382 \ifHy@unicode
3383 \else
3384 \Hy@WarningNoLine{%
3385 XeTeX driver only supports unicode.\MessageBreak
3386 Enabling option 'unicode'%
3387 }%
3388 \kvsetkeys{Hyp}{unicode}%
3389 \fi
3390 \else
3391 \let\HyXeTeX@CheckUnicode\relax
3392 \fi
3393 }
3394 \def\HyPsd@PrerenderUnicode#1{%
3395 \begingroup
3396 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3397 \else
3398 \sbox0{%
3399 \let\GenericInfo\@gobbletwo
3400 \let\GenericWarning\@gobbletwo
3401 \let\GenericError\@gobblefour
3402 \PrerenderUnicode{#1}%
3403 }%
3404 \fi
3405 \endgroup
3406 }
3407 \define@key{Hyp}{pdftitle}{%
3408 \HyXeTeX@CheckUnicode
3409 \HyPsd@XeTeXBigCharstrue
3410 \HyPsd@PrerenderUnicode{#1}%
3411 \pdfstringdef\@pdftitle{#1}%
3412 }
3413 \define@key{Hyp}{pdfauthor}{%
3414 \HyXeTeX@CheckUnicode
3415 \HyPsd@XeTeXBigCharstrue
3416 \HyPsd@PrerenderUnicode{#1}%
3417 \pdfstringdef\@pdfauthor{#1}%
3418 }
3419 \define@key{Hyp}{pdfproducer}{%
3420 \HyXeTeX@CheckUnicode
3421 \HyPsd@XeTeXBigCharstrue
3422 \HyPsd@PrerenderUnicode{#1}%
3423 \pdfstringdef\@pdfproducer{#1}%
3424 }
3425 \define@key{Hyp}{pdfcreator}{%
3426 \HyXeTeX@CheckUnicode
3427 \HyPsd@XeTeXBigCharstrue
3428 \HyPsd@PrerenderUnicode{#1}%
3429 \pdfstringdef\@pdfcreator{#1}%
3430 }
3431 \define@key{Hyp}{pdfcreationdate}{%
3432 \begingroup
3433 \Hy@unicodedefalse
3434 \pdfstringdef\@pdfcreationdate{#1}%
3435 \endgroup
3436 }
3437 \define@key{Hyp}{pdfmoddate}{%
3438 \begingroup

```



```

3439 \Hy@unicodedefalse
3440 \pdfstringdef\@pdfmoddate{#1}%
3441 \endgroup
3442 }
3443 \define@key{Hyp}{pdfsubject}{%
3444 \HyXeTeX@CheckUnicode
3445 \HyPsd@XeTeXBigCharstrue
3446 \HyPsd@PrerenderUnicode{#1}%
3447 \pdfstringdef\@pdfsubject{#1}%
3448 }
3449 \define@key{Hyp}{pdfkeywords}{%
3450 \HyXeTeX@CheckUnicode
3451 \HyPsd@XeTeXBigCharstrue
3452 \HyPsd@PrerenderUnicode{#1}%
3453 \pdfstringdef\@pdfkeywords{#1}%
3454 }
3455 \define@key{Hyp}{pdftrapped}{%
3456 \lowercase{\edef\Hy@temp{#1}}%
3457 \ifx\Hy@temp\HyInfo@trapped@true
3458 \def\@pdftrapped{True}%
3459 \else
3460 \ifx\Hy@temp\HyInfo@trapped@false
3461 \def\@pdftrapped{False}%
3462 \else
3463 \ifx\Hy@temp\HyInfo@trapped@unknown
3464 \def\@pdftrapped{Unknown}%
3465 \else
3466 \ifx\Hy@temp\@empty
3467 \else
3468 \Hy@Warning{%
3469   Unsupported value '#1'\MessageBreak
3470   for option 'pdftrapped'%
3471 }%
3472 \fi
3473 \def\@pdftrapped{}%
3474 \fi
3475 \fi
3476 \fi
3477 }
3478 \def\HyInfo@trapped@true{true}
3479 \def\HyInfo@trapped@false{false}
3480 \def\HyInfo@trapped@unknown{unknown}
3481 \def\HyInfo@TrappedUnsupported{%
3482 \ifx\@pdftrapped\@empty
3483 \else
3484 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3485 \gdef\HyInfo@TrappedUnsupported{}%
3486 \fi
3487 }
3488 \define@key{Hyp}{pdfinfo}{%
3489 \kvsetkeys{pdfinfo}{#1}%
3490 }
3491 \def\Hy@temp#1{%
3492 \lowercase{\Hy@temp@A{#1}}{#1}%
3493 }
3494 \def\Hy@temp@A#1#2{%
3495 \define@key{pdfinfo}{#2}{%

```

```

3496 \hypersetup{pdf#1={##1}}%
3497 }%
3498 }
3499 \Hy@temp{Title}
3500 \Hy@temp{Author}
3501 \Hy@temp{Keywords}
3502 \Hy@temp{Subject}
3503 \Hy@temp{Creator}
3504 \Hy@temp{Producer}
3505 \Hy@temp{CreationDate}
3506 \Hy@temp{ModDate}
3507 \Hy@temp{Trapped}
3508 \newif\ifHyInfo@AddonUnsupported
3509 \kv@set@family@handler{pdfinfo}{%
3510 \HyInfo@AddonHandler{#1}{#2}%
3511 }
3512 \let\HyInfo@do\relax
3513 \def\HyInfo@AddonHandler#1#2{%
3514 \ifx\kv@value\relax
3515 \Hy@Warning{%
3516 Option 'pdfinfo': ignoring key '\kv@key' without value%
3517 }%
3518 \else
3519 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3520 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3521 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3522 \ifHyInfo@AddonUnsupported
3523 \Hy@Warning{%
3524 This driver does not support additional\MessageBreak
3525 information entries, therefore\MessageBreak
3526 '\kv@key' is ignored%
3527 }%
3528 \else
3529 \define@key{pdfinfo}{\HyInfo@Key}{%
3530 \HyXeTeX@CheckUnicode
3531 \HyPsd@XeTeXBigCharstrue
3532 \HyPsd@PrerenderUnicode{##1}%
3533 \pdfstringdef\HyInfo@Value{##1}%
3534 \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3535 \HyInfo@Value
3536 }%
3537 \edef\HyInfo@AddonList{%
3538 \HyInfo@AddonList
3539 \HyInfo@do{\HyInfo@Key}%
3540 }%
3541 \kv@parse@normalized{%
3542 \HyInfo@Key={#2}%
3543 }{%
3544 \kv@processor@default{pdfinfo}%
3545 }%
3546 \fi
3547 \else
3548 \kv@parse@normalized{%
3549 \HyInfo@Key={#2}%
3550 }{%
3551 \kv@processor@default{pdfinfo}%
3552 }%

```

```

3553 \fi
3554 \fi
3555 }
3556 \def\HyInfo@GenerateAddons{%
3557 \ifHyInfo@AddonUnsupported
3558 \def\HyInfo@Addons{}%
3559 \else
3560 \begingroup
3561 \toks@{}%
3562 \def\HyInfo@do##1{%
3563 \edef\EscapeName\HyInfo@Key{##1}%
3564 \edef\x{%
3565 \toks@{}%
3566 \the\toks@
3567 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3568 }%
3569 }%
3570 \x
3571 }%
3572 \HyInfo@AddonList
3573 \edef\x{\endgroup
3574 \def\noexpand\HyInfo@Addons{\the\toks@}%
3575 }%
3576 \x
3577 \fi
3578 }
3579 \def\HyInfo@AddonList{}

3580 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3581 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3582 \let\setpdfinkmargin\@gobble
3583 \def\calculate@pdfview#1 #2\{%
3584 \def\@pdfview{#1}%
3585 \ifx\#2\%
3586 \def\@pdfviewparams{-32768}%
3587 \else
3588 \def\@pdfviewparams{#2}%
3589 \fi
3590 }
3591 \begingroup\expandafter\expandafter\expandafter\endgroup
3592 \expandafter\ifx\csname numexpr\endcsname\relax
3593 \def\Hy@number#1{%
3594 \expandafter\@firstofone\expandafter{\number#1}%
3595 }%
3596 \else
3597 \def\Hy@number#1{%
3598 \the\numexpr#1\relax
3599 }%
3600 \fi
3601 \define@key{Hyp}{pdfstartpage}{%
3602 \ifx\#1\%
3603 \def\@pdfstartpage{}%
3604 \else
3605 \edef\@pdfstartpage{\Hy@number{#1}}%
3606 \fi
3607 }%
3608 \define@key{Hyp}{pdfstartview}{%
3609 \ifx\#1\%

```

```

3610 \def\@pdfstartview{ }%
3611 \else
3612 \hypercalcbpdef\@pdfstartview{ /#1 }%
3613 \fi
3614 }
3615 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3616 \define@key{Hyp}{pdftoolbar}[true]{%
3617 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3618 }
3619 \define@key{Hyp}{pdfmenubar}[true]{%
3620 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3621 }
3622 \define@key{Hyp}{pdfwindowui}[true]{%
3623 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3624 }
3625 \define@key{Hyp}{pdffitwindow}[true]{%
3626 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3627 }
3628 \define@key{Hyp}{pdfcenterwindow}[true]{%
3629 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3630 }
3631 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3632 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3633 }
3634 \define@key{Hyp}{pdfa}[true]{%
3635 \Hy@boolkey{pdfa}{#1}%
3636 }
3637 \define@key{Hyp}{pdfnewwindow}[true]{%
3638 \def\Hy@temp{#1}%
3639 \ifx\Hy@temp\@empty
3640 \Hy@newwindowsetfalse
3641 \else
3642 \Hy@newwindowsettrue
3643 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3644 \fi
3645 }
3646 \def\Hy@SetNewWindow{%
3647 \ifHy@newwindowset
3648 /NewWindow %
3649 \ifHy@newwindow true\else false\fi
3650 \fi
3651 }
3652 \Hy@DefNameKey{pdfpagelayout}{%
3653 \do{SinglePage}{ }%
3654 \do{OneColumn}{ }%
3655 \do{TwoColumnLeft}{ }%
3656 \do{TwoColumnRight}{ }%
3657 \do{TwoPageLeft}{PDF 1.5}%
3658 \do{TwoPageRight}{PDF 1.5}%
3659 }
3660 \define@key{Hyp}{pdflang}{%
3661 \def\@pdflang{#1}%
3662 }
3663 \define@key{Hyp}{pdfpagelabels}[true]{%
3664 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3665 }
3666 \define@key{Hyp}{pdfescapeform}[true]{%

```

```

3667 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3668 }

```

Default values:

```

3669 \def\@linkbordercolor{1 0 0}
3670 \def\@urlbordercolor{0 1 1}
3671 \def\@menubordercolor{1 0 0}
3672 \def\@filebordercolor{0 .5 .5}
3673 \def\@runbordercolor{0 .7 .7}
3674 \def\@citebordercolor{0 1 0}
3675 \def\@pdfhighlight{/I}
3676 \def\@pdftitle{}
3677 \def\@pdfauthor{}
3678 \let\@pdfproducer\relax
3679 \def\@pdfcreator{LaTeX with hyperref package}
3680 \def\@pdfcreationdate{}
3681 \def\@pdfmoddate{}
3682 \def\@pdfsubject{}
3683 \def\@pdfkeywords{}
3684 \def\@pdftrapped{}
3685 \def\@pdfpagescrop{}
3686 \def\@pdfstartview{/Fit }
3687 \def\@pdfstartpage{1}
3688 \def\@pdfprintpagerange{}
3689 \def\@pdflang{}
3690 \let\PDF@SetupDoc\@empty
3691 \let\PDF@FinishDoc\@empty
3692 \let\phantomsection\@empty
3693 \let\special@paper\@empty
3694 \def\HyperDestNameFilter#1{#1}
3695 \Hy@AtBeginDocument{%
3696   \begingroup
3697     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3698     \dimen@=\x\relax
3699     \ifdim\dimen@>\z@
3700       \else
3701         \dimen@=11in\relax
3702         \Hy@WarningNoLine{%
3703           Height of page (\expandafter\string\x) %
3704           is invalid (\the\x),\MessageBreak
3705           using 11in%
3706         }%
3707         \fi
3708         \dimen@=0.99626401\dimen@
3709         \xdef\Hy@pageheight{\strip@pt\dimen@}%
3710       \endgroup
3711 }
3712 \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.

```

3713 \let\hyper@normalise\ExecuteOptions
3714 \let\ExecuteOptions\hypersetup
3715 \Hy@RestoreCatcodes
3716 \InputIfFileExists{hyperref.cfg}{-}{-}
3717 \Hy@SetCatcodes
3718 \let\ExecuteOptions\hyper@normalise

```

```
3719 \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`.

```
3720 \RequirePackage{kvoptions}[2009/07/21]
3721 \SetupKeyvalOptions{family=Hyp}
3722 \DeclareLocalOptions{%
3723   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3724 }
```

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

```
3725 \ifpackageloaded{tex4ht}{%
3726   \ifpackagewith{hyperref}{tex4ht}{%}{%
3727     \PassOptionsToPackage{tex4ht}{hyperref}%
3728   }%
3729 }{}

3730 \let\ReadBookmarks\relax
3731 \ProcessKeyvalOptions{Hyp}
```

After processing options.

```
3732 \Hy@AtBeginDocument{%
3733   \ifHy@draft
3734     \let\hyper@@anchor\@gobble
3735     \gdef\hyper@link#1#2#3{#3}%
3736     \let\hyper@anchorstart\@gobble
3737     \let\hyper@anchorend\@empty
3738     \let\hyper@linkstart\@gobbletwo
3739     \let\hyper@linkend\@empty
3740     \def\hyper@linkurl#1#2{#1}%
3741     \def\hyper@linkfile#1#2#3{#1}%
3742     \def\hyper@link@{#1}#2#3{#1}%
3743     \def\Acrobatmenu#1#2{\leavevmode#2}%
3744     \let\PDF@SetupDoc\@empty
3745     \let\PDF@FinishDoc\@empty
3746     \let\@fifthoffive\@secondoftwo
3747     \let\@secondoffive\@secondoftwo
3748     \let\ReadBookmarks\relax
3749     \let\WriteBookmarks\relax
3750     \Hy@WarningNoLine{ draft mode on}%
3751   \fi
3752   \Hy@DisableOption{draft}%
3753   \Hy@DisableOption{nolinks}%
3754   \Hy@DisableOption{final}%
3755 }
```

15.1 PDF/A

```
3756 \Hy@DisableOption{pdfa}

3757 \ifHy@pdfa
3758   \kvsetkeys{Hyp}{pdfversion=1.4}%
3759   \def\Hy@Acrobatmenu#1#2{%
3760     \leavevmode
3761     \begingroup
3762     \edef\x{#1}%
```

```

3763 \@onelevel@sanitize\x
3764 \ifx\x\Hy@NextPage
3765 \let\y=Y%
3766 \else
3767 \ifx\x\Hy@PrevPage
3768 \let\y=Y%
3769 \else
3770 \ifx\x\Hy@FirstPage
3771 \let\y=Y%
3772 \else
3773 \ifx\x\Hy@LastPage
3774 \let\y=Y%
3775 \else
3776 \let\y=N%
3777 \fi
3778 \fi
3779 \fi
3780 \fi
3781 \expandafter\endgroup
3782 \ifx\y Y%
3783 \else
3784 \PackageError{hyperref}{%
3785 PDF/A: Named action '#1' is not permitted%
3786 }\@ehc
3787 {#2}%
3788 \expandafter\@gobble
3789 \fi
3790 }%
3791 \def\Hy@temp#1{%
3792 \expandafter\def\csname Hy@#1\endcsname{#1}%
3793 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3794 }%
3795 \Hy@temp{NextPage}%
3796 \Hy@temp{PrevPage}%
3797 \Hy@temp{FirstPage}%
3798 \Hy@temp{LastPage}%
3799 \else
3800 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3801 \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.

```

3802 \Hy@nextfalse
3803 \ltx@ifundefined{spanish@sh@"@sel}{-}{\Hy@nexttrue}
3804 \ltx@ifundefined{galician@sh@"@sel}{-}{\Hy@nexttrue}
3805 \ltx@ifundefined{estonian@sh@"@sel}{-}{\Hy@nexttrue}
3806 \ifHy@next
3807 \let\texttilde\~%
3808 \fi
3809 \ifHy@figures
3810 \Hy@Info{Hyper figures ON}%
3811 \else
3812 \Hy@Info{Hyper figures OFF}%
3813 \fi
3814 \ifHy@nesting

```

```

3815 \Hy@Info{Link nesting ON}%
3816 \else
3817 \Hy@Info{Link nesting OFF}%
3818 \fi
3819 \ifHy@hyperindex
3820 \Hy@Info{Hyper index ON}%
3821 \else
3822 \Hy@Info{Hyper index OFF}%
3823 \fi
3824 \ifHy@plainpages
3825 \Hy@Info{Plain pages ON}%
3826 \else
3827 \Hy@Info{Plain pages OFF}%
3828 \fi
3829 \ifHy@backref
3830 \Hy@Info{Backreferencing ON}%
3831 \else
3832 \Hy@Info{Backreferencing OFF}%
3833 \fi
3834 \ifHy@typexml
3835 \Hy@AtEndOfPackage{%
3836 \RequirePackage{color}%
3837 \RequirePackage{nameref}%
3838 }%
3839 \fi
3840 \Hy@DisableOption{typexml}
3841 \ifHy@implicit
3842 \typeout{Implicit mode ON; LaTeX internals redefined}%
3843 \else
3844 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3845 \def\MaybeStopEarly{%
3846 \typeout{Hyperref stopped early}%
3847 \Hy@AtBeginDocument{%
3848 \PDF@FinishDoc
3849 \gdef\PDF@FinishDoc{}%
3850 }%
3851 \endinput
3852 }%
3853 \Hy@AtBeginDocument{%
3854 \let\autoref\ref
3855 \let\autopageref\pageref
3856 \ifx\@pdfpagemode\@empty
3857 \gdef\@pdfpagemode{UseNone}%
3858 \fi
3859 \global\Hy@backreffalse
3860 }%
3861 \Hy@AtEndOfPackage{%
3862 \global\let\ReadBookmarks\relax
3863 \global\let\WriteBookmarks\relax
3864 }%
3865 \fi
3866 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3867 \Hy@AtEndOfPackage{%
3868 \@ifpackageloaded{tex4ht}{%

```



```

3869 \def\Hy@driver{htex4ht}%
3870 \Hy@texhttrue
3871 }{}%

```

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.

```

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

```

```

3924 \else
3925   \ifx\Hy@driver\Hy@temp
3926     \Hy@WarningNoLine{%
3927       Wrong driver '\Hy@driver.def';\MessageBreak
3928       VTeX is not running in HTML mode.\MessageBreak
3929       Using default driver%
3930     }%
3931     \let\Hy@driver\@empty
3932   \fi
3933 \fi
3934 \fi

```

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

```

3935 \ifx\Hy@driver\@empty
3936   \providecommand*{\Hy@defaultdriver}{hypertex}%
3937   \ifpdf
3938     \def\Hy@driver{hpdfTeX}%
3939   \else
3940     \ifxetex
3941       \def\Hy@driver{hxetex}%
3942     \else
3943       \ifvtexhtml
3944         \def\Hy@driver{hvtexhtm}%
3945       \def\MaybeStopEarly{%
3946         \typeout{Hyperref stopped early}%
3947         \Hy@AtBeginDocument{%
3948           \PDF@FinishDoc
3949           \gdef\PDF@FinishDoc{}}%
3950       }%
3951       \endinput
3952     }%
3953   \else
3954     \ifvtexpdf
3955       \def\Hy@driver{hvtex}%
3956     \else
3957       \ifvtexps
3958         \def\Hy@driver{hvtex}%
3959       \else
3960         \let\Hy@driver\Hy@defaultdriver
3961       \fi
3962     \fi
3963   \fi
3964 \fi
3965 \fi
3966 \ifx\Hy@driver\Hy@defaultdriver
3967   \def\Hy@temp{hdvwind}%
3968   \ifx\Hy@temp\Hy@driver
3969     \kvsetkeys{Hyp}{colorlinks}%
3970     \PassOptionsToPackage{dviwindo}{color}%
3971   \fi
3972 \fi
3973 \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3974 \else
3975   \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3976 \fi
3977 \input{\Hy@driver.def}%
3978 \let\@unprocessedoptions\relax
3979 \Hy@RestoreCatcodes

```

```
3980 }
```

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.

```
3981 \newif\ifHy@DvipdfmxOutlineOpen
3982 \ifxetex
3983   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3984   \else
3985     \Hy@DvipdfmxOutlineOpentruer
3986   \fi
3987 \fi
3988 \begingroup\expandafter\expandafter\expandafter\endgroup
3989 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3990 \else
3991   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3992     \Hy@DvipdfmxOutlineOpentruer
3993   \fi
3994 \fi
3995 \Hy@DisableOption{tex4ht}
3996 \Hy@DisableOption{pdftex}
3997 \Hy@DisableOption{nativepdf}
3998 \Hy@DisableOption{dvipdfm}
3999 \Hy@DisableOption{dvipdfmx}
4000 \Hy@DisableOption{dvipdfmx-outline-open}
4001 \Hy@DisableOption{pdfmark}
4002 \Hy@DisableOption{dvips}
4003 \Hy@DisableOption{hypertex}
4004 \Hy@DisableOption{vtex}
4005 \Hy@DisableOption{vtexpdfmark}
4006 \Hy@DisableOption{dviwindo}
4007 \Hy@DisableOption{dvipsone}
4008 \Hy@DisableOption{textures}
4009 \Hy@DisableOption{latex2html}
4010 \Hy@DisableOption{ps2pdf}
4011 \Hy@DisableOption{xetex}
4012 \Hy@AtEndOfPackage{%
4013   \Hy@DisableOption{pdfversion}%
4014 }
```

15.2.2 Bookmarks

```
4015 \def\WriteBookmarks{0}
4016 \def\@bookmarkopenstatus#1{%
4017   \ifHy@bookmarksoopen
```

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

```
4018   \ifnum#1<\expandafter\@firstofone\expandafter
4019     {\number\@bookmarksoopenlevel} % explicit space
4020   \else
4021     -%
4022   \fi
4023 \else
4024   -%
4025 \fi
4026 }
4027 \ifHy@bookmarks
4028   \Hy@Info{Bookmarks ON}%
```

```

4029 \ifx\@pdfpagemode\@empty
4030   \def\@pdfpagemode{UseOutlines}%
4031 \fi
4032 \else
4033   \def\@bookmarkopenstatus#1{%
4034     \Hy@Info{Bookmarks OFF}%
4035     \Hy@AtEndOfPackage{%
4036       \global\let\ReadBookmarks\relax
4037       \global\let\WriteBookmarks\relax
4038     }%
4039   \ifx\@pdfpagemode\@empty
4040     \def\@pdfpagemode{UseNone}%
4041   \fi
4042 \fi
4043 \Hy@DisableOption{bookmarks}

```

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

```

4044 \def\Hy@CatcodeWrapper#1{%
4045   \def\Hy@EndWrap{%
4046     \def\TMP@EnsureCode##1##2{%
4047       \edef\Hy@EndWrap{%
4048         \Hy@EndWrap
4049         \catcode##1 \the\catcode##1\relax
4050       }%
4051       \catcode##1 ##2\relax
4052     }%
4053     \TMP@EnsureCode{10}{12}% ^^J
4054     \TMP@EnsureCode{33}{12}% !
4055     \TMP@EnsureCode{34}{12}% "
4056     \TMP@EnsureCode{36}{3}% $ (math)
4057     \TMP@EnsureCode{38}{4}% & (alignment)
4058     \TMP@EnsureCode{39}{12}% '
4059     \TMP@EnsureCode{40}{12}% (
4060     \TMP@EnsureCode{41}{12}% )
4061     \TMP@EnsureCode{42}{12}% *
4062     \TMP@EnsureCode{43}{12}% +
4063     \TMP@EnsureCode{44}{12}% ,
4064     \TMP@EnsureCode{45}{12}% -
4065     \TMP@EnsureCode{46}{12}% .
4066     \TMP@EnsureCode{47}{12}% /
4067     \TMP@EnsureCode{58}{12}% :
4068     \TMP@EnsureCode{59}{12}% ;
4069     \TMP@EnsureCode{60}{12}% <
4070     \TMP@EnsureCode{61}{12}% =
4071     \TMP@EnsureCode{62}{12}% >
4072     \TMP@EnsureCode{63}{12}% ?
4073     \TMP@EnsureCode{91}{12}% [
4074     \TMP@EnsureCode{93}{12}% ]
4075     \TMP@EnsureCode{94}{7}% ^ (superscript)
4076     \TMP@EnsureCode{95}{8}% _ (subscript)
4077     \TMP@EnsureCode{96}{12}% '
4078     \TMP@EnsureCode{124}{12}% |
4079     \TMP@EnsureCode{126}{13}% ~ (active)
4080     ##1\relax
4081   \Hy@EndWrap
4082 }

```

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

```

4083 \Hy@AtBeginDocument{%
4084   \ifHy@ocgcolorlinks
4085     \kvsetkeys{Hyp}{colorlinks}%
4086     \ifHy@pdfa
4087       \Hy@Warning{%
4088         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4089         using 'colorlinks' instead of 'ocgcolorlinks'%
4090       }%
4091     \Hy@ocgcolorlinksfalse
4092   \fi
4093 \fi
4094 \ifHy@ocgcolorlinks
4095 \else
4096   \Hy@DisableOption{ocgcolorlinks}%
4097 \fi
4098 \ifHy@colorlinks
4099   \def\@pdfborder{0 0 0}%
4100   \let\@pdfborderstyle\@empty
4101   \ifHy@typexml
4102   \else
4103     \Hy@CatcodeWrapper{%
4104       \RequirePackage{color}%
4105     }%
4106   \fi
4107   \def\Hy@colorlink#1{%
4108     \begingroup
4109     \HyColor@UseColor#1%
4110   }%
4111   \def\Hy@endcolorlink{\endgroup}%
4112   \Hy@Info{Link coloring ON}%
4113 \else
4114   \ifHy@frenchlinks
4115     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4116     \def\Hy@endcolorlink{\endgroup}%
4117     \Hy@Info{French linking ON}%
4118   \else
for grouping consistency:
4119     \def\Hy@colorlink#1{\begingroup}%
4120     \def\Hy@endcolorlink{\endgroup}%
4121     \Hy@Info{Link coloring OFF}%
4122   \fi
4123 \fi
4124 \Hy@DisableOption{colorlinks}%
4125 \Hy@DisableOption{frenchlinks}%
4126 \ifHy@texht
4127   \long\def\@firstoffive#1#2#3#4#5{#1}%
4128   \long\def\@secondoffive#1#2#3#4#5{#2}%
4129   \long\def\@thirdoffive#1#2#3#4#5{#3}%
4130   \long\def\@fourthoffive#1#2#3#4#5{#4}%
4131   \long\def\@fifthoffive#1#2#3#4#5{#5}%
4132   \providecommand*\@safe@activetrue{}%
4133   \providecommand*\@safe@activesfalse{}%
4134   \def\T@ref#1{%
4135     \Hy@safe@activetrue
4136     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4137     \Hy@safe@activesfalse
4138   }%

```

```

4139 \def\T@pageref#1{%
4140   \Hy@safe@activetrue
4141   \expandafter\@setref\cename r@#1\endcename\@secondoffive{#1}%
4142   \Hy@safe@activesfalse
4143 }%
4144 \else
4145   \ifHy@typexml
4146   \else
4147     \Hy@CatcodeWrapper{%
4148       \RequirePackage{nameref}%
4149     }%
4150   \fi
4151 \fi
4152 \DeclareRobustCommand\ref{%
4153   \@ifstar\@refstar\T@ref
4154 }%
4155 \DeclareRobustCommand\pageref{%
4156   \@ifstar\@pagerefstar\T@pageref
4157 }%
4158 % \@ifclassloaded{memoir}{%
4159 %   \ltx@ifundefined{@mem@titlerefnohref}\ltx@secondoftwo{%
4160 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4161 %   }%
4162 % }%
4163 % \ltx@secondoftwo
4164 % {%
4165 %   \DeclareRobustCommand*{\nameref}{%
4166 %     \@ifstar\@mem@titlerefnohref\@mem@titleref
4167 %   }%
4168 % }%
4169 % \DeclareRobustCommand*{\nameref}{%
4170 %   \@ifstar\@namerefstar\T@nameref
4171 % }%
4172 % }%
4173 \Hy@AtBeginDocument{%
4174   \ifHy@texht
4175   \else
4176     \Hy@CatcodeWrapper{%
4177       \ReadBookmarks
4178     }%
4179   \fi
4180 }
4181 \ifHy@backref
4182   \RequirePackage{backref}%
4183 \else
4184   \let\Hy@backout\@gobble
4185 \fi
4186 \Hy@DisableOption{backref}
4187 \Hy@DisableOption{pagebackref}
4188 \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`.

```

4189 \begingroup
4190 \endlinechar=-1 %
4191 \catcode'\^^A=14 %
4192 \catcode'\^^M\active
4193 \catcode'\%\active
4194 \catcode'\#\active
4195 \catcode'\_\active
4196 \catcode'\$\active
4197 \catcode'\&\active
4198 \gdef\hyper@normalise{^^A
4199   \begingroup
4200   \catcode'\^^M\active
4201   \def^^M{ }^^A
4202   \catcode'\%\active
4203   \let%\@percentchar
4204   \let%\@percentchar
4205   \catcode'\#\active
4206   \def#{\hyper@hash}^^A
4207   \def\#{\hyper@hash}^^A
4208   \@makeother\&^^A
4209   \edef&{\string&}^^A
4210   \edef&{\string&}^^A
4211   \edef\textunderscore{\string_}^^A
4212   \let_\textunderscore
4213   \catcode'\_\active
4214   \let_\textunderscore
4215   \let~\hyper@tilde
4216   \let~\hyper@tilde
4217   \let\textasciitilde\hyper@tilde
4218   \let\\ \@backslashchar
4219   \edef${\string$}^^A
4220   \Hy@safe@activetrue
4221   \hyper@n@rmalise
4222 }^^A
4223 \catcode'\#=6 ^^A
4224 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4225 \gdef\hyper@n@rmalise#1#2{^^A
4226   \def\Hy@tempa{#2}^^A
4227   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4228     \Hy@ReturnAfterElseFi{^^A
4229     \hyper@@normalise{#1}^^A
4230   }^^A
4231   \else
4232     \Hy@ReturnAfterFi{^^A
4233     \hyper@@normalise{#1}{#2}^^A
4234   }^^A
4235   \fi
4236 }^^A
4237 \gdef\hyper@@normalise#1#2{^^A
4238   \edef\Hy@tempa{^^A
4239     \endgroup
4240     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
4241   }^^A
4242   \Hy@tempa
4243 }^^A

```

```

4244 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4245   #1^^A
4246   \ifx\limits#2\limits
4247   \else
4248     \Hy@ReturnAfterFi{^^A
4249     \Hy@RemovePercentCr #2\@nil
4250   }^^A
4251   \fi
4252 }^^A
4253 \endgroup
4254 \providecommand*\hyper@chars{%
4255   \let\#\hyper@hash
4256   \let\%\@percentchar
4257   \Hy@safe@activetrue
4258 }

4259 \def\hyperlink#1#2{%
4260   \hyper@@link{}{#1}{#2}%
4261 }

4262 \def\Hy@VerboseLinkStart#1#2{%
4263   \ifHy@verbose
4264     \begingroup
4265     \Hy@safe@activetrue
4266     \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4267     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4268     \xdef\Hy@VerboseGlobalTemp{%
4269       \Hy@VerboseGlobalTemp, %
4270       line \the\inputlineno
4271     }%
4272   \endgroup
4273   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4274   \@onelevel@sanitize\Hy@VerboseLinkInfo
4275   \fi
4276 }

4277 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4278 \def\Hy@VerboseLinkStop{%
4279   \ifHy@verbose
4280     \begingroup
4281     \edef\x{\endgroup
4282       \write\m@ne{%
4283         Package 'hyperref' Info: %
4284         End of reference \Hy@VerboseLinkInfo.%
4285       }%
4286     }%
4287     \x
4288   \fi
4289 }

4290 \def\Hy@VerboseAnchor#1{%
4291   \ifHy@verbose
4292     \begingroup
4293     \Hy@safe@activetrue
4294     \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4295   \endgroup
4296   \fi
4297 }

4298 \def\Hy@AllowHyphens{%
4299   \relax

```



```

4300 \ifhmode
4301   \penalty\@M
4302   \hskip\z@skip
4303 \fi
4304 }

4305 \DeclareRobustCommand*{\href}{%
4306   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4307 }
4308 \def\Hy@href#{%
4309   \hyper@normalise\href@
4310 }
4311 \begingroup
4312   \catcode'\$=6 %
4313   \catcode'\#=12 %
4314   \gdef\href$1{\expandafter\href@split$1##\}%
4315   \gdef\href@split$1#$2#$3\{%
4316     \hyper@@link{$1}{$2}%
4317   }%
4318 \endgroup

```

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

```

4319 \RequirePackage{url}
4320 \let\HyOrg@url\url
4321 \def\Hurl{\begingroup \Url}
4322 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4323 \def\nolinkurl@#1{\Hurl{#1}}
4324 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4325 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4326 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4327 \providecommand\hyper@image[2]{#2}

4328 \def\hypertarget#1#2{%
4329   \ifHy@nesting
4330     \hyper@@anchor{#1}{#2}%
4331   \else
4332     \hyper@@anchor{#1}{\relax}#2%
4333   \fi
4334 }

```

\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 L^AT_EX label which can be used in a short form of \hyperref later, to avoid remembering the name and category.

```

4335 \DeclareRobustCommand*{\hyperref}{%
4336   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4337 }
4338 \def\Hy@babelnormalise#1[#2]{%
4339   \begingroup
4340     \Hy@safe@activetrue
4341     \edef\Hy@tempa{%
4342       \endgroup
4343       \noexpand#1[#2]}%
4344   }%
4345   \Hy@tempa
4346 }

```

```

4347 \def\@hyperref{\hyper@normalise\@hyperref}
4348 \def\@@hyperref#1#2#3{%
4349   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4350   \expandafter\tryhyper@link\ref@one\{#1}%
4351 }
4352 \def\tryhyper@link#1\#2{%
4353   \hyper@@link{#2}{#1}%
4354 }
4355 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4356 \def\@hyperdef#1#2#3{%, category, name, text
4357   \ifx\#1\\%
4358     \def\Hy@AnchorName{#2}%
4359   \else
4360     \def\Hy@AnchorName{#1.#2}%
4361   \fi
4362   \ifHy@nesting
4363     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4364   \else
4365     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4366   \fi
4367 }

```

```

4368 \def\label@hyperref[#1]{%
4369 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4370 }%
4371 \def\label@@hyperref#1#2#3{%
4372 \ifx#1\relax
4373 \protect\G@refundefinedtrue
4374 \@latex@warning{%
4375   Hyper reference ‘#2’ on page \thepage \space undefined%
4376 }%
4377 \hyper@@link{}{??}{#3}%
4378 \else
4379 \hyper@@link{\expandafter\@fifthoffive#1}%
4380   {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4381 \fi
4382 }
4383 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4384                               % anchor text
4385 \@bsphack
4386 \ifx\\#2\\%
4387 \def\Hy@AnchorName{#3}%
4388 \else
4389 \def\Hy@AnchorName{#2.#3}%
4390 \fi
4391 \if@filesw
4392 \protected@write\@auxout{}{%
4393   \string\newlabel{#1}{\{#\}\}\{\Hy@AnchorName\}\}%
4394 }%
4395 \fi
4396 \@esphack
4397 \ifHy@nesting
4398 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4399 \else
4400 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%

```

```

4401 \fi
4402 }

```

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.

```

4403 \def\hyper@link{\let\Hy@reserved@a\relax
4404 \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
4405 }
4406 \def\hyper@link@[#1]#2#3#4{%
4407 \begingroup
4408 \protected@edef\Hy@tempa{#2}%
4409 \Hy@safe@activestrue
4410 \edef\x{#3}%
4411 \ifx\Hy@tempa\@empty
4412 \toks0{\hyper@link{#1}}%
4413 \else
4414 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4415 \fi
4416 \toks2{%
4417 \Hy@safe@activesfalse
4418 #4%
4419 }%
4420 \edef\Hy@tempa{\the\toks2}%
4421 \edef\x{\endgroup
4422 \ifx\Hy@tempa\@empty
4423 \noexpand\Hy@Warning{Suppressing empty link}%
4424 \else
4425 \the\toks0 {\x}{\the\toks2}}%
4426 \fi
4427 }%
4428 \x
4429 }

```

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.

```

4430 \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.

```

4431 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4432 }

```

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

```
4433 \def\@pdftempwordfile{file}%
4434 \def\@pdftempwordrun{run}%
4435 \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:

```
4436 \ifx\\#6\\%
4437 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4438 \else
4439 \ifx\\#4\\%
4440 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4441 \else
```

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

```
4442 \def\@pdftempa{#4}%
4443 \ifx\@pdftempa\@pdftempwordfile
4444 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
4445 \else
```

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

```
4446 \ifx\@pdftempa\@pdftempwordrun
4447 \ifHy@pdfa
4448 \PackageError{hyperref}{%
4449 PDF/A: Launch action is prohibited%
4450 }\@ehc
4451 \begingroup
4452 \leavevmode
4453 #2%
4454 \endgroup
4455 \else
4456 \expandafter\@hyper@launch#7\\{#3}{#2}%
4457 \fi
4458 \else
```

otherwise its a URL

```
4459 \hyper@linkurl{#3}{#7\ifx\\#2\\%
4460 \fi
4461 \fi
4462 \fi
4463 \fi
4464 }
```

By default, turn run: into file:

```
4465 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
4466 \hyper@linkurl{#2}{%
4467 \Hy@linkfileprefix
4468 #1%
4469 \ifx\\#3\\%
4470 \else
4471 \hyper@hash
4472 #3%
4473 \fi
4474 }%
4475 }
```

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

```

4476 \def\@hyper@linkfile file:#1\\#2#3{%
4477   %file url,link string, name
4478   \filename@parse{#1}%
4479   \ifx\filename@ext\relax
4480     \edef\filename@ext{\XR@ext}%
4481   \fi
4482   \def\use@file{\filename@area\filename@base.\filename@ext}%
4483   \Hy@ifStringEndsWith\filename@ext\XR@ext{%
4484     \hyper@linkfile{#2}{\use@file}{#3}%
4485   }{%
4486     \ifx\@baseurl\@empty
4487       \hyper@linkurl{#2}{%
4488         \Hy@linkfileprefix\use@file\ifx\\#3\\else\hyper@hash#3\fi
4489       }%
4490     \else
4491       \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4492     \fi
4493   }%
4494 }

4495 \def\Hy@ifStringEndsWith#1#2{%
4496   \begingroup
4497   \edef\x{#1}%
4498   \@onelevel@sanitize\x
4499   \edef\x{.\x$}%
4500   \edef\y{#2}%
4501   \@onelevel@sanitize\y
4502   \edef\y{.\y$}%
4503   \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4504     \endgroup
4505     \ifx\relax##2\relax
4506       \expandafter\ltx@secondoftwo
4507     \else
4508       \expandafter\ltx@firstoftwo
4509     \fi
4510   }%
4511   \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4512 }

```

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 it's 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.

```

4513 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4514 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4515   \ifx\\#1\\%
4516     #2\Hy@Warning{Ignoring empty anchor}%
4517   \else
4518     \def\anchor@spot{#2#3}%
4519     \let\put@me@back\@empty
4520     \ifx\relax#2\relax
4521     \else

```

```

4522 \ifHy@nesting
4523 \else
4524 \ifcat a\noexpand#2\relax
4525 \else
4526 \ifcat 0\noexpand#2 \relax
4527 \else
4528 % \typeout{Anchor start is not alphanumeric %
4529 % on input line\the\inputlineno%
4530 % }%
4531 \let\anchor@spot\@empty
4532 \def\put@me@back{#2#3}%
4533 \fi
4534 \fi
4535 \fi
4536 \fi
4537 \ifHy@activeanchor
4538 \anchor@spot
4539 \else
4540 \hyper@anchor{#1}%
4541 \fi
4542 \expandafter\put@me@back
4543 \fi
4544 \let\anchor@spot\@empty
4545 }

```

18 Compatibility with the *L^AT_EX2html* package

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

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

```

4546 \let\htmladding\hyperimage
4547 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4548 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4549 \def\htmlref#1#2{% anchor text, label
4550 \label@hyperref[{#2}]{#1}%
4551 }

```

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

```

4552 \def\@latex2htmlX{%
4553 \let\hhyperref\hyperref
4554 \def\hyperref##1##2##3##4{% anchor text for HTML
4555 % text to print before label in print
4556 % label
4557 % post-label text in print
4558 ##2\ref{##4}##3%
4559 }%
4560 }

```

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.

```
4561 \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
4562 \def\HyField@NewFlag#1#2{%
4563   \lowercase{\HyField@NewOption{#2}}}%
4564   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4565 }
```

```
\HyField@NewFlagOnly
4566 \def\HyField@NewFlagOnly#1#2{%
4567   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4568 }
```

```
\HyField@NewOption #1: option name
4569 \def\HyField@NewOption#1{%
4570   \expandafter\newif\csname ifFld@#1\endcsname
4571   \define@key{Field}{#1}[true]{%
4572     \lowercase{\Field@boolkey{##1}}{#1}%
4573   }%
4574 }
```

\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
4575 \def\HyField@NewBitsetFlag#1#2#3#4{%
4576   \begingroup
4577   \count@=#4\relax
4578   \advance\count@\m@ne
4579   \def\x##1{%
4580     \endgroup
4581     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4582     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4583       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4584         (\number#4) #2%
4585       }%
4586     \else
4587       \expandafter\edef\csname HyField@#3@##1\endcsname{%
```

```

4588     \csname HyField@#3@#1\endcsname
4589     /#2%
4590   }%
4591   \fi
4592 }%
4593 \expandafter\x\expandafter{\the\count@}%
4594 }

```

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

```

4595 \def\HyField@UseFlag#1#2{%
4596   \lowercase{\HyField@@UseFlag{#2}}{#1}%
4597 }

```

\HyField@@UseFlag

```

4598 \def\HyField@@UseFlag#1#2{%
4599   \bitsetSetValue{HyField@#2}{%
4600     \csname HyField@#2@#1\endcsname
4601   }{%
4602     \csname ifFld@#1\endcsname 1\else 0\fi
4603   }%
4604 }

```

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

```

4605 \def\HyField@SetFlag#1#2{%
4606   \lowercase{\HyField@@SetFlag{#2}}{#1}%
4607 }

```

\HyField@@SetFlag

```

4608 \def\HyField@@SetFlag#1#2{%
4609   \bitsetSetValue{HyField@#2}{%
4610     \csname HyField@#2@#1\endcsname
4611   }{1}%
4612 }

```

\HyField@PrintFlags

```

4613 \def\HyField@PrintFlags#1#2{%
4614   \ifHy@verbose
4615     \begingroup
4616     \let\Hy@temp\@empty
4617     \let\MessageBreak\relax
4618     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4619     \bitsetGetSetBitList{HyField@#1}\do{%
4620       \edef\Hy@temp{%
4621         \Hy@temp
4622         \csname HyField@#1@\x\endcsname\MessageBreak
4623       }%
4624     }%
4625   \edef\x{\endgroup
4626     \noexpand\Hy@Info{%
4627       Field flags: %
4628       \expandafter\ifx\@car#1\@nil S\else/\fi
4629       #1 %
4630       \bitsetGetDec{HyField@#1} %
4631       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4632     \Hy@temp
4633     for #2%

```



```

4634     }%
4635     }\x
4636     \fi
4637 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4638 \HyField@NewFlag{Ff}{ReadOnly}{1}
4639 \HyField@NewFlag{Ff}{Required}{2}
4640 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4641 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4642 \HyField@NewFlag{Ff}{Radio}{16}
4643 \HyField@NewFlag{Ff}{Pushbutton}{17}
4644 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4645 \HyField@NewFlag{Ff}{Multiline}{13}
4646 \HyField@NewFlag{Ff}{Password}{14}
4647 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4648 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4649 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4650 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4651 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4652 \HyField@NewFlag{Ff}{Combo}{18}
4653 \HyField@NewFlag{Ff}{Edit}{19}
4654 \HyField@NewFlag{Ff}{Sort}{20}
4655 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4656 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4657 \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.

```

4658 \newif\ifFld@popdown
4659 \define@key{Field}{popdown}[true]{%
4660   \lowercase{\Field@boolkey{#1}}{popdown}%
4661 }

```

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.

```

4662 \HyField@NewFlag{F}{Invisible}{1}
4663 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4664 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4665 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4666 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4667 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4668 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4669 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4670 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

```

```

4671 \ifHy@pdfa
4672 \def\HyField@PDFAFlagWarning#1#2{%
4673   \Hy@Warning{%
4674     PDF/A: Annotation flag '#1' must\MessageBreak
4675     be set to '#2'%
4676   }%
4677 }%
4678 \Fld@invisiblefalse
4679 \def\Fld@invisibletrue{%
4680   \HyField@PDFAFlagWarning{invisible}{false}%
4681 }%
4682 \Fld@hiddenfalse
4683 \def\Fld@hiddentruetrue{%
4684   \HyField@PDFAFlagWarning{hidden}{false}%
4685 }%
4686 \Fld@printtrue
4687 \def\Fld@printfalse{%
4688   \HyField@PDFAFlagWarning{print}{true}%
4689 }%
4690 \Fld@nozoomtrue
4691 \def\Fld@nozoomfalse{%
4692   \HyField@PDFAFlagWarning{nozoom}{true}%
4693 }%
4694 \Fld@norotatetrue
4695 \def\Fld@norotatefalse{%
4696   \HyField@PDFAFlagWarning{norotate}{true}%
4697 }%
4698 \Fld@noviewfalse
4699 \def\Fld@noviewtrue{%
4700   \HyField@PDFAFlagWarning{noview}{false}%
4701 }%
4702 \fi

```

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

```

4703 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4704 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4705 \HyField@NewFlag{Submit}{GetMethod}{4}
4706 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4707 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4708 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4709 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4710 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4711 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4712 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4713 \HyField@NewFlag{Submit}{ExclFKey}{12}
4714 \HyField@NewFlag{Submit}{EmbedForm}{14}

4715 \define@key{Field}{export}{%
4716   \lowercase{\def\Hy@temp{#1}}%
4717   \@ifundefined{Fld@export@\Hy@temp}{%
4718     \@onelevel@sanitize\Hy@temp
4719     \PackageError{hyperref}{%
4720       Unknown export format '\Hy@temp'\MessageBreak
4721       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4722     }\@ehc
4723   }{%
4724     \let\Fld@export\Hy@temp
4725   }%

```

```

4726 }
4727 \def\Fld@export{fdf}
4728 \@namedef{Fld@export@fdf}{0}%
4729 \@namedef{Fld@export@html}{1}%
4730 \@namedef{Fld@export@xfdf}{2}%
4731 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4732 \def\HyField@FlagsSubmit{%
4733   \bitsetReset{HyField@Submit}%
4734   \ifcase\@nameuse{Fld@export@}\Fld@export %
4735     % FDF
4736     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4737     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4738     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4739     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4740     \HyField@UseFlag{Submit}{CanonicalFormat}%
4741     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4742     \HyField@UseFlag{Submit}{ExclFKey}%
4743     \HyField@UseFlag{Submit}{EmbedForm}%
4744   \or % HTML
4745     \HyField@SetFlag{Submit}{ExportFormat}%
4746     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4747     \HyField@UseFlag{Submit}{GetMethod}%
4748     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4749     \HyField@UseFlag{Submit}{CanonicalFormat}%
4750   \or % XFDF
4751     \HyField@SetFlag{Submit}{XFDF}%
4752     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4753     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4754     \HyField@UseFlag{Submit}{CanonicalFormat}%
4755   \or % PDF
4756     \HyField@SetFlag{Submit}{SubmitPDF}%
4757     \HyField@UseFlag{Submit}{GetMethod}%
4758   \fi
4759   \HyField@PrintFlags{Submit}{submit button field}%
4760   \bitsetIsEmpty{HyField@Submit}{%
4761     \def\Fld@submitflags{%
4762     }{%
4763       \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4764   }%
4765 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4766 \def\HyField@FlagsAnnot#1{%
4767   \bitsetReset{HyField@F}%
4768   \HyField@UseFlag{F}{Invisible}%
4769   \HyField@UseFlag{F}{Hidden}%
4770   \HyField@UseFlag{F}{Print}%
4771   \HyField@UseFlag{F}{NoZoom}%
4772   \HyField@UseFlag{F}{NoRotate}%
4773   \HyField@UseFlag{F}{NoView}%

```

```

4774 \HyField@UseFlag{F}{Locked}%
4775 \HyField@UseFlag{F}{ToggleNoView}%
4776 \HyField@UseFlag{F}{LockedContents}%
4777 \HyField@PrintFlags{F}{#1}%
4778 \bitsetIsEmpty{HyField@F}{%
4779   \def\Fld@annotflags{%
4780   }{%
4781   \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4782 }%
4783 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4784 \def\HyField@FlagsPushButton{%
4785   \HyField@FlagsAnnot{push button field}%
4786   \bitsetReset{HyField@Ff}%
4787   \HyField@UseFlag{Ff}{ReadOnly}%
4788   \HyField@UseFlag{Ff}{Required}%
4789   \HyField@UseFlag{Ff}{NoExport}%
4790   \HyField@SetFlag{Ff}{Pushbutton}%
4791   \HyField@PrintFlags{Ff}{push button field}%
4792   \bitsetIsEmpty{HyField@Ff}{%
4793     \def\Fld@flags{%
4794     }{%
4795     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4796   }%
4797 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4798 \def\HyField@FlagsCheckBox{%
4799   \HyField@FlagsAnnot{check box field}%
4800   \bitsetReset{HyField@Ff}%
4801   \HyField@UseFlag{Ff}{ReadOnly}%
4802   \HyField@UseFlag{Ff}{Required}%
4803   \HyField@UseFlag{Ff}{NoExport}%
4804   \HyField@PrintFlags{Ff}{check box field}%
4805   \bitsetIsEmpty{HyField@Ff}{%
4806     \def\Fld@flags{%
4807     }{%
4808     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4809   }%
4810 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4811 \def\HyField@FlagsRadioButton{%
4812   \HyField@FlagsAnnot{radio button field}%
4813   \bitsetReset{HyField@Ff}%
4814   \HyField@UseFlag{Ff}{ReadOnly}%
4815   \HyField@UseFlag{Ff}{Required}%
4816   \HyField@UseFlag{Ff}{NoExport}%
4817   \HyField@UseFlag{Ff}{NoToggleToOff}%

```

```

4818 \HyField@SetFlag{Ff}{Radio}%
4819 \HyField@UseFlag{Ff}{RadiosInUnison}%
4820 \HyField@PrintFlags{Ff}{radio button field}%
4821 \bitsetIsEmpty{HyField@Ff}{%
4822   \def\Fld@flags{%
4823   }{%
4824   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4825   }%
4826 }

```

19.1.7 Text fields

\HyField@FlagsText

```

4827 \def\HyField@FlagsText{%
4828   \HyField@FlagsAnnot{text field}%
4829   \bitsetReset{HyField@Ff}%
4830   \HyField@UseFlag{Ff}{ReadOnly}%
4831   \HyField@UseFlag{Ff}{Required}%
4832   \HyField@UseFlag{Ff}{NoExport}%
4833   \HyField@UseFlag{Ff}{Multiline}%
4834   \HyField@UseFlag{Ff}{Password}%
4835   \HyField@UseFlag{Ff}{FileSelect}%
4836   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4837   \HyField@UseFlag{Ff}{DoNotScroll}%
4838   \ifFld@comb
4839     \ifcase0\ifFld@multiline
4840       \else\ifFld@password
4841       \else\ifFld@fileselect
4842       \else 1\fi\fi\fi\relax
4843     \PackageError{hyperref}{%
4844       Field option 'comb' cannot used together with\MessageBreak
4845       'multiline', 'password', or 'fileselect'%
4846     }\@ehc
4847   \else
4848     \HyField@UseFlag{Ff}{Comb}%
4849   \fi
4850 \fi
4851 \HyField@UseFlag{Ff}{RichText}%
4852 \HyField@PrintFlags{Ff}{text field}%
4853 \bitsetIsEmpty{HyField@Ff}{%
4854   \def\Fld@flags{%
4855   }{%
4856   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4857   }%
4858 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4859 \def\HyField@FlagsChoice{%
4860   \HyField@FlagsAnnot{choice field}%
4861   \bitsetReset{HyField@Ff}%
4862   \HyField@UseFlag{Ff}{ReadOnly}%
4863   \HyField@UseFlag{Ff}{Required}%
4864   \HyField@UseFlag{Ff}{NoExport}%
4865   \HyField@UseFlag{Ff}{Combo}%

```

```

4866 \ifFld@combo
4867 \HyField@UseFlag{Ff}{Edit}%
4868 \fi
4869 \HyField@UseFlag{Ff}{Sort}%
4870 \HyField@UseFlag{Ff}{MultiSelect}%
4871 \ifFld@combo
4872 \ifFld@edit
4873 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4874 \fi
4875 \fi
4876 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4877 \HyField@PrintFlags{Ff}{choice field}%
4878 \bitsetIsEmpty{HyField@Ff}{%
4879 \def\Fld@flags{%
4880 }{%
4881 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4882 }%
4883 }

```

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.

```

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

```

```

4917 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4918 \fi
4919 \ifx\Fld@value\relax
4920 \else
4921 \pdfstringdef\Hy@gtemp\Fld@value
4922 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4923 \fi
4924 \fi
4925 \endgroup
4926 }

```

\HyField@@PDFChoices

```

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

```

```

4972 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]]}%
4973 \ifx#1V%
4974 \def\HyTmp@optitem##1##2##3{%
4975 \ifnum##3=1 %
4976 \@firstofone{ ##1}%
4977 \fi
4978 }%
4979 \edef\HyTmp@optlist{\HyTmp@optlist}%
4980 \xdef\Fld@choices{%
4981 \Fld@choices
4982 /I[\expandafter\@firstofone\HyTmp@optlist]%
4983 }%
4984 \fi
4985 \fi
4986 \fi
4987 }

```

19.3 Forms

\HyField@SetKeys

```

4988 \def\HyField@SetKeys{%
4989 \kvsetkeys{Field}%
4990 }

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

```



```

5024 \ifx\Hy@tempa\enc@@html
5025 \Form@htmltrue
5026 \def\Fld@export{html}%
5027 \else
5028 \Hy@Warning{%
5029   Form 'encoding' key with \MessageBreak
5030   unknown value '#1'%
5031 }%
5032 \Form@htmlfalse
5033 \fi
5034 }
5035 \define@key{Form}{method}{%
5036 \lowercase{\def\Hy@temp{#1}}%
5037 \@ifundefined{Form@method@\Hy@temp}{%
5038 \onelevel@sanitize\Hy@temp
5039 \PackageError{hyperref}{%
5040   Unknown method '\Hy@temp'.\MessageBreak
5041   Known values are 'post' and 'get'%
5042 }\@ehc
5043 }{%
5044 \let\Form@method\Hy@temp
5045 \ifcase\@nameuse{Form@method@\Hy@temp} %
5046 \Fld@getmethodfalse
5047 \else
5048 \Fld@getmethodtrue
5049 \fi
5050 }%
5051 }
5052 \def\Form@method{}
5053 \@namedef{Form@method@post}{0}
5054 \@namedef{Form@method@get}{1}
5055 \def\Field@boolkey#1#2{%
5056 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5057 }
5058 \newtoks\Field@toks
5059 \Field@toks={ }%
5060 \def\Field@addtoks#1#2{%
5061 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5062 \@processme
5063 }
5064 \def\Fld@checkequals#1=#2=#3\{\{%
5065 \def\@currDisplay{#1}%
5066 \ifx\#2\%
5067 \def\@currValue{#1}%
5068 \else
5069 \def\@currValue{#2}%
5070 \fi
5071 }
5072 \define@key{Field}{loc}{%
5073 \def\Fld@loc{#1}%
5074 }
5075 \define@key{Field}{checked}[true]{%
5076 \lowercase{\Field@boolkey{#1}}{checked}%
5077 }
5078 \define@key{Field}{disabled}[true]{%
5079 \lowercase{\Field@boolkey{#1}}{disabled}%
5080 }

```

```

5081 \define@key{Field}{accesskey}{%
5082   \Field@addtoks{accesskey}{#1}%
5083 }
5084 \define@key{Field}{tabkey}{%
5085   \Field@addtoks{tabkey}{#1}%
5086 }
5087 \define@key{Field}{name}{%
5088   \def\Fld@name{#1}%
5089 }
5090 \define@key{Field}{width}{%
5091   \def\Fld@width{#1}%
5092   \Field@Width#1\setbox0=\hbox{m}%
5093 }
5094 \define@key{Field}{maxlen}{%
5095   \def\Fld@maxlen{#1}%
5096 }
5097 \define@key{Field}{menulength}{%
5098   \Fld@menulength=#1\relax
5099 }
5100 \define@key{Field}{height}{%
5101   \def\Fld@height{#1}%
5102 }
5103 \define@key{Field}{charsize}{%
5104   \Fld@charsize#1%
5105 }
5106 \define@key{Field}{borderwidth}{%
5107   \def\Fld@borderwidth{#1}%
5108 }
5109 \define@key{Field}{borderstyle}{%
5110   \def\Fld@borderstyle{#1}%
5111 }
5112 \define@key{Field}{bordersep}{%
5113   \def\Fld@bordersep{#1}%
5114 }
5115 \define@key{Field}{default}{%
5116   \def\Fld@default{#1}%
5117 }
5118 \define@key{Field}{align}{%
5119   \def\Fld@align{#1}%
5120 }
5121 \define@key{Field}{value}{%
5122   \def\Fld@value{#1}%
5123 }
5124 \define@key{Field}{checkboxsymbol}{%
5125   \Fld@DingDef\Fld@cbsymbol{#1}%
5126 }
5127 \define@key{Field}{radiosymbol}{%
5128   \Fld@DingDef\Fld@radiosymbol{#1}%
5129 }
5130 \def\Fld@DingDef#1#2{%
5131   \def\Fld@temp{}%
5132   \Fld@@DingDef#2\ding{}\@nil
5133   \let#1\Fld@temp
5134 }
5135 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5136   \expandafter\def\expandafter\Fld@temp\expandafter{%
5137     \Fld@temp

```

```

5138   #1%
5139 }%
5140 \ifx\\#3\\%
5141   \expandafter\@gobble
5142 \else
5143   \begingroup
5144     \lccode'0=#2\relax
5145   \lowercase{\endgroup
5146     \expandafter\def\expandafter\Fld@temp\expandafter{%
5147       \Fld@temp
5148       0%
5149     }%
5150   }%
5151   \expandafter\@firstofone
5152 \fi
5153 {%
5154   \Fld@@DingDef#3\@nil
5155 }%
5156 }

5157 \define@key{Field}{rotation}{%
5158   \def\Fld@rotation{#1}%
5159 }

5160 \define@key{Field}{backgroundcolor}{%
5161   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5162 }
5163 \define@key{Field}{bordercolor}{%
5164   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5165 }
5166 \define@key{Field}{color}{%
5167   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5168 }

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

```

```

5194 \fi
5195 }
5196 \Hy@temp{keystroke}
5197 \Hy@temp{format}
5198 \Hy@temp{validate}
5199 \Hy@temp{calculate}
5200 \Hy@temp{onfocus}
5201 \Hy@temp{onblur}
5202 \Hy@temp{onenter}
5203 \Hy@temp{onexit}
5204 \def\Hy@temp#1{%
5205   \define@key{Field}{#1}{%
5206     \Field@addtoks{#1}{##1}%
5207   }%
5208 }
5209 \Hy@temp{onselect}
5210 \Hy@temp{onchange}
5211 \Hy@temp{ondblclick}
5212 \Hy@temp{onmousedown}
5213 \Hy@temp{onmouseup}
5214 \Hy@temp{onmouseover}
5215 \Hy@temp{onmousemove}
5216 \Hy@temp{onmouseout}
5217 \Hy@temp{onkeypress}
5218 \Hy@temp{onkeydown}
5219 \Hy@temp{onkeyup}
5220 \ifHy@pdfa
5221   \define@key{Field}{onclick}{%
5222     \PackageError{hyperref}{%
5223       PDF/A: Action 'onclick' is prohibited%
5224     }\@ehc
5225   }%
5226 \else
5227   \define@key{Field}{onclick}{%
5228     \def\Fld@onclick@code{#1}%
5229     \Field@addtoks{onclick}{#1}%
5230   }%
5231 \fi

5232 \DeclareRobustCommand\TextField{%
5233   \@ifnextchar[{\@TextField}{\@TextField[]}%
5234 }
5235 \DeclareRobustCommand\ChoiceMenu{%
5236   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5237 }
5238 \DeclareRobustCommand\CheckBox{%
5239   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5240 }
5241 \DeclareRobustCommand\PushButton{%
5242   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5243 }
5244 \DeclareRobustCommand\Gauge{%
5245   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5246 }
5247 \DeclareRobustCommand\Submit{%
5248   \@ifnextchar[{\@Submit}{\@Submit[]}%
5249 }
5250 \DeclareRobustCommand\Reset{%

```

```

5251 \ifnextchar[{\@Reset}{\@Reset[]}%
5252 }
5253 \def\LayoutTextField#1#2{% label, field
5254   #1 #2%
5255 }
5256 \def\LayoutChoiceField#1#2{% label, field
5257   #1 #2%
5258 }
5259 \def\LayoutCheckField#1#2{% label, field
5260   #1 #2%
5261 }
5262 \def\LayoutPushButtonField#1{% button
5263   #1%
5264 }
5265 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5266 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5267 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5268 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5269 \def\MakeButtonField#1{%
5270   \sbox0{%
5271     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5272   }%
5273   \@tempdima\ht0 %
5274   \advance\@tempdima by \Fld@borderwidth bp %
5275   \advance\@tempdima by \Fld@borderwidth bp %
5276   \ht0\@tempdima
5277   \@tempdima\dp0 %
5278   \advance\@tempdima by \Fld@borderwidth bp %
5279   \advance\@tempdima by \Fld@borderwidth bp %
5280   \dp0\@tempdima
5281   \box0\relax
5282 }
5283 \def\DefaultHeightofSubmit{14pt}
5284 \def\DefaultWidthofSubmit{2cm}
5285 \def\DefaultHeightofReset{14pt}
5286 \def\DefaultWidthofReset{2cm}
5287 \def\DefaultHeightofCheckBox{\baselineskip}
5288 \def\DefaultWidthofCheckBox{\baselineskip}
5289 \def\DefaultHeightofChoiceMenu{\baselineskip}
5290 \def\DefaultWidthofChoiceMenu{\baselineskip}
5291 \def\DefaultHeightofText{\baselineskip}
5292 \def\DefaultHeightofTextMultiline{4\baselineskip}
5293 \def\DefaultWidthofText{3cm}
5294 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5295 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5296 \def\DefaultOptionsofPushButton{print}
5297 \def\DefaultOptionsofCheckBox{print}
5298 \def\DefaultOptionsofText{print}

Default options for the types of \ChoiceMenu.
5299 \def\DefaultOptionsofListBox{print}
5300 \def\DefaultOptionsofComboBox{print,edit,sort}
5301 \def\DefaultOptionsofPopdownBox{print}
5302 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5303 \ifHy@figures
5304 \Hy@Info{Hyper figures ON}%
5305 \else
5306 \Hy@Info{Hyper figures OFF}%
5307 \fi
5308 \ifHy@nesting
5309 \Hy@Info{Link nesting ON}%
5310 \else
5311 \Hy@Info{Link nesting OFF}%
5312 \fi
5313 \ifHy@hyperindex
5314 \Hy@Info{Hyper index ON}%
5315 \else
5316 \Hy@Info{Hyper index OFF}%
5317 \fi
5318 \ifHy@backref
5319 \Hy@Info{backreferencing ON}%
5320 \else
5321 \Hy@Info{backreferencing OFF}%
5322 \fi
5323 \ifHy@colorlinks
5324 \Hy@Info{Link coloring ON}%
5325 \else
5326 \Hy@Info{Link coloring OFF}%
5327 \fi
5328 \ifHy@ocgcolorlinks
5329 \Hy@Info{Link coloring with OCG ON}%
5330 \else
5331 \Hy@Info{Link coloring with OCG OFF}%
5332 \fi
5333 \ifHy@pdfa
5334 \Hy@Info{PDF/A mode ON}%
5335 \else
5336 \Hy@Info{PDF/A mode OFF}%
5337 \fi

```

21 Low-level utility macros

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

```

5338 \edef\hyper@hash{\string#}
5339 \edef\hyper@tilde{\string~}
5340 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5341 \def\@currentHref{Doc-Start}
5342 \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.

```

5343 \Hy@AtBeginDocument{%
5344 \Hy@pdfstringtrue
5345 \PDF@SetupDoc
5346 \let\PDF@SetupDoc\@empty
5347 \Hy@DisableOption{pdfpagescrop}%
5348 \Hy@DisableOption{pdfpagemode}%
5349 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5350 \Hy@DisableOption{pdfdirection}%
5351 \Hy@DisableOption{pdfviewarea}%

```

```

5352 \Hy@DisableOption{pdfviewclip}%
5353 \Hy@DisableOption{pdfprintarea}%
5354 \Hy@DisableOption{pdfprintclip}%
5355 \Hy@DisableOption{pdfprintscaling}%
5356 \Hy@DisableOption{pdfduplex}%
5357 \Hy@DisableOption{pdfpicktraybypdfsize}%
5358 \Hy@DisableOption{pdfprintpagerange}%
5359 \Hy@DisableOption{pdfnumcopies}%
5360 \Hy@DisableOption{pdfstartview}%
5361 \Hy@DisableOption{pdfstartpage}%
5362 \Hy@DisableOption{pdftoolbar}%
5363 \Hy@DisableOption{pdfmenubar}%
5364 \Hy@DisableOption{pdfwindowui}%
5365 \Hy@DisableOption{pdfitwindow}%
5366 \Hy@DisableOption{pdfcenterwindow}%
5367 \Hy@DisableOption{pdfdisplaydoctitle}%
5368 \Hy@DisableOption{pdfpagelayout}%
5369 \Hy@DisableOption{pdflang}%
5370 \Hy@DisableOption{baseurl}%
5371 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5372 \Hy@pdfstringfalse
5373 }

```

Ignore star from referencing macros:

```

5374 \LetLtxMacro\NoHy@OrgRef\ref
5375 \DeclareRobustCommand*{\ref}{%
5376 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5377 }
5378 \LetLtxMacro\NoHy@OrgPageRef\pageref
5379 \DeclareRobustCommand*{\pageref}{%
5380 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5381 }

```

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.

```

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

```

```

5399 \let\Hy@backout\@gobble
5400 \def\hyper@@anchor##1{}%
5401 \def\hyper@link##1##2##3{##3}%
5402 \def\hyper@anchor##1{}%
5403 \def\hyper@anchorstart##1{}%
5404 \let\hyper@anchorend\@empty
5405 \def\hyper@linkstart##1##2{}%
5406 \let\hyper@linkend\@empty
5407 \def\hyper@linkurl##1##2{##1}%
5408 \def\hyper@linkfile##1##2##3{##1}%
5409 \def\hyper@link@[##1]##2##3{}%
5410 }
5411 \def\endNoHyper{%
5412 \global\let\hyper@link\hyper@livelink
5413 }
5414 \</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:

```

5415 \*nohyperref
5416 \RequirePackage{letltxmacro}[2008/06/13]
5417 \let\hyper@@anchor\@gobble
5418 \def\hyper@link##1##2##3{##3}%
5419 \let\hyper@anchorstart\@gobble
5420 \let\hyper@anchorend\@empty
5421 \let\hyper@linkstart\@gobbletwo
5422 \let\hyper@linkend\@empty
5423 \def\hyper@linkurl##1##2{##1}%
5424 \def\hyper@linkfile##1##2##3{##1}%
5425 \def\hyper@link@[##1]##2##3{}%
5426 \let\PDF@SetupDoc\@empty
5427 \let\PDF@FinishDoc\@empty
5428 \def\nohyperpage##1{##1}

```

Some top-level commands:

```

5429 \def\Acrobatmenu##1##2{\leavevmode##2}
5430 \let\pdfstringdefDisableCommands\@gobbletwo
5431 \let\texorpdfstring\@firstoftwo
5432 \let\pdfbookmark\@undefined
5433 \newcommand\pdfbookmark[3]{}
5434 \let\phantomsection\@empty
5435 \let\hypersetup\@gobble
5436 \let\hyperbaseurl\@gobble
5437 \let\href\@gobble
5438 \let\hyperdef\@gobbletwo
5439 \let\hyperlink\@gobble
5440 \let\hypertarget\@gobble
5441 \def\hyperref{%
5442 \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5443 }

```



```

5444 \long\def\@gobbleopt[#1]{%
5445 \let\hyperpage\@empty
Ignore star from referencing macros:
5446 \LetLtxMacro\NoHy@OrgRef\ref
5447 \DeclareRobustCommand*\ref{%
5448 \ifstar\NoHy@OrgRef\NoHy@OrgRef
5449 }
5450 \LetLtxMacro\NoHy@OrgPageRef\pageref
5451 \DeclareRobustCommand*\pageref{%
5452 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5453 }
5454 \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}

```

5455 \*package
5456 \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.

```

5457 \if@filesw
5458 \ifHy@typexml
5459 \immediate\closeout\@mainaux
5460 \immediate\openout\@mainaux\jobname.aux\relax
5461 \immediate\write\@auxout{<relaxxml>\relax}%
5462 \fi
5463 \immediate\write\@auxout{%
5464 \string\providecommand\string\HyperFirstAtBeginDocument{%
5465 \string\AtBeginDocument}^^J%
5466 \string\HyperFirstAtBeginDocument{%
5467 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5468 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5469 \string\gdef\string\contentsline%
5470 \string#1\string#2\string#3\string#4{%
5471 \string\oldcontentsline%
5472 {\string#1}{\string#2}{\string#3}}^^J%
5473 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5474 \string\gdef\string\newlabel\string#1\string#2{%
5475 \string\newlabelxx{\string#1}\string#2}^^J%
5476 \string\gdef\string\newlabelxx%
5477 \string#1\string#2\string#3\string#4\string#5\string#6{%
5478 \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.

```

5479 \string\AtEndDocument{%
5480 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5481 \string\let\string\contentsline\string\oldcontentsline^^J%
5482 \string\let\string\newlabel\string\oldnewlabel^^J%
5483 \string\fi%
5484 }^^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.

```

5485 \string\fi%
5486 }^^J%
5487 \string\global\string\let\string\hyper@last\relax^^J%
5488 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5489 }%
5490 \fi
5491 \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.

```

5492 \ifx\hyper@last\@undefined
5493 \def\@starttoc#1{%
5494 \begingroup
5495 \makeatletter
5496 \IfFileExists{\jobname.#1}{%
5497 \Hy@WarningNoLine{%
5498 old #1 file detected, not used; run LaTeX again%
5499 }%
5500 }{}%
5501 \if@filesw
5502 \expandafter\newwrite\csname tf@#1\endcsname
5503 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5504 \fi
5505 \@nobreakfalse
5506 \endgroup
5507 }%
5508 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{\}{\}{\}}}%
5509 \fi
5510 }

```

25 Title strings

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

```

5511 \ifHy@usetitle
5512 \let\HyOrg@title\title
5513 \let\HyOrg@author\author
5514 \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
5515 \def\Hy@scanopttitle[#1]{%
5516 \gdef\Hy@title{#1}%
5517 \HyOrg@title{#1}%
5518 }%
5519 \def\Hy@scantitle#1{%
5520 \gdef\Hy@title{#1}%
5521 \HyOrg@title{#1}%
5522 }%
5523 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5524 \def\Hy@scanoptauthor[#1]{%
5525 \gdef\Hy@author{#1}%
5526 \HyOrg@author{#1}%
5527 }%

```

```

5528 \def\Hy@scanauthor#1{%
5529   \gdef\Hy@author{#1}%
5530   \HyOrg@author{#1}%
5531 }%

```

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.

```

5532 \begingroup
5533 \def\process@me#1\@nil#2{%
5534   \expandafter\let\expandafter\x\csname @#2\endcsname
5535   \edef\y{\expandafter\strip@prefix\meaning\x}%
5536   \def\c##1#1##2\@nil{%
5537     \ifx\\##1\\%
5538     \else
5539       \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5540         \expandafter{x}%
5541     \fi
5542   }%
5543   \expandafter\c\y\relax#1\@nil
5544 }%
5545 \expandafter\process@me\string\@latex@\@nil{title}%
5546 \expandafter\process@me\string\@latex@\@nil{author}%
5547 \endgroup
5548 \fi
5549 \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.

```

5550 \def\Hy@UseMaketitleString#1{%
5551   \ltx@ifundefined{Hy@#1}{-}{%
5552     \begingroup
5553     \let\Hy@saved@hook\pdfstringdefPreHook
5554     \pdfstringdefDisableCommands{%
5555       \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5556       \let\newline\\%
5557     }%
5558     \expandafter\ifx\csname @pdf#1\endcsname\@empty
5559       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5560         \csname Hy@#1\endcsname\@empty
5561       }%
5562     \fi
5563     \global\let\pdfstringdefPreHook\Hy@saved@hook
5564   \endgroup
5565 }%
5566 }
5567 \def\Hy@newline@title#1{ #1}
5568 \def\Hy@newline@author#1{, #1}
5569 \def\Hy@UseMaketitleInfos{%
5570   \Hy@UseMaketitleString{title}%
5571   \Hy@UseMaketitleString{author}%

```

5572 }

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5573 \RequirePackage{atbegshi}[2007/09/09]
5574 \def\Hy@EveryPageHook{}
5575 \def\Hy@EveryPageBoxHook{}
5576 \def\Hy@FirstPageHook{}
5577 \AtBeginShipout{%
5578   \Hy@EveryPageHook
5579   \ifx\Hy@EveryPageBoxHook\@empty
5580   \else
5581     \setbox\AtBeginShipoutBox=\vbox{%
5582       \offinterlineskip
5583       \Hy@EveryPageBoxHook
5584       \box\AtBeginShipoutBox
5585     }%
5586   \fi
5587 }
5588 \AtBeginShipoutFirst{%
5589   \Hy@FirstPageHook
5590 }
5591 \g@addto@macro\Hy@FirstPageHook{%
5592   \PDF@FinishDoc
5593   \gdef\PDF@FinishDoc{}}%
5594 }
```

27.1 PDF /PageLabels

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

```

5595 \ifHy@pagelabels
5596   \begingroup\expandafter\expandafter\expandafter\endgroup
5597   \expandafter\ifx\csname thepage\endcsname\relax
5598     \Hy@pagelabelsfalse
5599     \Hy@WarningNoLine{%
5600       Option 'pdfpagelabels' is turned off\MessageBreak
5601       because \string\thepage\space is undefined%
5602     }%
5603     \csname fi\endcsname
5604     \csname iffalse\expandafter\endcsname
5605   \fi
```

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

```

5606 \def\thispdfpagelabel#1{%
5607   \gdef\HyPL@thisLabel{#1}%
5608 }%
5609 \global\let\HyPL@thisLabel\relax
```

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

```

5610 \def\HyPL@Labels{}
```

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

```
5611 \newcount\Hy@abspage
5612 \Hy@abspage=0 %
```

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

```
5613 \def\HyPL@LastType{init}%
5614 \def\HyPL@LastNumber{0}%
5615 \def\HyPL@LastPrefix{}%
```

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

```
5616 \def\HyPL@arabic{D}%
5617 \def\HyPL@Roman{R}%
5618 \def\HyPL@roman{r}%
5619 \def\HyPL@Alph{A}%
5620 \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.

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

```

5660     \ifx\HyPL@Prefix\@empty
5661     \else
5662     /P(\HyPL@Prefix)%
5663     \fi
5664     /S/\csname HyPL\HyPL@Type\endcsname
5665     \ifnum\the\c@page=1 %
5666     \else
5667     \space/St \the\c@page
5668     \fi
5669     }%
5670     \fi
5671     \fi
5672     \xdef\HyPL@LastNumber{\the\c@page}%
5673     \global\let\HyPL@LastType\HyPL@Type
5674     \global\let\HyPL@LastPrefix\HyPL@Prefix
5675     \endgroup
5676     \Hy@GlobalStepCount\Hy@abspage
5677     }%

```

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

```

5678 \def\HyPL@CheckThePage#1\@nil{%
5679   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5680 }%

```

`\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`.

```

5681 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5682   \def\Hy@tempa{#4}%
5683   \def\Hy@tempb{\csname\endcsname\c@page}%
5684   \ifx\Hy@tempa\Hy@tempb
5685     \expandafter\ifx\csname HyPL#3\endcsname\relax
5686     \else
5687     \def\HyPL@Type{#3}%
5688     \def\HyPL@Prefix{#2}%
5689     \fi
5690   \else
5691     \begingroup
5692     \let\Hy@next\endgroup
5693     \let\HyPL@found\@undefined
5694     \def\arabic{\HyPL@Format{arabic}}%
5695     \def\Roman{\HyPL@Format{Roman}}%
5696     \def\roman{\HyPL@Format{roman}}%
5697     \def\Alph{\HyPL@Format{Alph}}%
5698     \def\alph{\HyPL@Format{alph}}%
5699     \protected@edef\Hy@temp{#1}%
5700     \ifx\HyPL@found\relax
5701     \toks@{\expandafter{\Hy@temp}}%
5702     \edef\Hy@next{\endgroup
5703       \noexpand\HyPL@@@CheckThePage\the\toks@
5704       \noexpand\HyPL@found\relax\noexpand\@nil
5705     }%
5706     \fi
5707     \Hy@next
5708   \fi

```

5709 }%

`\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`.

```
5710 \def\HyPL@Format#1#2{%
5711   \ifx\HyPL@found\@undefined
5712     \expandafter\ifx\csname c@#2\endcsname\c@page
5713       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5714     \else
5715       \expandafter\noexpand\csname#1\endcsname{#2}%
5716     \fi
5717   \else
5718     \expandafter\noexpand\csname#1\endcsname{#2}%
5719   \fi
5720 }%
```

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

```
5721 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5722   \def\Hy@tempa{#3}%
5723   \def\Hy@tempb{\HyPL@found\relax}%
5724   \ifx\Hy@tempa\Hy@tempb
5725     \def\HyPL@Type{#2}%
5726     \def\HyPL@Prefix{#1}%
5727   \fi
5728 }%
```

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

```
5729 \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`.

```
5730 \def\HyPL@Useless{0<</S/D>>}%
5731 \@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.

```
5732 \def\HyPL@SetPageLabels{%
5733   \@onelevel@sanitize\HyPL@Labels
5734   \ifx\HyPL@Labels\@empty
5735     \else
5736       \ifx\HyPL@Labels\HyPL@Useless
5737         \else
5738           \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5739         \fi
5740       \fi
5741 }%
```

```
5742 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5743 \fi
```

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

```
5744 \Hy@DisableOption{pdfpagelabels}
```

```
5745 </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`

```
5746 <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.

```
5747 <*vTeX>
5748 \providecommand*{\XR@ext}{pdf}
5749 \edef\Hy@VTeXversion{%
5750   \ifx\VTeXversion\undefined
5751     \z@
5752   \else
5753     \ifx\VTeXversion\relax
5754       \z@
5755     \else
5756       \VTeXversion
5757     \fi
5758   \fi
5759 }
5760 \begingroup
5761   \ifnum\Hy@VTeXversion<660 %
5762     \gdef\Hy@PutCatalog#1{%
5763       \Hy@WarningNoLine{%
5764         VTeX 6.59g or above required for pdfpagelabels%
5765       }%
5766     }%
5767   \else
5768     \gdef\Hy@PutCatalog#1{%
5769       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5770     }%
5771     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5772       \ifx\#2\%
5773         \else
5774           \immediate\special{!pdfpagelabels #2}%
5775         \fi
5776       }%
5777     \fi
5778 \endgroup
5779 </vTeX>

5780 <*pdfTeX | vTeX>
```

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

```
5781 \ifHy@pagelabels
5782   \def\HyPL@StorePageLabel#1{%
5783     \toks@\expandafter{\HyPL@Labels}%
5784     \xdef\HyPL@Labels{%
5785       \the\toks@
5786       \the\Hy@abspage<<#1>>%
5787     }%
5788   }%
```


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.

```
5789 \RequirePackage{atveryend}[2009/12/07]%
5790 \AtVeryEndDocument{%
5791   \HyPL@SetPageLabels
5792 }%

5793 \fi
5794 </pdfTeX | vTeX>
```

27.1.2 xetex

```
5795 <*xetex>
5796 \HyPsd@LoadUnicode
5797 \Hy@unicodetrue
5798 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5799 \else
5800   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5801 \fi
5802 \HyPsd@LoadStringEncoding
5803 \define@key{Hyp}{unicode}[true]{%
5804   \Hy@boolkey{unicode}{#1}%
5805   \ifHy@unicode
5806     \else
5807       \Hy@Warning{%
5808         XeTeX driver only supports 'unicode=true'.\MessageBreak
5809         Ignoring option setting 'unicode=false'%
5810       }%
5811       \Hy@unicodetrue
5812 \fi
5813 }
5814 \define@key{Hyp}{pdfencoding}{%
5815   \edef\HyPsd@temp{#1}%
5816   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5817     \let\HyPsd@pdfencoding\HyPsd@temp
5818   \else
5819     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5820       \let\HyPsd@pdfencoding\HyPsd@temp
5821     \else
5822       \Hy@Warning{%
5823         XeTeX driver only supports\MessageBreak
5824         'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5825         setting 'pdfencoding=\HyPsd@temp'%
5826       }%
5827     \fi
5828   \fi
5829 }
5830 \let\HyXeTeX@CheckUnicode\relax
5831 </xetex>
```

27.1.3 pdfmarkbase, dvipdfm, xetex

```
5832 <*pdfmarkbase>
5833 \begingroup
5834 \@ifundefined{headerps@out}{}{%
5835   \toks@\expandafter{\Hy@FirstPageHook}%
5836   \xdef\Hy@FirstPageHook{%
```

```

5837 \noexpand\headerps@out{%
5838 systemdict /pdfmark known%
5839 {%
5840 userdict /?pdfmark systemdict /exec get put%
5841 }{%
5842 userdict /?pdfmark systemdict /pop get put %
5843 userdict /pdfmark systemdict /cleartomark get put%
5844 }%
5845 ifelse%
5846 }%
5847 \the\toks@
5848 }%
5849 }%
5850 \endgroup
5851 \</pdfmarkbase>

```

\Hy@PutCatalog

```

5852 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5853 <*pdfmarkbase>
5854 \def\Hy@PutCatalog#1{%
5855 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}}%
5856 }
5857 \</pdfmarkbase>

5858 <*pdfmarkbase | dvipdfm | xetex>
5859 \ifHy@pagelabels

```

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

```

5860 \def\HyPL@StorePageLabel#1{%
5861 \if@filesw
5862 \begingroup
5863 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5864 \immediate\write\@mainaux{%
5865 \string\HyPL@Entry{\Hy@tempa}%
5866 }%
5867 \endgroup
5868 \fi
5869 }%

```

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.

```

5870 \Hy@AtBeginDocument{%
5871 \if@filesw
5872 \immediate\write\@mainaux{%
5873 \string\providecommand\string*\string\HyPL@Entry[1]{}%
5874 }%
5875 \fi
5876 \ifx\HyPL@Labels\@empty
5877 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5878 \else
5879 \HyPL@SetPageLabels
5880 \fi
5881 \let\HyPL@Entry\@gobble
5882 }%

```

\HyPL@Entry

```

5883 \def\HyPL@Entry#1{%

```

```

5884 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5885 \HyPL@Labels
5886 #1%
5887 }%
5888 }%

5889 \fi
5890 </pdfmarkbase | dvipdfm | xetex>

5891 <*package>

5892 \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

```

5893 \def\Hy@CounterExists#1{%
5894 \begingroup\expandafter\expandafter\expandafter\endgroup
5895 \expandafter\ifx\csname c@#1\endcsname\relax
5896 \expandafter\@gobble
5897 \else
5898 \begingroup\expandafter\expandafter\expandafter\endgroup
5899 \expandafter\ifx\csname the#1\endcsname\relax
5900 \expandafter\expandafter\expandafter\@gobble
5901 \else
5902 \expandafter\expandafter\expandafter\@firstofone
5903 \fi
5904 \fi
5905 }
5906 \Hy@CounterExists{section}{%
5907 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5908 }
5909 \Hy@CounterExists{part}{%
5910 \newcommand\theHpart{\arabic{part}}}%
5911 }
5912 \ltx@ifundefined{thechapter}{%
5913 \newcommand\theHsection {\arabic{section}}}%
5914 \newcommand\theHfigure {\arabic{figure}}}%
5915 \newcommand\theHtable {\arabic{table}}}%
5916 }{%
5917 \newcommand\theHchapter {\arabic{chapter}}}%

```

```

5918 \newcommand\theHfigure    {\theHchapter.\arabic{figure}}%
5919 \newcommand\theHtable     {\theHchapter.\arabic{table}}%
5920 \newcommand\theHsection    {\theHchapter.\arabic{section}}%
5921 }
5922 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5923 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5924 \newcommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
5925 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5926 \newcommand\theHtheorem    {\theHsection.\arabic{theorem}}
5927 \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.

```

5928 \let\H@item\item
5929 \newcounter{Item}
5930 \def\theHItem{\arabic{Item}}
5931 \def\item{%
5932   \@hyper@itemfalse
5933   \if@nmbrlist\@hyper@itemtrue\fi
5934   \H@item
5935 }
5936 \newcommand\theHenumi      {\theHItem}
5937 \newcommand\theHenumii    {\theHItem}
5938 \newcommand\theHenumiii   {\theHItem}
5939 \newcommand\theHenumiv    {\theHItem}
5940 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5941 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5942 \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.

```

5943 \let\H@refstepcounter\refstepcounter
5944 \edef\name@of@eq{equation}%
5945 \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.

```

5946 \newif\if@hyper@item
5947 \newif\if@skiphyperref
5948 \@hyper@itemfalse
5949 \@skiphyperreffalse
5950 \def\refstepcounter#1{%
5951   \ifHy@pdfstring
5952   \else
5953     \H@refstepcounter{#1}%
5954     \edef\This@name{#1}%
5955     \ifx\This@name\name@of@slide
5956     \else
5957       \if@skiphyperref
5958       \else
5959         \if@hyper@item
5960         \stepcounter{Item}%
5961         \hyper@refstepcounter{Item}%
5962         \@hyper@itemfalse
5963       \else

```

```

5964     \hyper@refstepcounter{#1}%
5965     \fi
5966   \fi
5967 \fi
5968 \fi
5969 }

```

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

```

5970 \ifpackageloaded{amsmath}{\newif\ifmeasuring@measuring@false}

```

`\hyper@refstepcounter`

```

5971 \def\hyper@refstepcounter#1{%
5972   \edef\This@name{#1}%
5973   \ifx\This@name\name@of@eq
5974     \ifundefined{theHequation}{%
5975       \make@stripped@name{\theequation}%
5976       \let\theHequation\newname
5977     }{}%
5978   \fi
5979   \ifundefined{theH#1}{%
5980     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5981   }{}%
5982   \hyper@makecurrent{#1}%
5983   \ifmeasuring@
5984     \else
5985     \Hy@raisedlink{%
5986       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5987     }%
5988   \fi
5989 }

```

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`.

```

5990 \begingroup\expandafter\expandafter\expandafter\endgroup
5991 \expandafter\ifx\csname chapter\endcsname\relax
5992   \def\Hy@chapterstring{section}%
5993 \else
5994   \def\Hy@chapterstring{chapter}%
5995 \fi
5996 \def\Hy@appendixstring{appendix}
5997 \def\Hy@chapapp{\Hy@chapterstring}
5998 \let\HyOrg@appendix\appendix
5999 \def\appendix{%
6000   \ltx@ifundefined{chapter}%
6001     {\gdef\theHsection{\Alph{section}}}%
6002     {\gdef\theHchapter{\Alph{chapter}}}%
6003   \xdef\Hy@chapapp{\Hy@appendixstring}%
6004   \HyOrg@appendix
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 }

```

\Hy@Test@Alph

```

6015 \def\Hy@Test@Alph#1{%
6016   \ifcase#1\or
6017     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6018     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6019     U\or V\or W\or X\or Y\or Z%
6020   \else
6021     \@ctrerr
6022   \fi
6023 }

```

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

```

6024 \def\hyper@makecurrent#1{%
6025   \begingroup
6026   \edef\Hy@param{#1}%
6027   \ifx\Hy@param\Hy@chapterstring
6028     \let\Hy@param\Hy@chapapp
6029   \fi
6030   \ifHy@hypertextnames
6031     \let\@number\@firstofone
6032     \def\@fnsymbol##1{\fnsymbol\number##1}%
6033     \ifx\@alph\Hy@Test@alph
6034       \else
6035         \def\@alph{alph\number}%
6036       \fi
6037     \ifx\@Alph\Hy@Test@Alph
6038       \else
6039         \def\@Alph{Alph\number}%
6040       \fi
6041     \ifHy@naturalnames
6042       \let\textlatin\@firstofone
6043     \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6044   \else
6045     \xdef\HyperGlobalCurrentHref{%
6046       \csname
6047         the%
6048         \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6049         #1%
6050       \endcsname
6051     }%
6052   \fi
6053   \xdef\HyperGlobalCurrentHref{%
6054     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6055   }%
6056   \else
6057     \Hy@GlobalStepCount\Hy@linkcounter
6058     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%

```

```

6059 \fi
6060 \endgroup
6061 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6062 \ifHy@localanchorname
6063 \let\@currentHref\HyperLocalCurrentHref
6064 \else
6065 \global\let\@currentHref\HyperGlobalCurrentHref
6066 \fi
6067 }

```

`\Hy@MakeCurrentHref`

```

6068 \def\Hy@MakeCurrentHref#1{%
6069 \edef\HyperLocalCurrentHref{#1}%
6070 \@onelevel@sanitize\HyperLocalCurrentHref
6071 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6072 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6073 \ifHy@localanchorname
6074 \let\@currentHref\HyperLocalCurrentHref
6075 \else
6076 \global\let\@currentHref\HyperGlobalCurrentHref
6077 \fi
6078 }

```

`\Hy@MakeCurrentHrefAuto`

```

6079 \def\Hy@MakeCurrentHrefAuto#1{%
6080 \Hy@GlobalStepCount\Hy@linkcounter
6081 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6082 }

```

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

```

6083 \def\@currentHlabel{\@currentHref}

6084 \@ifpackageloaded{fancyvrb}{%
6085 \@ifpackagelater{fancyvrb}{1998/05/20}{%
6086 \def\FV@StepLineNo{%
6087 \FV@SetLineNo
6088 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6089 \FV@StepLineNo
6090 }%
6091 }%
6092 }{}

```

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`

```

6093 \Hy@AtBeginDocument{%
6094 \@ifclassloaded{revtex4}{%

```

```

6095 \@@namedef{ver@lastpage.sty}{1994/06/25}%
6096 }{}%
6097 \@ifpackageloaded{lastpage}{%
6098 \ifHy@pageanchor
6099 \else
6100 \Hy@WarningNoLine{%
6101 The \string\pageref{LastPage} link doesn't work\MessageBreak
6102 with disabled option 'pageanchor'%
6103 }%
6104 \fi
6105 \def\lastpage@putlabel{%
6106 \addtocounter{page}{-1}%
6107 \if@filesw
6108 \beginingroup
6109 \let\@number\@firstofone
6110 \ifHy@pageanchor
6111 \ifHy@hypertextnames
6112 \ifHy@plainpages
6113 \def\Hy@temp{\arabic{page}}%
6114 \else
6115 \Hy@unicodefalse
6116 \pdfstringdef\Hy@temp{\thepage}%
6117 \fi
6118 \else
6119 \def\Hy@temp{\the\Hy@pagecounter}%
6120 \fi
6121 \fi
6122 \immediate\write\@auxout{%
6123 \string\newlabel
6124 {LastPage}{{}{\thepage}}{%
6125 \ifHy@pageanchor page.\Hy@temp\fi}}}%
6126 }%
6127 \endgroup
6128 \fi
6129 \addtocounter{page}{1}%
6130 }%
6131 \@ifclassloaded{revtex4}{%
6132 \beginingroup
6133 \toks@\expandafter{\lastpage@putlabel}%
6134 \edef\x{\endgroup
6135 \def\noexpand\lastpage@putlabel{%
6136 \noexpand\stepcounter{page}%
6137 \the\toks@
6138 \noexpand\addtocounter{page}\noexpand\m@ne
6139 }%
6140 }%
6141 \x
6142 }{}%
6143 }{}%
6144 }
6145 </package>
6146 <*check>
6147 \checkpackage{lastpage}[1994/06/25]
6148 \checkcommand\def\lastpage@putlabel{%
6149 \addtocounter{page}{-1}%
6150 \immediate\write\@auxout{%
6151 \string\newlabel{LastPage}{{}{\thepage}}%

```



```

6152 }%
6153 \addtocounter{page}{1}%
6154 }
6155 </check>
6156 <*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.

```

6157 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
6158 \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:

```

6159 \ifpackageloaded{titlesec}{%
6160   \def\ttl@Hy@steplink#1{%
6161     \Hy@MakeCurrentHrefAuto{#1*}%
6162     \edef\ttl@Hy@saveanchor{%
6163       \noexpand\Hy@raisedlink{%
6164         \noexpand\hyper@anchorstart{\@currentHref}%
6165         \noexpand\hyper@anchorend
6166         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6167         \noexpand\ttl@Hy@PatchSaveWrite
6168       }%
6169     }%
6170   }%
6171   \def\ttl@Hy@PatchSaveWrite{%
6172     \begingroup
6173     \toks@{\expandafter{\ttl@savewrite}}%
6174     \edef\x{\endgroup
6175       \def\noexpand\ttl@savewrite{%
6176         \let\noexpand\@currentHref
6177         \noexpand\ttl@Hy@SavedCurrentHref
6178         \the\toks@
6179       }%
6180     }%
6181     \x
6182   }%
6183   \def\ttl@Hy@refstepcounter#1{%
6184     \let\ttl@b\Hy@raisedlink
6185     \def\Hy@raisedlink##1{%
6186       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6187     }%
6188     \refstepcounter{#1}%
6189     \let\Hy@raisedlink\ttl@b
6190   }%
6191 }{}

```

Package titletoc support:

```

6192 \ifpackageloaded{titletoc}{%
6193   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%

```

6194 }{} }

32 Package varioref support

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

```
6195 \def\Hy@varioref@undefined{{{??}{??}}{}{}}
6196 \@ifpackageloaded{varioref}{%
6197   \def\vref@pagenum#1#2{%
6198     \@ifundefined{r@#2}{%
6199       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6200     }{}%
6201     \edef#1{\getpagerefnumber{#2}}%
6202   }%
6203 }
```

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

```
6204 \@ifpackageloaded{longtable}{%
6205   \begingroup
6206   \def\y{\LT@array}%
6207   \@ifundefined{scr@LT@array}{%
6208     \@ifundefined{adl@LT@array}{}{\def\y{\adl@LT@array}}%
6209   }\def\y{\scr@LT@array}%
6210   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6211     \expandafter\endgroup
6212     \expandafter\def\y[#1]#2{%
6213       \H@refstepcounter{#1}%
6214       \hyper@makecurrent{table}%
6215       \let\Hy@LT@currentHref\@currentHref
6216       #2\@sharp###4%
6217     }%
6218   }%
6219   \expandafter\expandafter\expandafter\x\y{#1}{#2}\@nil
```

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

```
6220 \begingroup
6221   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6222     \endgroup
6223     \def\LT@start{%
6224       #1%
6225       \ifvoid\LT@foot#2\fi
6226       \let\@currentHref\Hy@LT@currentHref
6227       \Hy@raisedlink{%
6228         \hyper@anchorstart{\@currentHref}\hyper@anchorend
6229       }%
6230       #3%
6231     }%
6232   }%
6233   \expandafter\x\LT@start\@nil
```

6234 }{}

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.

```

6235 \let\new@refstepcounter\refstepcounter
6236 \let\H@equation\equation
6237 \let\H@endequation\endequation

6238 \@ifpackageloaded{amsmath}{%
6239   \long\def\Hy@temp{%
6240     \incr@eqnum
6241     \mathdisplay@push
6242     \st@rredfalse \global\@eqnswtrue
6243     \mathdisplay{equation}%
6244   }%
6245   \ifx\Hy@temp\equation
6246     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6247       \csname iftrue\endcsname
6248     \else
6249       \long\def\equation{%
6250         \mathdisplay@push
6251         \st@rredfalse \global\@eqnswtrue
6252         \mathdisplay{equation}%
6253         \incr@eqnum
6254       }%
6255     \fi
6256   \fi
6257 }{%
6258 \def\equation{%
6259   \let\refstepcounter\H@refstepcounter
6260   \H@equation
6261   \@ifundefined{theHequation}{%
6262     \make@stripped@name{\theequation}%
6263     \let\theHequation\newname
6264   }{}%
6265   \hyper@makecurrent{equation}%
6266   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6267   \let\refstepcounter\new@refstepcounter
6268 }%
6269 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6270 }
```

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.

```

6271 \newif\if@eqnstar
6272 \@eqnstarfalse
6273 \let\H@eqnarray\eqnarray
6274 \let\H@endeqnarray\endeqnarray
```

```

6275 \def\eqnarray{%
6276   \let\Hy@reserved@a\relax
6277   \def\@currentHref{}%
6278   \H@eqnarray
6279   \if@eqnstar
6280   \else
6281     \ifx\\ \@currentHref\\%
6282     \else
6283       \ifundefined{theHequation}{%
6284         \make@stripped@name{theequation}%
6285         \let\theHequation\newname
6286       }{}%
6287       \hyper@makecurrent{equation}%
6288       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6289     \fi
6290   \fi
6291 }
6292 \def\endeqnarray{%
6293   \H@endeqnarray
6294 }

```

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.

```

6295 \@namedef{eqnarray*}{%
6296   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6297 }
6298 \@namedef{endeqnarray*}{%
6299   \nonumber\endeqnarray\@eqnstarfalse
6300 }

```

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

```

6301 \ltx@ifundefined{subeqnarray}{}{}%
6302 \let\H@subeqnarray\subeqnarray
6303 \let\H@endsubeqnarray\endsubeqnarray
6304 \def\subeqnarray{%
6305   \let\Hy@reserved@a\relax
6306   \H@subeqnarray
6307   \ifundefined{theHequation}{%
6308     \make@stripped@name{theequation}%
6309     \let\theHequation\newname
6310   }{}%
6311   \hyper@makecurrent{equation}%
6312   \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6313 }%
6314 \def\endsubeqnarray{%
6315   \H@endsubeqnarray
6316 }%
6317 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6318 }

```

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

```

6319 \def\make@stripped@name#1{%
6320   \begingroup
6321   \escapechar\m@ne
6322   \global\let\newname\@empty
6323   \protected@edef\Hy@tempa{#1}%
6324   \edef\@tempb{%
6325     \noexpand\@tfor\noexpand\Hy@tempa:=%

```

```

6326     \expandafter\strip@prefix\meaning\Hy@tempa
6327   }%
6328   \@tempb\do{%
6329     \if{\Hy@tempa\else
6330     \if}\Hy@tempa\else
6331     \xdef\newname{\newname\Hy@tempa}%
6332     \fi
6333     \fi
6334   }%
6335 \endgroup
6336 }

```

Support for amsmath's subequations:

```

6337 \begingroup\expandafter\expandafter\expandafter\endgroup
6338 \expandafter\ifx\csname subequations\endcsname\relax
6339 \else
6340   \let\HyOrg@subequations\subequations
6341   \def\subequations{%
6342     \stepcounter{equation}%
6343     \protected@edef\theHparentequation{%
6344       \@ifundefined{theHequation}\theequation\theHequation
6345     }%
6346     \addtocounter{equation}{-1}%
6347     \HyOrg@subequations
6348     \def\theHequation{\theHparentequation\alph{equation}}}%
6349   \ignorespaces
6350 }%
6351 \fi

```

Support for package amsthm (Daniel Müllner):

```

6352 \@ifpackageloaded{amsthm}{%
6353   \def\@thm#1#2#3{%
6354     \ifhmode
6355       \unskip\unskip\par
6356     \fi
6357     \normalfont
6358     \trivlist
6359     \let\thmheadnl\relax
6360     \let\thm@swap\@gobble
6361     \thm@notefont{\fontseries\mddefault\upshape}%
6362     \thm@headpunct{.}% add period after heading
6363     \thm@headsep 5\p@ plus\p@ minus\p@\relax
6364     \thm@space@setup
6365     #1% style overrides
6366     \@topsep \thm@preskip           % used by thm head
6367     \@topsepadd \thm@postskip       % used by \endparentv
6368     \def\dth@counter{#2}%
6369     \ifx\@empty\dth@counter
6370       \def\@tempa{%
6371         \@oparg{\@begintheorem{#3}{}}{}%
6372       }%
6373     \else
6374       \H@refstepcounter{#2}%
6375       \hyper@makecurrent{#2}%
6376       \let\Hy@dth@currentHref\@currentHref
6377       \def\@tempa{%
6378         \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6379       }%

```

```

6380 \fi
6381 \@tempa
6382 }%
6383 \dth@everypar={%
6384 \@minipagefalse
6385 \global\@newlistfalse
6386 \@noperitemfalse
6387 \if@inlabel
6388 \global\@inlabelfalse
6389 \begingroup
6390 \setbox\z@\lastbox
6391 \ifvoid\z@
6392 \kern-\itemindent
6393 \fi
6394 \endgroup
6395 \ifx\@empty\dth@counter
6396 \else
6397 \Hy@raisedlink{%
6398 \hyper@anchorstart{%
6399 \ltx@ifundefined{Hy@dth@currentHref}%
6400 \@currentHref\Hy@dth@currentHref
6401 }\hyper@anchorend
6402 }%
6403 \fi
6404 \unhbox\@labels
6405 \fi
6406 \if@nobreak
6407 \@nobreakfalse \clubpenalty\@M
6408 \else
6409 \clubpenalty\@clubpenalty \everypar{}%
6410 \fi
6411 }%
6412 }{}

```

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.

```

6413 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6414 \ifHy@hyperfootnotes
6415 \newcounter{Hfootnote}%
6416 \let\H@@footnotetext\@footnotetext
6417 \let\H@@footnotemark\@footnotemark
6418 \def\xfootnotenext[#1]{%
6419 \begingroup
6420 \csname c@\@mpfn\endcsname #1\relax
6421 \unrestored@protected\xdef\@thefnmark{\thempfn}%
6422 \endgroup
6423 \ifx\@footnotetext\@mpfootnotetext
6424 \expandafter\H@@mpfootnotetext
6425 \else
6426 \expandafter\H@@footnotetext
6427 \fi

```

```

6428 }%
6429 \def\@footnotemark[#1]{%
6430   \begingroup
6431     \c@footnote #1\relax
6432     \unrestored@protected@xdef\@thefnmark{\thefnnote}%
6433   \endgroup
6434   \H@@@footnotemark
6435 }%
6436 \let\H@@mpfootnotetext\@mpfootnotetext
6437 \long\def\@mpfootnotetext#1{%
6438   \H@@mpfootnotetext{%
6439     \ifHy@nesting
6440       \expandafter\hyper@@@anchor\expandafter{%
6441         \Hy@footnote@currentHref
6442       }{#1}%
6443     \else
6444       \Hy@raisedlink{%
6445         \expandafter\hyper@@@anchor\expandafter{%
6446           \Hy@footnote@currentHref
6447         }\relax}%
6448       }#1%
6449     \fi
6450   }%
6451 }%
6452 \long\def\@footnotetext#1{%
6453   \H@@@footnotetext{%
6454     \ifHy@nesting
6455       \expandafter\hyper@@@anchor\expandafter{%
6456         \Hy@footnote@currentHref
6457       }{#1}%
6458     \else
6459       \Hy@raisedlink{%
6460         \expandafter\hyper@@@anchor\expandafter{%
6461           \Hy@footnote@currentHref
6462         }\relax}%
6463       }%
6464       \let\@currentHref\Hy@footnote@currentHref
6465       \let\@currentlabelname\@empty
6466       #1%
6467     \fi
6468   }%
6469 }%

```

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.

```

6470 \def\@footnotemark{%
6471   \leavevmode
6472   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6473   \stepcounter{Hfootnote}%
6474   \global\let\Hy@saved@currentHref\@currentHref
6475   \hyper@makecurrent{Hfootnote}%
6476   \global\let\Hy@footnote@currentHref\@currentHref
6477   \global\let\@currentHref\Hy@saved@currentHref
6478   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6479   \@makefnmark
6480   \hyper@linkend

```

```

6481 \ifhmode\spacefactor\@x@sf\fi
6482 \relax
6483 }%

```

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

```

6484 \@ifpackageloaded{longtable}{%
6485 \CheckCommand*\LT@p@ftntext}[1]{%
6486 \edef\@tempa{%
6487 \the\LT@p@ftn
6488 \noexpand\footnotetext[\the\c@footnote]%
6489 }%
6490 \global\LT@p@ftn\expandafter{\@tempa{#1}}}%
6491 }%
6492 \long\def\LT@p@ftntext#1{%
6493 \edef\@tempa{%
6494 \the\LT@p@ftn
6495 \begingroup
6496 \noexpand\c@footnote=\the\c@footnote\relax
6497 \noexpand\protected@xdef
6498 \noexpand\@thefnmark{\noexpand\thempfn}%
6499 \noexpand\protected@xdef\noexpand\@thefnmark{%
6500 \noexpand\thempfn
6501 }%
6502 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6503 \expandafter{%
6504 \Hy@footnote@currentHref
6505 }%
6506 }%
6507 \global\LT@p@ftn\expandafter{%
6508 \@tempa{#1}%
6509 \endgroup
6510 }%
6511 }%
6512 \long\def\Hy@LT@footnotetext#1#2{%
6513 \H@@@footnotetext{%
6514 \ifHy@nesting
6515 \hyper@@anchor{#1}{#2}%
6516 \else
6517 \Hy@raisedlink{%
6518 \hyper@@anchor{#1}{\relax}}%
6519 }%
6520 \def\@currentHref{#1}%
6521 \let\@currentlabelname\@empty
6522 #2%
6523 \fi
6524 }%
6525 }%
6526 }{}%

```

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

```

6527 \@ifpackageloaded{fancyvrb}{%
6528 \def\V@@footnotetext{%
6529 \insert\footins\bgroup
6530 \csname reset@font\endcsname
6531 \footnotesize

```



```

6532 \interlinepenalty\interfootnotelinepenalty
6533 \splittopskip\footnotesep
6534 \splitmaxdepth\dp\strutbox
6535 \floatingpenalty \@MM
6536 \hsize\columnwidth
6537 \@parboxrestore
6538 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6539 \@makefnmark{}%
6540 \rule{\z@}{\footnotesep}%
6541 \bgroup
6542 \aftergroup\V@@@footnotetext
6543 \Hy@raisedlink{%
6544 \expandafter\hyper@@anchor\expandafter{%
6545 \Hy@footnote@currentHref
6546 }{\relax}%
6547 }%
6548 \let\@currentHref\Hy@footnote@currentHref
6549 \let\@currentlabelname\@empty
6550 \ignorespaces
6551 }%
6552 }{}%

```

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

```

6553 \def\Hy@temp#1{%
6554 \begingroup
6555 \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
6556 \endgroup
6557 \@footnotemark
6558 }%
6559 \ifx\Hy@temp\footref
6560 \def\footref#1{%
6561 \begingroup
6562 \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
6563 \endgroup
6564 \H@@@footnotemark
6565 }%
6566 \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.

```

6567 \let\HyOrg@maketitle\maketitle
6568 \def\maketitle{%
6569 \let\Hy@saved@footnotemark\@footnotemark
6570 \let\Hy@saved@footnotetext\@footnotetext
6571 \let\@footnotemark\H@@@footnotemark
6572 \let\@footnotetext\H@@@footnotetext
6573 \@ifnextchar[\Hy@maketitle@optarg{% ]
6574 \HyOrg@maketitle
6575 \Hy@maketitle@end
6576 }%
6577 }%
6578 \def\Hy@maketitle@optarg[#1]{%
6579 \HyOrg@maketitle[{#1}]%
6580 \Hy@maketitle@end
6581 }%
6582 \def\Hy@maketitle@end{%
6583 \ifx\@footnotemark\H@@@footnotemark

```

```

6584 \let\@footnotemark\Hy@saved@footnotemark
6585 \fi
6586 \ifx\@footnotetext\H@@footnotetext
6587 \let\@footnotetext\Hy@saved@footnotetext
6588 \fi
6589 }%

```

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

```

6590 \def\realfootnote{%
6591 \ifnextchar[\@xfootnote{%
6592 \stepcounter{\@mpfn}%
6593 \protected@xdef\@thefnmark{\thempfn}%
6594 \H@@@footnotemark\H@@@footnotetext
6595 }%
6596 }%

6597 \fi
6598 \Hy@DisableOption{hyperfootnotes}

6599 </package>
6600 <*check>
6601 \checklatex
6602 \checkcommand\def\@xfootnotenext[#1]{%
6603 \begingroup
6604 \csname c@\@mpfn\endcsname #1\relax
6605 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6606 \endgroup
6607 \@footnotetext
6608 }
6609 \checkcommand\def\@xfootnotemark[#1]{%
6610 \begingroup
6611 \c@footnote #1\relax
6612 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6613 \endgroup
6614 \@footnotemark
6615 }
6616 \checkcommand\def\@footnotemark{%
6617 \leavevmode
6618 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6619 \@makefnmark
6620 \ifhmode\spacefactor\@x@sf\fi
6621 \relax
6622 }
6623 </check>
6624 <*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.

```

6625 \def\caption{%
6626 \ifx\@cuptype\@undefined
6627 \latex@error{\noexpand\caption outside float}\@ehd
6628 \expandafter\@gobble
6629 \else
6630 \H@refstepcounter\@cuptype
6631 \let\Hy@tempa\@caption

```

```

6632 \ifundefined{float@caption}{%
6633 }{%
6634 \expandafter\ifx\csname @float@c@\@capttype\endcsname
6635 \float@caption
6636 \let\Hy@tempa\Hy@float@caption
6637 \fi
6638 }%
6639 \expandafter\@firstofone
6640 \fi
6641 {\@dblarg{\Hy@tempa\@capttype}}}%
6642 }
6643 \long\def\@caption#1[#2]#3{%
6644 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6645 \csname iftrue\endcsname
6646 \global\let\@currentHref\hc@currentHref
6647 \else
6648 \hyper@makecurrent{\@capttype}%
6649 \fi
6650 \ifundefined{NR@getttitle}{%
6651 \def\@currentlabelname{#2}%
6652 }{%
6653 \NR@getttitle{#2}%
6654 }%
6655 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6656 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6657 }%
6658 \begingroup
6659 \@parboxrestore
6660 \if@minipage
6661 \setminipage
6662 \fi
6663 \normalsize
6664 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6665 \csname iftrue\endcsname
6666 \global\@capstartfalse
6667 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6668 \else
6669 \@makecaption{\csname fnum@#1\endcsname}{%
6670 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6671 \ifHy@nesting
6672 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6673 \else
6674 \Hy@raisedlink{%
6675 \expandafter\hyper@@anchor\expandafter{%
6676 \@currentHref
6677 }{\relax}%
6678 }%
6679 #3%
6680 \fi
6681 }%
6682 \fi
6683 \par
6684 \endgroup
6685 }

```

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.

```

6686 \let\Hy@float@caption\@caption
6687 \ifpackageloaded{float}{%
6688   \def\Hy@float@caption{%
6689     \ifx\Hy@float@currentHref\@undefined
6690       \hyper@makecurrent{\@captive}%
6691       \global\let\Hy@float@currentHref\@currentHref
6692     \else
6693       \let\@currentHref\Hy@float@currentHref
6694     \fi
6695     \float@caption
6696   }%
6697 \let\HyOrg@float@makebox\float@makebox
6698 \renewcommand{\float@makebox}[1]{%
6699   \HyOrg@float@makebox{%
6700     #1\relax
6701     \ifx\Hy@float@currentHref\@undefined
6702     \else
6703       \expandafter\hyper@@anchor\expandafter{%
6704         \Hy@float@currentHref
6705       }\relax}%
6706     \global\let\Hy@float@currentHref\@undefined
6707   \fi
6708   }%
6709 }%
6710 }{}

6711 \</package>
6712 \<*check>
6713 \checklatex[1999/06/01 - 2000/06/01]
6714 \checkcommand\def\caption{%
6715   \ifx\@captive\@undefined
6716     \@latex@error{\noexpand\caption outside float}\@ehd
6717     \expandafter\@gobble
6718   \else
6719     \refstepcounter\@captive
6720     \expandafter\@firstofone
6721   \fi
6722   {\@dblarg{\@caption\@captive}}%
6723 }
6724 \checkcommand\long\def\@caption#1[#2]#3{%
6725   \par
6726   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6727     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6728   }%
6729   \begingroup
6730     \@parboxrestore
6731     \if@minipage
6732       \setminipage
6733     \fi
6734     \normalsize
6735     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6736   \endgroup
6737 }
6738 \</check>
6739 \<*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 *drftcite* may break.

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

```

6740 \def\hyper@natlinkstart#1{%
6741   \Hy@backout{#1}%
6742   \hyper@linkstart{cite}{cite.#1}%
6743   \def\hyper@nat@current{#1}%
6744 }
6745 \def\hyper@natlinkend{%
6746   \hyper@linkend
6747 }
6748 \def\hyper@natlinkbreak#1#2{%
6749   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6750 }
6751 \def\hyper@natanchorstart#1{%
6752   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6753 }
6754 \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.

```

6755 \ltx@ifundefined{NAT@parse}{%
6756   \providecommand*\@extra@binfo{}%
6757   \providecommand*\@extra@b@citeb{}%
6758   \def\bibcite#1#2{%
6759     \@newl@bel{b}{#1\@extra@binfo}{%
6760       \hyper@@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6761     }%
6762   }%
6763   \gdef\@extra@binfo{}%

```

Package *babel* redefines `\bibcite` with macro `\bbl@cite@choice`. It needs to be over-written to avoid the warning “Label(s) may have changed.”.

```

6764 \let\Hy@bibcite\bibcite
6765 \begingroup
6766   \ifundefined{bbl@cite@choice}{}{%
6767     \g@addto@macro\bbl@cite@choice{%
6768       \let\bibcite\Hy@bibcite
6769     }%
6770   }%
6771 \endgroup

```

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

```

6772 \providecommand*\@BIBLABEL{\@biblabel}%
6773 \def\@lbibitem[#1]#2{%
6774   \@skiphyperreftrue
6775   \H@item[%
6776     \ifx\Hy@raisedlink\@empty

```

```

6777 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6778 \@BIBLABEL{#1}%
6779 \hyper@anchorend
6780 \else
6781 \Hy@raisedlink{%
6782 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6783 }%
6784 \@BIBLABEL{#1}%
6785 \fi
6786 \hfill
6787 ]%
6788 \@skiphyperreffalse
6789 \if@filesw
6790 \begingroup
6791 \let\protect\noexpand
6792 \immediate\write\@auxout{%
6793 \string\bibcite{#2}{#1}%
6794 }%
6795 \endgroup
6796 \fi
6797 \ignorespaces
6798 }%

```

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

```

6799 \def\@bibitem#1{%
6800 \@skiphyperrefftrue\H@item\@skiphyperreffalse
6801 \Hy@raisedlink{%
6802 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6803 }%
6804 \if@filesw
6805 \begingroup
6806 \let\protect\noexpand
6807 \immediate\write\@auxout{%
6808 \string\bibcite{#1}{\the\value{\@listctr}}}%
6809 }%
6810 \endgroup
6811 \fi
6812 \ignorespaces
6813 }%
6814 }{}

6815 </package>
6816 <*check>
6817 \checklatex
6818 \checkcommand\def\@lbibitem[#1]#2{%
6819 \item[\@biblabel{#1}\hfill]%
6820 \if@filesw
6821 {%
6822 \let\protect\noexpand
6823 \immediate\write\@auxout{%
6824 \string\bibcite{#2}{#1}%
6825 }%
6826 }%
6827 \fi
6828 \ignorespaces
6829 }
6830 \checkcommand\def\@bibitem#1{%

```

```

6831 \item
6832 \if@filesw
6833 \immediate\write\@auxout{%
6834 \string\bibcite{#1}{\the\value{\@listctr}}}%
6835 }%
6836 \fi
6837 \ignorespaces
6838 }
6839 \end{check}
6840 \end{package}

```

RevTeX (bless its little heart) takes over \bibcite and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

6841 \ifclassloaded{revtex}{%
6842 \Hy@Info{*** compatibility with revtex **** }%
6843 \def\revtex@checking#1#2{%
6844 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6845 \expandafter\def\csname b@#1\endcsname{#2}%
6846 \@SetMaxRnhefLabel{#1}%
6847 \expandafter\let\csname b@#1\endcsname\T@temp
6848 }%

```

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

```

6849 \@ifundefined{@CITE}{\def@CITE{\@cite}}{}%
6850 \providecommand*{\@extra@b@citeb}{}%
6851 \def\CITE[#1]#2{%
6852 \let\@citea\@empty
6853 \leavevmode
6854 \unskip
6855 $\sim$%
6856 \scriptstyle
6857 \@CITE{%
6858 \@for\@citeb:=#2\do{%
6859 \@citea
6860 \def\@citea{,\penalty\@m\ }%
6861 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6862 \if@filesw
6863 \immediate\write\@auxout{\string\citation{\@citeb}}%
6864 \fi
6865 \@ifundefined{b@\@citeb\extra@b@citeb}{%
6866 \mbox{\reset@font\bfseries ?}%
6867 \G@refundefinedtrue
6868 \@latex@warning{%
6869 Citation '\@citeb' on page \thepage \space undefined%
6870 }%
6871 }{%
6872 {\csname b@\@citeb\extra@b@citeb\endcsname}%
6873 }%
6874 }%
6875 }{#1}%
6876 }$%
6877 }%

```

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

```

6878 \def\citex[#1]#2{%

```

```

6879 \let\@citea\@empty
6880 \@cite{%
6881   \@for\@citeb:=#2\do{%
6882     \@citea
6883     \def\@citea{,\penalty\@m\ }%
6884     \edef\@citeb{\expandafter\@firstofone\@citeb}%
6885     \if@filesw
6886       \immediate\write\@auxout{\string\citation{\@citeb}}%
6887     \fi
6888     \ifundefined{b@\@citeb\@extra@b@citeb}{%
6889       \mbox{\reset@font\bfseries ?}%
6890       \G@refundefinedtrue
6891       \@latex@warning{%
6892         Citation '\@citeb' on page \thepage \space undefined%
6893       }%
6894     }{%
6895       \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6896     }%
6897   }%
6898 }{#1}%
6899 }%
6900 }{}

```

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.

```

6901 \ifpackageloaded{harvard}{%
6902   \Hy@AtBeginDocument{%
6903     \Hy@Info{*** compatibility with harvard **** }%
6904     \Hy@raiselinksfalse
6905     \def\harvardcite#1#2#3#4{%
6906       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
6907       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
6908       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
6909       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6910     }%
6911     \def\HAR@citetoaux#1{%
6912       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6913       \ifHy@backref
6914         \ifx\@empty\@currentlabel
6915           \else
6916             \@bsphack
6917             \if@filesw
6918               \protected@write\@auxout{}{%
6919                 \string\@writefile{brf}{%
6920                   \string\backcite{#1}{%
6921                     {\thepage}{\@currentlabel}{\@currentHref}%
6922                   }%
6923                 }%
6924             }%
6925           \fi

```



```

6926     \@esphack
6927     \fi
6928   \fi
6929 }%
6930 \def\harvarditem{%
6931   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6932 }%
6933 \def\@harvarditem[#1]#2#3#4#5\par{%
6934   \item[]%
6935   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6936   \if@filesw
6937     \begingroup
6938     \def\protect##1{\string ##1\space}%
6939     \ifthenelse{\equal{#1}{\null}}{%
6940       {\def\next{{#4}{#2}{#2}{#3}}}%
6941       {\def\next{{#4}{#2}{#1}{#3}}}%
6942     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6943   \endgroup
6944   \fi
6945   \protect\hspace*{-\labelwidth}%
6946   \protect\hspace*{-\labelsep}%
6947   \ignorespaces
6948   #5%
6949   \ifHy@backref
6950     \newblock
6951     \backref{\csname br@#4\endcsname}%
6952   \fi
6953   \par
6954 }%

```

\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:

```

6955 \long\def\HAR@checkcitations#1#2#3#4{%
6956   \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6957   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6958     \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6959     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6960       \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6961       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6962         \else
6963           \@tempswatrue
6964         \fi
6965       \else
6966         \@tempswatrue
6967       \fi
6968     \else
6969       \@tempswatrue
6970     \fi
6971   }%
6972 }%
6973 }{}

```

37.2 Package chicago

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

```

6974 \@ifpackageloaded{chicago}{%
\citeN
6975 \def\citeN{%
6976 \def\@citesep{-1000}%
6977 \def\@cite##1##2{##1}%
6978 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
6979 \@citedata@opt
6980 }%

\shortciteN
6981 \def\shortciteN{%
6982 \def\@citesep{-1000}%
6983 \def\@cite##1##2{##1}%
6984 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
6985 \@citedata@opt
6986 }%

\@citedata@opt
6987 \def\@citedata@opt{%
6988 \let\@cite@opt\@empty
6989 \@ifnextchar [{%
6990 \@tempswattrue
6991 \@citedatax@opt
6992 }{%
6993 \@tempswafalse
6994 \@citedatax[]%
6995 }%
6996 }%

\@citedatax@opt
6997 \def\@citedatax@opt[#1]{%
6998 \def\@cite@opt{, #1}%
6999 \@citedatax[{#1}]%
7000 }%

7001 }{}

```

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.

```

7002 \def\Hy@EveryPageAnchor{%
7003 \Hy@DistillerDestFix
7004 \ifHy@pageanchor
7005 \ifHy@hypertextnames
7006 \ifHy@plainpages
7007 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7008 \else
7009 \begingroup
7010 \let\@number\@firstofone

```

```

7011     \Hy@unicodedefalse
7012     \pdfstringdef\@the@H@page{\thepage}%
7013     \endgroup
7014     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7015     \fi
7016   \else
7017     \Hy@GlobalStepCount\Hy@pagecounter
7018     \def\Hy@TempPageAnchor{%
7019       \hyper@@anchor{page.\the\Hy@pagecounter}%
7020     }%
7021     \fi
7022     \vbox to 0pt{%
7023       \kern\voffset
7024       \kern\topmargin
7025       \kern-1bp\relax
7026       \hbox to 0pt{%
7027         \kern\hoffset
7028         \kern\ifodd\value{page}%
7029           \oddsidemargin
7030         \else
7031           \evensidemargin
7032         \fi
7033         \kern-1bp\relax
7034         \Hy@TempPageAnchor
7035       \hss
7036     }%
7037     \vss
7038   }%
7039 \fi
7040 }
7041 \g@addto@macro\Hy@EveryPageBoxHook{%
7042   \Hy@EveryPageAnchor
7043 }

```

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.

```

7044 \def\addcontentsline#1#2#3{% toc extension, type, tag
7045   \begingroup
7046   \let\label\@gobble
7047   \ifx\@currentHref\@empty
7048     \Hy@Warning{%
7049       No destination for bookmark of \string\addcontentsline,%
7050       \MessageBreak destination is added%
7051     }%
7052     \phantomsection
7053   \fi
7054   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7055     \begingroup
7056     \def\Hy@tempa{#1}%
7057     \ifx\Hy@tempa\Hy@bookmarkstype
7058       \Hy@WarningNoLine{%
7059         bookmark level for unknown #2 defaults to 0%
7060       }%

```

```

7061 \else
7062 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7063 \fi
7064 \endgroup
7065 \expandafter\gdef\csname toclevel@#2\endcsname{0}%
7066 \fi
7067 \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
7068 \Hy@writebookmark{\csname the#2\endcsname}%
7069 {#3}%
7070 {\@currentHref}%
7071 {\Hy@toclevel}%
7072 {#1}%
7073 \ifHy@verbose
7074 \begingroup
7075 \def\Hy@tempa{#3}%
7076 \@onelevel@sanitize\Hy@tempa
7077 \let\temp@online\on@line
7078 \let\on@line\@empty
7079 \Hy@Info{%
7080 bookmark\temp@online:\MessageBreak
7081 thecounter {\csname the#2\endcsname}\MessageBreak
7082 text {\Hy@tempa}\MessageBreak
7083 reference {\@currentHref}\MessageBreak
7084 toclevel {\Hy@toclevel}\MessageBreak
7085 type {#1}%
7086 }%
7087 \endgroup
7088 \fi
7089 \addtocontents{#1}{%
7090 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7091 }%
7092 \endgroup
7093 }
7094 \def\contentsline#1#2#3#4{%
7095 \ifx\\#4\\%
7096 \csname l@#1\endcsname{#2}{#3}%
7097 \else
7098 \ifcase\Hy@linktoc % none
7099 \csname l@#1\endcsname{#2}{#3}%
7100 \or % section
7101 \csname l@#1\endcsname{%
7102 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7103 }{#3}%
7104 \or % page
7105 \csname l@#1\endcsname{{#2}}{%
7106 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7107 }%
7108 \else % all
7109 \csname l@#1\endcsname{%
7110 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7111 }{%
7112 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7113 }%
7114 \fi
7115 \fi
7116 }
7117 \</package>

```

```

7118 <*check>
7119 \checklatex
7120 \checkcommand\def\addcontentsline#1#2#3{%
7121   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
7122 }
7123 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7124 </check>
7125 <*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.

```

7126 \let\H@definecounter\@definecounter
7127 \def\@definecounter#1{%
7128   \H@definecounter{#1}%
7129   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7130 }

```

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.

```

7131 \let\H@newctr\@newctr
7132 \def\@newctr#1[#2]{%
7133   \H@newctr#1[{#2}]%
7134   \expandafter\def\csname theH#1\endcsname{%
7135     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7136   }%
7137 }

```

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.

```

7138 \ifpackageloaded{amsmath}{%
7139   \def\Hy@make@anchor{%
7140     \Hy@MakeCurrentHrefAuto{AMS}%
7141     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7142   }%
7143   \def\Hy@make@df@tag@@#1{%
7144     \gdef\df@tag{%
7145       \maketag@@@{\Hy@make@anchor#1}%
7146       \def\@currentlabel{#1}%
7147     }%
7148   }%
7149   \def\Hy@make@df@tag@@@#1{%
7150     \gdef\df@tag{%
7151       \tagform@{\Hy@make@anchor#1}%
7152       \toks@{\xp{\p@equation{#1}}}%
7153       \edef\@currentlabel{\the\toks@}%
7154     }%
7155   }%

```

```

7156 \let\HyOrg@make@df@tag@@\make@df@tag@@
7157 \let\HyOrg@make@df@tag@@@make@df@tag@@@
7158 \let\make@df@tag@@\Hy@make@df@tag@@
7159 \let\make@df@tag@@@Hy@make@df@tag@@@
7160 }{}

```

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

```

7161 \ifpackagewith{hyperref}{pdfTeX}{%
7162   \let\H@seteqlabel\@seteqlabel
7163   \def\@seteqlabel#1{%
7164     \H@seteqlabel{#1}%
7165     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7166     \Hy@raisedlink{%
7167       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7168     }%
7169   }%
7170 }{}

```

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.

```

7171 \let\HyOrg@addtoreset\@addtoreset
7172 \def\@addtoreset#1#2{%
7173   \HyOrg@addtoreset{#1}{#2}%
7174   \expandafter\xdef\csname theH#1\endcsname{%
7175     \expandafter\noexpand
7176     \csname the\@ifundefined{theH#2}{H#2}\endcsname
7177     .\noexpand\the\noexpand\value{#1}%
7178   }%
7179 }

```

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

```

7180 </package>
7181 <*check>
7182 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7183 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7184   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7185     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7186       \@addtoreset{#2}{#3}%
7187       \exp\xdef\csname the#2\endcsname{%
7188         \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7189       }%
7190     }%
7191   }%

```

```

7192 }%
7193 </check>
7194 <*package>
7195 \@ifpackageloaded{amsmath}{%
7196   \@ifpackagelater{amsmath}{1999/12/14}{%
7197     \renewcommand*{\numberwithin}{3}[\arabic]{%
7198       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7199         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7200           \HyOrg@addtoreset{#2}{#3}%
7201           \@xp\xdef\csname the#2\endcsname{%
7202             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7203           }%
7204           \@xp\xdef\csname theH#2\endcsname{%
7205             \@xp\@nx
7206             \csname the\@ifundefined{theH#3}{H#3}\endcsname
7207             .\@nx#1{#2}%
7208           }%
7209         }%
7210       }%
7211     }%
7212   }{%
7213     \Hy@WarningNoLine{%
7214       \string\numberwithin\space of package ‘amsmath’ %
7215       only fixed\MessageBreak
7216       for version 2000/06/06 v2.12 or newer%
7217     }%
7218   }%
7219 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7220 \ifHy@figures
7221   \let\Hy@Gin@setfile\Gin@setfile
7222   \def\Gin@setfile#1#2#3{%
7223     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7224   }%
7225 \fi
7226 \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.

```

7227 \ifHy@hyperindex
7228   \def\HyInd@ParenLeft{()%
7229   \def\HyInd@ParenRight{)%}

```

```

7230 \def\hyperindexformat#1#2{%
7231   \let\HyOrg@hyperpage\hyperpage
7232   \let\hyperpage\@firstofone
7233   #1{\HyOrg@hyperpage{#2}}}%
7234   \let\hyperpage\HyOrg@hyperpage
7235 }%
7236 \Hy@nextfalse
7237 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7238 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7239 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7240 \begingroup
7241   \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7242   \lccode'\|/\|=\relax
7243 \lowercase{\endgroup
7244   \ifHy@next
7245     \let\HyInd@org@wrindex\@wrindex
7246     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
7247     \def\HyInd@@wrindex#1#2|#3|#4\{\%
7248       \ifx\|#3\%
7249         \HyInd@org@wrindex{#1}{#2|hyperpage}%
7250       \else
7251         \HyInd@@@wrindex{#1}{#2}#3\%
7252       \fi
7253     }%
7254     \def\HyInd@@@wrindex#1#2#3#4\{\%
7255     \def\Hy@temp@A{#3}%
7256     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7257       \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7258       \relax
7259       \HyInd@org@wrindex{#1}{%
7260         #2|hyperindexformat{/#3#4}%
7261       }%
7262     \else
7263       \ifx\|#4\%
7264         \ifx\Hy@temp@A\HyInd@ParenRight
7265           \HyInd@org@wrindex{#1}{#2|#3}%
7266         \else
7267           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7268         \fi
7269       \else
7270         \HyInd@org@wrindex{#1}{%
7271           #2|#3hyperindexformat{/#4}%
7272         }%
7273       \fi
7274     \fi
7275   }%
7276 \else
7277   \def\@wrindex#1{\@@wrindex#1||\}%
7278   \def\@@wrindex#1|#2|#3\{\%
7279   \if@files
7280     \ifx\|#2\%
7281       \protected@write\@indexfile{}{%
7282         \string\indexentry{#1|hyperpage}{\thepage}%
7283       }%
7284     \else
7285       \HyInd@@@wrindex{#1}#2\%
7286     \fi

```



```

7287 \fi
7288 \endgroup
7289 \@esphack
7290 }%
7291 \def\HyInd@@@wrindex#1#2#3\{\{%
7292 \def\Hy@temp@A{#2}%
7293 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7294 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7295 \relax
7296 \protected@write\@indexfile{\}{\%
7297 \string\indexentry{\%
7298 #1|hyperindexformat{/#2#3}%
7299 }\{the page}%
7300 }%
7301 \else
7302 \ifx\#3\{\%
7303 \ifx\Hy@temp@A\HyInd@ParenRight
7304 \protected@write\@indexfile{\}{\%
7305 \string\indexentry{#1|#2}\{the page}%
7306 }%
7307 \else
7308 \protected@write\@indexfile{\}{\%
7309 \string\indexentry{#1|#2hyperpage}\{the page}%
7310 }%
7311 \fi
7312 \else
7313 \protected@write\@indexfile{\}{\%
7314 \string\indexentry{\%
7315 #1|#2hyperindexformat{/#3}%
7316 }\{the page}%
7317 }%
7318 \fi
7319 \fi
7320 }%
7321 \fi
7322 }%
7323 \fi
7324 \Hy@DisableOption{hyperindex}
7325 \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.

```

7326 \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.

```

7327 \def\hyperpage#1{\%
7328 \HyInd@hyperpage#1\nohyperpage}\@nil
7329 }
7330 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{\%
7331 \HyInd@@@hyperpage{#1}%
7332 #2%
7333 \def\Hy@temp{#3}%
7334 \ifx\Hy@temp\@empty
7335 \else
7336 \Hy@ReturnAfterFi{\%
7337 \HyInd@hyperpage#3\@nil

```

```

7338 }%
7339 \fi
7340 }
7341 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
7342 \def\@hyperpage#1--#2--#3\{%
7343 \ifx\#2\%
7344 \@commahyperpage{#1}%
7345 \else
7346 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7347 \fi
7348 }
7349 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7350 \def\@commahyperpage#1, #2,#3\{%
7351 \ifx\#2\%
7352 \HyInd@pagelink{#1}%
7353 \else
7354 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7355 \fi
7356 }

```

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

```

7357 \def\HyInd@pagelink#1{%
7358 \begingroup
7359 \toks@={}%
7360 \HyInd@removespaces#1 \@nil
7361 \endgroup
7362 }
7363 \def\HyInd@removespaces#1 #2\@nil{%
7364 \toks@=\expandafter{\the\toks@#1}%
7365 \ifx\#2\%
7366 \edef\x{\the\toks@}%
7367 \ifx\x\@empty
7368 \else
7369 \hyperlink{page.\the\toks@}{\the\toks@}%
7370 \fi
7371 \else
7372 \Hy@ReturnAfterFi{%
7373 \HyInd@removespaces#2\@nil
7374 }%
7375 \fi
7376 }

```

44 Compatibility with foiltex

```

7377 \@ifclassloaded{foils}{%
7378 \providecommand*\ext@table{lot}%
7379 \providecommand*\ext@figure{lof}%
7380 }{}

```

45 Compatibility with seminar slide package

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

```

7381 \@ifclassloaded{seminar}{%
7382 \Hy@seminarslides true\newcommand\theHslide{\arabic{slide}}%

```

```

7383 }{%
7384   \Hy@seminarslidesfalse
7385 }
7386 \@ifpackageloaded{slidesec}{%
7387   \newcommand\theHslidesection  {\arabic{slidesection}}%
7388   \newcommand\theHslidesubsection{%
7389     \theHslidesection.\arabic{slidesubsection}%
7390   }%
7391   \def\slide@heading[#1]#2{%
7392     \H@refstepcounter{slidesection}%
7393     \@addtoreset{slidesubsection}{slidesection}%
7394     \addtocontents{los}{%
7395       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7396       {\@SCTR}{\slideheading.\theslide\section}%
7397     }%
7398     \def\Hy@tempa{#2}%
7399     \ifx\Hy@tempa\@empty
7400     \else
7401       {%
7402         \edef\@currentlabel{%
7403           \csname p@slidesection\endcsname\theslide\section
7404         }%
7405         \makeslideheading{#2}%
7406       }%
7407     \fi
7408     \gdef\theslideheading{#1}%
7409     \gdef\theslidesubheading{}%
7410     \ifHy@bookmarksnumbered
7411       \def\Hy@slidetitle{\theslide\section\space #1}%
7412     \else
7413       \def\Hy@slidetitle{#1}%
7414     \fi
7415     \ifHy@hypertexnames
7416       \ifHy@naturalnames
7417         \hyper@@anchor{slideheading.\theslide\section}{\relax}%
7418         \Hy@writebookmark
7419           {\theslide\section}%
7420           {\Hy@slidetitle}%
7421           {slideheading.\theslide\section}%
7422           {1}%
7423           {toc}%
7424       \else
7425         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7426         \Hy@writebookmark
7427           {\theslide\section}%
7428           {\Hy@slidetitle}%
7429           {slideheading.\theHslidesection}%
7430           {1}%
7431           {toc}%
7432       \fi
7433     \else
7434       \Hy@GlobalStepCount\Hy@linkcounter
7435       \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7436       \Hy@writebookmark
7437         {\theslide\section}%
7438         {\Hy@slidetitle}%
7439         {slideheading.\the\Hy@linkcounter}%

```

```

7440 {1}%
7441 {toc}%
7442 \fi
7443 }%
7444 \def\slide@subheading[#1]#2{%
7445 \H@refstepcounter{slidesubsection}%
7446 \addtocontents{los}{%
7447 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7448 {\@SCTR}{slideheading.\theslidesubsection}%
7449 }%
7450 \def\Hy@tempa{#2}%
7451 \ifx\Hy@tempa\@empty
7452 \else
7453 {%
7454 \edef\@currentlabel{%
7455 \csname p@slidesubsection\endcsname\theslidesubsection
7456 }%
7457 \makeslidesubheading{#2}%
7458 }%
7459 \fi
7460 \gdef\theslidesubheading{#1}%
7461 \ifHy@bookmarksnumbered
7462 \def\Hy@slidetitle{\theslidesubsection\space #1}%
7463 \else
7464 \def\Hy@slidetitle{#1}%
7465 \fi
7466 \ifHy@hypertextnames
7467 \ifHy@naturalnames
7468 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7469 \Hy@writebookmark
7470 {\theslidesubsection}%
7471 {\Hy@slidetitle}%
7472 {slideheading.\theslidesubsection}%
7473 {2}%
7474 {toc}%
7475 \else
7476 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7477 \Hy@writebookmark
7478 {\theslidesubsection}%
7479 {\Hy@slidetitle}%
7480 {slideheading.\theHslidesubsection}%
7481 {2}%
7482 {toc}%
7483 \fi
7484 \else
7485 \Hy@GlobalStepCount\Hy@linkcounter
7486 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7487 \Hy@writebookmark
7488 {\theslidesubsection}%
7489 {\Hy@slidetitle}%
7490 {slideheading.\the\Hy@linkcounter}%
7491 {1}%
7492 {toc}%
7493 \fi
7494 }%
7495 \providecommand*{\listslidenam}{List of Slides}%
7496 \def\listofslides{%

```

```

7497 \section*{%
7498 \listslidename
7499 \@mkboth{%
7500 \expandafter\MakeUppercase\listslidename
7501 }{%
7502 \expandafter\MakeUppercase\listslidename
7503 }%
7504 }%
7505 \def\l@slide##1##2##3##4{%
7506 \slide@undottedcline{%
7507 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7508 }{%
7509 }%
7510 \let\l@subslide\l@slide
7511 \@startlos
7512 }%
7513 \def\slide@contents{%
7514 \def\l@slide##1##2##3##4{%
7515 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7516 }%
7517 \let\l@subslide\@gobblefour
7518 \@startlos
7519 }%
7520 \def\Slide@contents{%
7521 \def\l@slide##1##2##3##4{%
7522 \ifcase\lslide@flag
7523 \message{##1 ** \the\c@slidesection}%
7524 \ifnum##1>\c@slidesection
7525 \def\lslide@flag{1}%
7526 {%
7527 \large
7528 \slide@ccline{%
7529 \slidenumberline{$\Rightarrow\bullet$}%
7530 {\hyperlink{##4}{##2}}}%
7531 }{##3}%
7532 }%
7533 \else
7534 {%
7535 \large
7536 \slide@ccline{%
7537 \slidenumberline{$\surd\;\bullet$}%
7538 {\hyperlink{##4}{##2}}}%
7539 }{##3}%
7540 }%
7541 \fi
7542 \or
7543 \def\lslide@flag{2}%
7544 {%
7545 \large
7546 \slide@ccline{%
7547 \slidenumberline{$\bullet$}%
7548 {\hyperlink{##4}{##2}}}%
7549 }{##3}%
7550 }%
7551 \or
7552 {%
7553 \large

```

```

7554 \slide@cline{%
7555 \slidenumberline{$\bullet$}%
7556 {\hyperlink{##4}{##2}}%
7557 }{##3}%
7558 }%
7559 \fi
7560 }%
7561 \def\l@subslide##1##2##3##4{%
7562 \ifnum\lslide@flag=1 %
7563 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7564 \fi
7565 }%
7566 \def\lslide@flag{0}%
7567 \@startlos
7568 }%
7569 }{}

```

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.)

```

7570 \ifHy@texht
7571 \expandafter\endinput
7572 \fi
7573 \let\real@setref\@setref
7574 \def\@setref#1#2#3{% csname, extract group, refname
7575 \ifx#1\relax
7576 \protect\G@refundefinedtrue
7577 \nfss@text{\reset@font\bfseries ??}%
7578 \@latex@warning{%
7579 Reference '#3' on page \thepage \space undefined%
7580 }%
7581 \else
7582 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7583 \fi
7584 }

```

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

```

7585 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7586 \begingroup
7587 \toks0={\hyper@@link{#5}{#4}}%
7588 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7589 \edef\x{\endgroup
7590 \the\toks0 {\the\toks1 }%
7591 }%
7592 \x
7593 }
7594 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7595 \ifx#1\relax
7596 \protect\G@refundefinedtrue
7597 \nfss@text{\reset@font\bfseries ??}%
7598 \@latex@warning{%
7599 Reference '#3' on page \thepage \space undefined%
7600 }%
7601 \else
7602 \protect\hyper@@link
7603 {\expandafter\@fifthoffive#1}%
7604 {page.\expandafter\@secondoffive#1}%

```

```

7605     {\expandafter\@secondoffive#1}%
7606   \fi
7607 }

7608 </package>
7609 <*check>
7610 \checklatex
7611 \checkcommand\def\@setref#1#2#3{%
7612   \ifx#1\relax
7613     \protect\G@refundefinedtrue
7614     \nfss@text{\reset@font\bfseries ??}%
7615     \@latex@warning{%
7616       Reference '#3' on page \thepage\space undefined%
7617     }%
7618   \else
7619     \expandafter#2#1\null
7620   \fi
7621 }
7622 </check>
7623 <*package>

```

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

```

7624 \def\HyRef@StarSetRef#1{%
7625   \begingroup
7626   \Hy@safe@activetrue
7627   \edef\x{#1}%
7628   \@onelevel@sanitize\x
7629   \edef\x{\endgroup
7630     \noexpand\HyRef@@StarSetRef
7631     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7632   }%
7633   \x
7634 }

7635 \def\HyRef@@StarSetRef#1#2#3{%
7636   \ifx#1\@undefined
7637     \let#1\relax
7638   \fi
7639   \real@setref#1#3{#2}%
7640 }

7641 \def\@refstar#1{%
7642   \HyRef@StarSetRef{#1}\@firstoffive
7643 }

7644 \def\@pagerefstar#1{%
7645   \HyRef@StarSetRef{#1}\@secondoffive
7646 }

7647 \def\@namerefstar#1{%
7648   \HyRef@StarSetRef{#1}\@thirdoffive
7649 }

7650 \Hy@AtBeginDocument{%
7651   \@ifpackageloaded{varioref}{%
7652     \def\@Refstar#1{%
7653       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7654     }%
7655     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7656       \MakeUppercase#1%
7657     }%
7658     \DeclareRobustCommand*\Ref}{%

```

```

7659 \@ifstar\@Refstar\HyRef@Ref
7660 }%
7661 \def\HyRef@Ref#1{%
7662 \hyperref[#1]{\Ref*{#1}}%
7663 }%
7664 \def\vr@f#1{%
7665 \leavevmode\unskip\href@space
7666 \hyperref[#1]{%
7667 \Ref*{#1}%
7668 \let\href@space\nobreakspace
7669 \@vpageref\unskip}{#1}%
7670 }%
7671 }%
7672 \def\vr@f#1{%
7673 \leavevmode\unskip\href@space
7674 \begingroup
7675 \let\T@pageref\@pagerefstar
7676 \hyperref[#1]{%
7677 \ref*{#1}%
7678 \vpageref\unskip}{#1}%
7679 }%
7680 \endgroup
7681 }%
7682 }{}%
7683 }
7684 \DeclareRobustCommand*\autopageref{%
7685 \@ifstar{%
7686 \HyRef@autopagerefname\pageref*%
7687 }\HyRef@autopageref
7688 }
7689 \def\HyRef@autopageref#1{%
7690 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
7691 }
7692 \def\HyRef@autopagerefname{%
7693 \ltx@ifundefined{pageautorefname}{%
7694 \ltx@ifundefined{pagename}{%
7695 \Hy@Warning{No autoref name for 'page'}%
7696 }{%
7697 \pagename\nobreakspace
7698 }%
7699 }{}%
7700 \pageautorefname\nobreakspace
7701 }%
7702 }
7703 \DeclareRobustCommand*\autoref{%
7704 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7705 }
7706 \def\HyRef@autoref#1#2{%
7707 \begingroup
7708 \Hy@safe@activetrue
7709 \expandafter\HyRef@autosetref\csize r@#2\endcsize{#2}{#1}%
7710 \endgroup
7711 }
7712 \def\HyRef@autosetref#1#2#3{% link command, csize, refname
7713 \HyRef@ShowKeysRef{#2}%
7714 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7715 \edef\HyRef@thisref{%

```



```

7716 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7717 }%
7718 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7719 \Hy@safe@activesfalse
7720 #3{%
7721 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7722 }{%
7723 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7724 }{%
7725 \HyRef@currentHtag
7726 \expandafter\@firstoffive#1\@empty\@empty\@empty
7727 \null
7728 }%
7729 \else
7730 \protect\G@refundefinedtrue
7731 \nfss@text{\reset@font\bfseries ??}%
7732 \@latex@warning{%
7733 Reference '#2' on page \thepage\space undefined%
7734 }%
7735 \fi
7736 }
7737 \def\HyRef@testreftype#1.#2\.{%
7738 \ltx@ifundefined{#1autorefname}{%
7739 \ltx@ifundefined{#1name}{%
7740 \HyRef@StripStar#1\*\@nil{#1}%
7741 \ltx@ifundefined{\HyRef@name autorefname}{%
7742 \ltx@ifundefined{\HyRef@name name}{%
7743 \def\HyRef@currentHtag{%
7744 \Hy@Warning{No autoref name for '#1'}%
7745 }{%
7746 \edef\HyRef@currentHtag{%
7747 \expandafter\noexpand\csname\HyRef@name name\endcsname
7748 \noexpand~%
7749 }%
7750 }%
7751 }{%
7752 \edef\HyRef@currentHtag{%
7753 \expandafter\noexpand
7754 \csname\HyRef@name autorefname\endcsname
7755 \noexpand~%
7756 }%
7757 }%
7758 }{%
7759 \edef\HyRef@currentHtag{%
7760 \expandafter\noexpand\csname#1name\endcsname
7761 \noexpand~%
7762 }%
7763 }%
7764 }{%
7765 \edef\HyRef@currentHtag{%
7766 \expandafter\noexpand\csname#1autorefname\endcsname
7767 \noexpand~%
7768 }%
7769 }%
7770 }
7771 \def\HyRef@StripStar#1*\#2\@nil#3{%
7772 \def\HyRef@name{#2}%

```

```

7773 \ifx\HyRef@name\HyRef@CaseStar
7774 \def\HyRef@name{#1}%
7775 \else
7776 \def\HyRef@name{#3}%
7777 \fi
7778 }
7779 \def\HyRef@CaseStar{*\\}
7780 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7781 \let\HyRef@ShowKeysRef\@gobble
7782 \def\HyRef@ShowKeysInit{%
7783 \begingroup\expandafter\expandafter\expandafter\endgroup
7784 \expandafter\ifx\csname SK@@label\endcsname\relax
7785 \else
7786 \ifx\SK@ref\@empty
7787 \else
7788 \def\HyRef@ShowKeysRef{%
7789 \SK@\SK@\@ref
7790 }%
7791 \fi
7792 \fi
7793 }
7794 \@ifpackageloaded{showkeys}{%
7795 \HyRef@ShowKeysInit
7796 }{%
7797 \Hy@AtBeginDocument{%
7798 \@ifpackageloaded{showkeys}{%
7799 \HyRef@ShowKeysInit
7800 }{}%
7801 }%
7802 }

```

Defaults for the names that \autoref uses.

```

7803 \providecommand*\AMSautorefname{\equationautorefname}
7804 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7805 \providecommand*\Itemautorefname{\itemautorefname}
7806 \providecommand*\itemautorefname{item}
7807 \providecommand*\equationautorefname{Equation}
7808 \providecommand*\footnoteautorefname{footnote}
7809 \providecommand*\itemautorefname{item}
7810 \providecommand*\figureautorefname{Figure}
7811 \providecommand*\tableautorefname{Table}
7812 \providecommand*\partautorefname{Part}
7813 \providecommand*\appendixautorefname{Appendix}
7814 \providecommand*\chapterautorefname{chapter}
7815 \providecommand*\sectionautorefname{section}
7816 \providecommand*\subsectionautorefname{subsection}
7817 \providecommand*\subsubsectionautorefname{subsubsection}
7818 \providecommand*\paragraphautorefname{paragraph}
7819 \providecommand*\subparagraphautorefname{subparagraph}
7820 \providecommand*\FancyVerbLineautorefname{line}
7821 \providecommand*\theoremautorefname{Theorem}
7822 \providecommand*\pageautorefname{page}
7823 \</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`.

```
7824 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7825 \RequirePackage{pdfTeXcmds}[2009/04/10]
7826 \begingroup\expandafter\expandafter\expandafter\endgroup
7827 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7828   \begingroup
7829     \catcode'\| =0 %
7830     \@makeother\| %
7831     |@firstofone{ |endgroup
7832     |def|Hy@pstringdef#1#2{%
7833       |begingroup
7834         |edef~{|string~}%
7835         |xdef|Hy@gtemp{#2}%
7836         |endgroup
7837         |let#1|Hy@gtemp
7838         |@onelevel@sanitize#1%
7839         |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7840         |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7841         |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7842       }%
7843       |def|Hy@ExchangeBackslash#1\#2|@nil{%
7844         #1%
7845         |ifx|\#2\| %
7846         |else
7847           \| %
7848           |Hy@ReturnAfterFi{%
7849             |Hy@ExchangeBackslash#2|@nil
7850           }%
7851         |fi
7852       }%
7853     }%
7854     \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7855       #1%
7856       \ifx\#2\| %
7857       \else
7858         \@backslashchar(%
7859         \Hy@ReturnAfterFi{%
7860           \Hy@ExchangeLeftParenthesis#2\@nil
7861         }%
7862       \fi
7863     }%
7864     \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7865       #1%
7866       \ifx\#2\| %
7867       \else
7868         \@backslashchar)%
7869       \Hy@ReturnAfterFi{%
```

```

7870      \Hy@ExchangeRightParenthesis#2\@nil
7871    }%
7872  \fi
7873 }%
7874 \else
7875 \def\Hy@pstringdef#1#2{%
7876   \begingroup
7877   \edef~{\string~}%
7878   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7879   \endgroup
7880   \let#1\Hy@gtemp
7881 }%
7882 \fi
7883 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7884 <*pdfTeX>
7885 \providecommand*{\XR@ext}{pdf}
7886 \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

```

7887 \let\Hy@pdfminorversion\relax
7888 \begingroup\expandafter\expandafter\expandafter\endgroup
7889 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7890   \begingroup\expandafter\expandafter\expandafter\endgroup
7891   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7892     \else
7893       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7894     \fi
7895   \else
7896     \def\Hy@pdfminorversion{\pdfminorversion}%
7897   \fi
7898 \@ifundefined{Hy@pdfminorversion}{%
7899   \PackageInfo{hyperref}{%
7900     PDF version is not set, because pdfTeX is too old (<1.10a)%
7901   }%
7902 }{%
7903   \ifHy@ocgcolorlinks
7904     \ifnum\Hy@pdfminorversion<5 %
7905       \kvsetkeys{Hyp}{pdfversion=1.5}%
7906     \fi
7907   \fi
7908   \ifHy@setpdfversion
7909     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7910   \else
7911     \Hy@pdfminorversion=\Hy@pdfversion\relax
7912   \fi
7913   \PackageInfo{hyperref}{%
7914     \expandafter\string\Hy@pdfminorversion
7915     :=\number\Hy@pdfversion\space

```

```

7916 }%
7917 \fi
7918 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7919 }
7920 \Hy@DisableOption{pdfversion}%
7921 \ifHy@ocgcolorlinks
7922 \immediate\pdfobj{%
7923 <<%
7924 /Type/OCG%
7925 /Name(View)%
7926 /Usage<<%
7927 /Print<<%
7928 /PrintState/OFF%
7929 >>%
7930 /View<<%
7931 /ViewState/ON%
7932 >>%
7933 >>%
7934 >>%
7935 }%
7936 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7937 \immediate\pdfobj{%
7938 <<%
7939 /Type/OCG%
7940 /Name(Print)%
7941 /Usage<<%
7942 /Print<<%
7943 /PrintState/ON%
7944 >>%
7945 /View<<%
7946 /ViewState/OFF%
7947 >>%
7948 >>%
7949 >>%
7950 }%
7951 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7952 \immediate\pdfobj{%
7953 [%
7954 \OBJ@OCG@view\space\OBJ@OCG@print
7955 ]%
7956 }%
7957 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7958 \pdfcatalog{%
7959 /OCProperties<<%
7960 /OCGs \OBJ@OCGs
7961 /D<<%
7962 /OFF[\OBJ@OCG@print]%
7963 /AS[%
7964 <<%
7965 /Event/View%
7966 /OCGs \OBJ@OCGs
7967 /Category[/View]%
7968 >>%
7969 <<%
7970 /Event/Print%
7971 /OCGs \OBJ@OCGs
7972 /Category[/Print]%

```

```

7973      >>%
7974      <<%
7975      /Event/Export%
7976      /OCGs \OBJ@OCGs
7977      /Category[/Print]%
7978      >>%
7979      ]%
7980      >>%
7981      >>%
7982      }%
7983      \beginngroup
7984      \edef\x{\endgroup
7985      \pdfpageresources{%
7986      /Properties<<%
7987      /OCView \OBJ@OCG@view
7988      /OCPrint \OBJ@OCG@print
7989      >>%
7990      }%
7991      }%
7992      \x
7993      \Hy@AtBeginDocument{%
7994      \def\Hy@colorlink#1{%
7995      \beginngroup
7996      \ifHy@ocgcolorlinks
7997      \def\Hy@ocgcolor{#1}%
7998      \setbox0=\color@hbox
7999      \else
8000      \HyColor@UseColor#1%
8001      \fi
8002      }%
8003      \def\Hy@endcolorlink{%
8004      \ifHy@ocgcolorlinks
8005      \color@endbox
8006      \mbox{%
8007      \pdfliteral page{/OC/OCPrint BDC}%
8008      \rlap{\copy0}%
8009      \pdfliteral page{EMC/OC/OCView BDC}%
8010      \beginngroup
8011      \expandafter\HyColor@UseColor\Hy@ocgcolor
8012      \box0 %
8013      \endgroup
8014      \pdfliteral page{EMC}%
8015      }%
8016      \fi
8017      \endgroup
8018      }%
8019      }%
8020      \else
8021      \Hy@DisableOption{ocgcolorlinks}%
8022      \fi

```

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

```

8023 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8024 \ifx\pdfstartlink\@undefined% less than version 14
8025 \let\pdfstartlink\pdfannotlink
8026 \let\pdfinkmargin\@tempdima
8027 \let\pdfxform\pdfform
8028 \let\pdflastxform\pdflastform

```

```

8029 \let\pdfrefxform\pdfrefform
8030 \else
8031 \pdflinkmargin1pt %
8032 \fi

```

First set up the default linking

```
8033 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8034 \def\new@pdfink#1{%
8035 \Hy@SaveLastskip
8036 \Hy@VerboseAnchor{#1}%
8037 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8038 \Hy@DestName\Hy@pstringDest\@pdfview
8039 \Hy@RestoreLastskip
8040 }
8041 \let\pdf@endanchor\@empty

```

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

```

8042 \def\Hy@DestName#1#2{%
8043 \pdfdest name{#1}#2\relax
8044 }

```

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.

```

8045 \providecommand*\@pdfborder{0 0 1}
8046 \providecommand*\@pdfborderstyle{}
8047 \def\Hy@undefinedname{UNDEFINED}
8048 \def\find@pdfink#1#2{%
8049 \leavevmode
8050 \protected@edef\Hy@testname{#2}%
8051 \ifx\Hy@testname\@empty
8052 \Hy@Warning{%
8053 Empty destination name,\MessageBreak
8054 using '\Hy@undefinedname'%
8055 }%
8056 \let\Hy@testname\Hy@undefinedname
8057 \else
8058 \Hy@pstringdef\Hy@testname{%
8059 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8060 }%
8061 \fi
8062 \Hy@StartlinkName{%
8063 \ifHy@pdfa /F 4\fi
8064 \Hy@setpdfborder
8065 \ifx\@pdfhighlight\@empty
8066 \else
8067 /H\@pdfhighlight
8068 \fi
8069 \ifx\CurrentBorderColor\relax
8070 \else
8071 /C[\CurrentBorderColor]%
8072 \fi
8073 }\Hy@testname
8074 \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

8075 }
8076 \def\Hy@StartlinkName#1#2{%
8077   \pdfstartlink attr{#1}goto name{#2}\relax
8078 }
8079 \def\close@pdfink{%
8080   \Hy@endcolorlink
8081   \Hy@VerboseLinkStop
8082   \pdfendlink
8083 }
8084 \def\hyper@anchor#1{%
8085   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8086 }
8087 \def\hyper@anchorstart#1{%
8088   \new@pdfink{#1}%
8089   \Hy@activeanchortrue
8090 }
8091 \def\hyper@anchorend{%
8092   \pdf@endanchor
8093   \Hy@activeanchorfalse
8094 }
8095 \def\hyper@linkstart#1#2{%
8096   \Hy@VerboseLinkStart{#1}{#2}%
8097   \ltx@ifundefined{@#1bordercolor}{%
8098     \let\CurrentBorderColor\relax
8099   }{%
8100     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8101   }%
8102   \find@pdfink{#1}{#2}%
8103 }
8104 \def\hyper@linkend{\close@pdfink}
8105 \def\hyper@link#1#2#3{%
8106   \Hy@VerboseLinkStart{#1}{#2}%
8107   \ltx@ifundefined{@#1bordercolor}{%
8108     \let\CurrentBorderColor\relax
8109   }{%
8110     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8111   }%
8112   \find@pdfink{#1}{#2}#3%
8113   \close@pdfink
8114 }
8115 \let\CurrentBorderColor\@linkbordercolor
8116 \def\hyper@linkurl#1#2{%
8117   \begingroup
8118     \Hy@pstringdef\Hy@pstringURI{#2}%
8119     \hyper@chars
8120     \leavevmode
8121     \pdfstartlink
8122       attr{%
8123         \Hy@setpdfborder
8124         \ifx\@pdfhighlight\@empty
8125           \else
8126             /H\@pdfhighlight
8127           \fi
8128         \ifx\@urlbordercolor\relax
8129           \else
8130             /C[\@urlbordercolor]%
8131           \fi

```



```

8132     }%
8133     user{%
8134         /Subtype/Link%
8135         \ifHy@pdfa /F 4\fi
8136         /A<<%
8137         /Type/Action%
8138         /S/URI%
8139         /URI(\Hy@pstringURI)%
8140     >>%
8141     }%
8142     \relax
8143     \Hy@colorlink\@urlcolor#1%
8144     \close@pdflink
8145     \endgroup
8146 }
8147 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8148     \begingroup
8149     \Hy@pstringdef\Hy@pstringF{#2}%
8150     \Hy@pstringdef\Hy@pstringD{#3}%
8151     \leavevmode
8152     \pdfstartlink
8153     attr{%
8154         \Hy@setpdfborder
8155         \ifx\@pdfhighlight\@empty
8156         \else
8157             /H\@pdfhighlight
8158         \fi
8159         \ifx\@filebordercolor\relax
8160         \else
8161             /C[\@filebordercolor]%
8162         \fi
8163     }%
8164     user {%
8165         /Subtype/Link%
8166         \ifHy@pdfa /F 4\fi
8167         /A<<%
8168         /F(\Hy@pstringF)%
8169         /S/GoToR%
8170         \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}

```

```

8171     \ifx\#3\%
8172         /D[0 \@pdfstartview]%
8173     \else
8174         /D(\Hy@pstringD)%
8175     \fi
8176     >>%
8177     }%

```

```

8178 \relax
8179 \Hy@colorlink\@filecolor#1%
8180 \close@pdflink
8181 \endgroup
8182 }
8183 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8184 \begingroup
8185 \Hy@pstringdef\Hy@pstringF{#1}%
8186 \Hy@pstringdef\Hy@pstringP{#3}%
8187 \leavevmode
8188 \pdfstartlink
8189 attr{%
8190 \Hy@setpdfborder
8191 \ifx\@pdfhighlight\@empty
8192 \else
8193 /H\@pdfhighlight
8194 \fi
8195 \ifx\@runbordercolor\relax
8196 \else
8197 /C[\@runbordercolor]%
8198 \fi
8199 }%
8200 user {%
8201 /Subtype/Link%
8202 \ifHy@pdfa /F 4\fi
8203 /A<<%
8204 /F(\Hy@pstringF)%
8205 /S/Launch%
8206 \Hy@SetNewWindow
8207 \ifx\#3\%
8208 \else
8209 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8210 \fi
8211 >>%
8212 }%
8213 \relax
8214 \Hy@colorlink\@runcolor#2%
8215 \close@pdflink
8216 \endgroup
8217 }

```

\@pdfproducer

```

8218 \ifx\@pdfproducer\relax
8219 \begingroup\expandafter\expandafter\expandafter\endgroup
8220 \expandafter\ifx\csname luatexversion\endcsname\relax
8221 \def\@pdfproducer{pdfTeX}%
8222 \ifx\eTeXversion\@undefined
8223 \else
8224 \ifx\eTeXversion\relax
8225 \else
8226 \ifnum\eTeXversion>0 %
8227 \def\@pdfproducer{pdfTeX}%
8228 \fi
8229 \fi
8230 \fi
8231 \ifx\pdfTeXversion\@undefined
8232 \else

```

```

8233 \ifnum\pdfTeXversion<100 %
8234 \edef\@pdfproducer{%
8235 \@pdfproducer
8236 \the\pdfTeXversion.\pdfTeXrevision
8237 }%
8238 \else
8239 \ifnum\pdfTeXversion<130 %
8240 \edef\@pdfproducer{%
8241 \@pdfproducer-%
8242 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8243 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8244 \pdfTeXrevision
8245 }%
8246 \else
8247 \ifnum\pdfTeXversion<140 %
8248 \else
8249 \def\@pdfproducer{pdfTeX}%
8250 \fi
8251 \edef\@pdfproducer{%
8252 \@pdfproducer-%
8253 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8254 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8255 \pdfTeXrevision
8256 }%
8257 \fi
8258 \fi
8259 \fi
8260 \else
8261 \begingroup
8262 \count@=\luaTeXversion
8263 \divide\count@ by 100 %
8264 \edef\x{\the\count@}%
8265 \count@=-\x\relax
8266 \multiply\count@ by 100 %
8267 \advance\count@ by \luaTeXversion
8268 \edef\x{\endgroup
8269 \def\noexpand\@pdfproducer{%
8270 LuaTeX-\x.\the\count@.\luaTeXrevision
8271 }%
8272 }%
8273 \x
8274 \fi
8275 \fi

```

\PDF@SetupDocx

```

8276 \def\PDF@SetupDoc{%
8277 \ifx\@pdfpagescrop\@empty
8278 \else
8279 \edef\process@me{%
8280 \pdfpagesattr={%
8281 /CropBox[\@pdfpagescrop]%
8282 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8283 \else
8284 ^^J\the\pdfpagesattr
8285 \fi
8286 }%
8287 }%

```

```

8288 \process@me
8289 \fi
8290 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8291 \pdfcatalog{%
8292 /PageMode/\@pdfpagemode
8293 \ifx\@baseurl\@empty
8294 \else
8295 /URI<</Base(\Hy@pstringB)>>%
8296 \fi
8297 }%
8298 \ifx\@pdfstartpage\@empty
8299 \else
8300 \ifx\@pdfstartview\@empty
8301 \else
8302 openaction goto page\@pdfstartpage{\@pdfstartview}%
8303 \fi
8304 \fi
8305 \edef\Hy@temp{%
8306 \ifHy@toolbar\else /HideToolbar true\fi
8307 \ifHy@menubar\else /HideMenubar true\fi
8308 \ifHy>windowui\else /HideWindowUI true\fi
8309 \ifHy@fitwindow /FitWindow true\fi
8310 \ifHy@centerwindow /CenterWindow true\fi
8311 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8312 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8313 \Hy@UseNameKey{Direction}\@pdfdirection
8314 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8315 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8316 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8317 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8318 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8319 \Hy@UseNameKey{Duplex}\@pdfduplex
8320 \ifx\@pdfpicktraybypdfsize\@empty
8321 \else
8322 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8323 \fi
8324 \ifx\@pdfprintpagerange\@empty
8325 \else
8326 /PrintPageRange[\@pdfprintpagerange]%
8327 \fi
8328 \ifx\@pdfnumcopies\@empty
8329 \else
8330 /NumCopies \@pdfnumcopies
8331 \fi
8332 }%
8333 \pdfcatalog{%
8334 \ifx\Hy@temp\@empty
8335 \else
8336 /ViewerPreferences<<\Hy@temp>>%
8337 \fi
8338 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8339 \ifx\@pdflang\@empty
8340 \else
8341 /Lang(\@pdflang)%
8342 \fi
8343 }%
8344 }

```

\PDF@FinishDoc

```
8345 \def\PDF@FinishDoc{%
8346   \Hy@UseMaketitleInfos
8347   \HyInfo@GenerateAddons
8348   \pdfinfo{%
8349     /Author(\@pdfauthor)%
8350     /Title(\@pdftitle)%
8351     /Subject(\@pdfsubject)%
8352     /Creator(\@pdfcreator)%
8353     \ifx\@pdfcreationdate\@empty
8354     \else
8355       /CreationDate(\@pdfcreationdate)%
8356     \fi
8357     \ifx\@pdfmoddate\@empty
8358     \else
8359       /ModDate(\@pdfmoddate)%
8360     \fi
8361     \ifx\@pdfproducer\relax
8362     \else
8363       /Producer(\@pdfproducer)%
8364     \fi
8365     /Keywords(\@pdfkeywords)%
8366     \ifx\@pdftrapped\@empty
8367     \else
8368       /Trapped/\@pdftrapped
8369     \fi
8370     \HyInfo@Addons
8371   }%
8372   \Hy@DisableOption{pdfauthor}%
8373   \Hy@DisableOption{pdftitle}%
8374   \Hy@DisableOption{pdfsubject}%
8375   \Hy@DisableOption{pdfcreator}%
8376   \Hy@DisableOption{pdfcreationdate}%
8377   \Hy@DisableOption{pdfmoddate}%
8378   \Hy@DisableOption{pdfproducer}%
8379   \Hy@DisableOption{pdfkeywords}%
8380   \Hy@DisableOption{pdftrapped}%
8381   \Hy@DisableOption{pdfinfo}%
8382 }
```

\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.

```
8383 \def\hyper@pagetransition{%
8384   \ifx\@pdfpagetransition\relax
8385   \else
8386     \expandafter\Hy@RemoveTransPageAttr
8387     \the\pdfpageattr^^J/Trans{}}>>\END
8388   \ifx\@pdfpagetransition\@empty
8389   \else
8390     \edef\@processme{%
8391       \global\pdfpageattr{%
8392         \the\pdfpageattr
8393         ^^J/Trans << /S /\@pdfpagetransition\space >>%
8394       }%
8395     }%
8396     \@processme
```

```

8397   \fi
8398   \fi
8399 }

```

`\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.

```

8400 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8401   \ifx\#2\%
8402     \global\pdfpageattr{#1}%
8403   \else
8404     \Hy@RemoveTransPageAttr#1#4\END
8405   \fi
8406 }

```

`\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`.

```

8407 \def\hyper@pageduration{%
8408   \ifx\@pdfpageduration\relax
8409   \else
8410     \expandafter
8411     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
8412     \ifx\@pdfpageduration\@empty
8413     \else
8414       \edef\@processme{%
8415         \global\pdfpageattr{%
8416           \the\pdfpageattr
8417             ^^J/Dur \@pdfpageduration\space
8418         }%
8419       }%
8420       \@processme
8421     \fi
8422   \fi
8423 }

```

`\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.

```

8424 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8425   \ifx\#2\%
8426     \global\pdfpageattr{#1}%
8427   \else
8428     \Hy@RemoveDurPageAttr#1#4\END
8429   \fi
8430 }

```

`\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).

```

8431 \def\hyper@pagehidden{%
8432   \ifHy@useHidKey
8433   \expandafter
8434   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END

```

```

8435 \ifHy@pdfpagehidden
8436 \edef\@processme{%
8437 \global\pdfpageattr{%
8438 \the\pdfpageattr
8439 ^^J/Hid true % SPACE
8440 }%
8441 }%
8442 \@processme
8443 \fi
8444 \fi
8445 }

```

`\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.

```

8446 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8447 \ifx\#2\%
8448 \global\pdfpageattr{#1}%
8449 \else
8450 \Hy@RemoveHidPageAttr#1#4\END
8451 \fi
8452 }

8453 \g@addto@macro\Hy@EveryPageHook{%
8454 \hyper@pagetransition
8455 \hyper@pageduration
8456 \hyper@pagehidden
8457 }

```

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

```

8458 </pdfTeX>
8459 <*pdfTeX | xetex>
8460 \Hy@AtBeginDocument{%
8461 \ifHy@setpagesize
8462 \expandafter\@firstofone
8463 \else
8464 \expandafter\@gobble
8465 \fi
8466 {%
8467 \@ifclassloaded{seminar}{%
8468 <*pdfTeX>
8469 \setlength{\pdfhorigin}{1truein}%
8470 \setlength{\pdfvorigin}{1truein}%
8471 </pdfTeX>
8472 \ifportrait
8473 \ifdim\paperwidth=\z@
8474 \else
8475 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8476 \fi
8477 \ifdim\paperheight=\z@
8478 \else
8479 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8480 \fi
8481 \else
8482 \ifdim\paperheight=\z@
8483 \else

```

```

8484     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8485     \fi
8486     \ifdim\paperwidth=\z@
8487     \else
8488     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8489     \fi
8490     \fi
8491   }{%
8492     \ltx@ifundefined{stockwidth}{%
8493       \ifdim\paperwidth>\z@
8494       \setlength{\pdfpagewidth}{\paperwidth}%
8495       \fi
8496       \ifdim\paperheight>\z@
8497       \setlength{\pdfpageheight}{\paperheight}%
8498       \fi
8499     }{%
8500       \ifdim\stockwidth>\z@
8501       \setlength{\pdfpagewidth}{\stockwidth}%
8502       \fi
8503       \ifdim\stockheight>\z@
8504       \setlength{\pdfpageheight}{\stockheight}%
8505       \fi
8506     }%
8507   }%
8508 }%
8509 \Hy@DisableOption{setpagesize}%
8510 }
8511 </pdfTeX | xetex>
8512 <*pdfTeX>
8513 \def\Acrobatmenu#1#2{%
8514   \Hy@Acrobatmenu{#1}{#2}{%
8515     \pdfstartlink
8516     attr{%
8517       \Hy@setpdfborder
8518       \ifx\@pdfhighlight\@empty
8519       \else
8520       /H\@pdfhighlight
8521       \fi
8522       \ifx\@menubordercolor\relax
8523       \else
8524       /C[\@menubordercolor]%
8525       \fi
8526     }%
8527     user{%
8528       /Subtype/Link%
8529       \ifHy@pdfa /F 4\fi
8530       /A<<%
8531       /S/Named/N/#1%
8532       >>%
8533     }%
8534     \relax
8535     \Hy@colorlink\@menucolor#2%
8536     \close@pdflink
8537   }%
8538 }

```


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`.

```
8539 \def\Hy@FixNotFirstPage{%
8540   \gdef\Hy@FixNotFirstPage{%
8541     \setbox\AtBeginShipoutBox=\hbox{%
8542       \copy\AtBeginShipoutBox
8543     }%
8544   }%
8545 }
8546 \AtBeginShipout{\Hy@FixNotFirstPage}
8547 \</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.

```
8548 \<*hypertex>
8549 \providecommand*{\XR@ext}{dvi}
8550 \def\PDF@FinishDoc{}
8551 \def\PDF@SetupDoc{%
```

```

8552 \ifx\@baseurl\@empty
8553 \else
8554 \special{html:<base href="\@baseurl">}%
8555 \fi
8556 }
8557 \def\hyper@anchor#1{%
8558 \Hy@SaveLastskip
8559 \Hy@VerboseAnchor{#1}%
8560 \begingroup
8561 \let\protect=\string
8562 \hyper@chars
8563 \special{html:<a name=%
8564 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8565 \endgroup
8566 \Hy@activeanchortrue
8567 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8568 \special{html:</a>}%
8569 \Hy@activeanchorfalse
8570 \Hy@RestoreLastskip
8571 }
8572 \def\hyper@anchorstart#1{%
8573 \Hy@SaveLastskip
8574 \Hy@VerboseAnchor{#1}%
8575 \begingroup
8576 \hyper@chars
8577 \special{html:<a name=%
8578 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8579 \endgroup
8580 \Hy@activeanchortrue
8581 }
8582 \def\hyper@anchorend{%
8583 \special{html:</a>}%
8584 \Hy@activeanchorfalse
8585 \Hy@RestoreLastskip
8586 }
8587 \def\@urltype{url}
8588 \def\hyper@linkstart#1#2{%
8589 \Hy@VerboseLinkStart{#1}{#2}%
8590 \expandafter\Hy@colorlink\csname @#1color\endcsname
8591 \def\Hy@tempa{#1}%
8592 \ifx\Hy@tempa\@urltype
8593 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8594 \else
8595 \begingroup
8596 \hyper@chars
8597 \special{html:<a href=%
8598 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
8599 \endgroup
8600 \fi
8601 }
8602 \def\hyper@linkend{%
8603 \special{html:</a>}%
8604 \Hy@endcolorlink
8605 }
8606 \def\hyper@linkfile#1#2#3{%
8607 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8608 }

```

```
8609 \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.

```
8610 \leavevmode
8611 \ifHy@raiselinks
8612 \setbox\@tempboxa=\color@hbox #1\color@endbox
8613 \@linkdim\dp\@tempboxa
8614 \lower\@linkdim\hbox{%
8615 \hyper@chars
8616 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8617 }%
8618 \Hy@colorlink\@urlcolor#1%
8619 \@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).

```
8620 \advance\@linkdim by -6.5\p@
8621 \raise\@linkdim\hbox{\special{html:</a>}}%
8622 \Hy@endcolorlink
8623 \else
8624 \begingroup
8625 \hyper@chars
8626 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8627 \Hy@colorlink\@urlcolor#1%
8628 \special{html:</a>}%
8629 \Hy@endcolorlink
8630 \endgroup
8631 \fi
8632 }
```

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

```
8633 \def\hyper@link#1#2#3{%
8634 \Hy@VerboseLinkStart{#1}{#2}%
8635 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
8636 }

8637 \def\hyper@image#1#2{%
8638 \begingroup
8639 \hyper@chars
8640 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8641 \endgroup
8642 }
8643 </hypertex>
8644 <*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.

```

8645 \providecommand*{\XR@ext}{dvi}
8646 \providecommand*{\wwwbrowser{c:\string\netscape\string\netscape}
8647 \def\hyper@anchor#1{%
8648   \Hy@SaveLastskip
8649   \Hy@VerboseAnchor{#1}%
8650   \begingroup
8651     \let\protect=\string
8652     \special{mark: #1}%
8653   \endgroup
8654   \Hy@activeanchortrue
8655   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8656   \Hy@activeanchorfalse
8657   \Hy@RestoreLastskip
8658 }
8659 \def\hyper@anchorstart#1{%
8660   \Hy@SaveLastskip
8661   \Hy@VerboseAnchor{#1}%
8662   \special{mark: #1}%
8663   \Hy@activeanchortrue
8664 }
8665 \def\hyper@anchorend{%
8666   \Hy@activeanchorfalse
8667   \Hy@RestoreLastskip
8668 }
8669 \def\hyper@linkstart#1#2{%
8670   \Hy@VerboseLinkStart{#1}{#2}%
8671   \expandafter\Hy@colorlink\csname @#1color\endcsname
8672   \special{button: %
8673     10000000 %
8674     \number\baselineskip\space
8675     #2%
8676   }%
8677 }
8678 \def\hyper@linkend{%
8679   \Hy@endcolorlink
8680 }
8681 \def\hyper@link#1#2#3{%
8682   \Hy@VerboseLinkStart{#1}{#2}%
8683   \setbox\@tempboxa=\color@hbox #3\color@endbox
8684   \leavevmode
8685   \ifHy@raiselinks
8686     \@linkdim\dp\@tempboxa
8687     \lower\@linkdim\hbox{%
8688       \special{button: %
8689         \number\wd\@tempboxa\space
8690         \number\ht\@tempboxa\space
8691         #2%
8692       }%
8693       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8694       \Hy@endcolorlink
8695     }%
8696     \@linkdim\ht\@tempboxa
8697     \advance\@linkdim by -6.5\p@
8698     \raise\@linkdim\hbox{}%
8699   \else

```

```

8700 \special{button: %
8701 \number\wd\@tempboxa\space
8702 \number\ht\@tempboxa\space
8703 #2%
8704 }%
8705 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8706 \Hy@endcolorlink
8707 \fi
8708 }
8709 \def\hyper@linkurl#1#2{%
8710 \begingroup
8711 \hyper@chars
8712 \leavevmode
8713 \setbox\@tempboxa=\color@hbox #1\color@endbox
8714 \ifHy@raiselinks
8715 \@linkdim\dp\@tempboxa
8716 \lower\@linkdim\hbox{%
8717 \special{button: %
8718 \number\wd\@tempboxa\space
8719 \number\ht\@tempboxa\space
8720 launch: \wwwbrowser\space
8721 #2%
8722 }%
8723 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8724 }%
8725 \@linkdim\ht\@tempboxa
8726 \advance\@linkdim by -6.5\p@
8727 \raise\@linkdim\hbox{}}%
8728 \else
8729 \special{button: %
8730 \number\wd\@tempboxa\space
8731 \number\ht\@tempboxa\space
8732 launch: \wwwbrowser\space
8733 #2%
8734 }%
8735 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8736 \fi
8737 \endgroup
8738 }
8739 \def\hyper@linkfile#1#2#3{%
8740 \begingroup
8741 \hyper@chars
8742 \leavevmode
8743 \setbox\@tempboxa=\color@hbox #1\color@endbox
8744 \ifHy@raiselinks
8745 \@linkdim\dp\@tempboxa
8746 \lower\@linkdim\hbox{%
8747 \special{button: %
8748 \number\wd\@tempboxa\space
8749 \number\ht\@tempboxa\space
8750 #3,%
8751 file: #2%
8752 }%
8753 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8754 }%
8755 \@linkdim\ht\@tempboxa
8756 \advance\@linkdim by -6.5\p@

```

```

8757 \raise\@linkdim\hbox{}%
8758 \else
8759 \special{button: %
8760 \number\wd\@tempboxa\space
8761 \number\ht\@tempboxa\space
8762 #3,%
8763 file: #2%
8764 }%
8765 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8766 \fi
8767 \endgroup
8768 }
8769 \ifx\@pdfproducer\relax
8770 \def\@pdfproducer{dviwindo + Distiller}%
8771 \fi
8772 \HyInfo@AddonUnsupportedtrue
8773 \def\PDF@FinishDoc{%
8774 \Hy@UseMaketitleInfos
8775 \HyInfo@TrappedUnsupported
8776 \special{PDF: Keywords \@pdfkeywords}%
8777 \special{PDF: Title \@pdftitle}%
8778 \special{PDF: Creator \@pdfcreator}%
8779 \ifx\@pdfcreationdate\@empty
8780 \else
8781 \special{PDF: CreationDate \@pdfcreationdate}%
8782 \fi
8783 \ifx\@pdfmoddate\@empty
8784 \else
8785 \special{PDF: ModDate \@pdfmoddate}%
8786 \fi
8787 \special{PDF: Author \@pdfauthor}%
8788 \ifx\@pdfproducer\relax
8789 \else
8790 \special{PDF: Producer \@pdfproducer}%
8791 \fi
8792 \special{PDF: Subject \@pdfsubject}%
8793 \Hy@DisableOption{pdfauthor}%
8794 \Hy@DisableOption{pdftitle}%
8795 \Hy@DisableOption{pdfsubject}%
8796 \Hy@DisableOption{pdfcreator}%
8797 \Hy@DisableOption{pdfcreationdate}%
8798 \Hy@DisableOption{pdfmoddate}%
8799 \Hy@DisableOption{pdfproducer}%
8800 \Hy@DisableOption{pdfkeywords}%
8801 \Hy@DisableOption{pdftrapped}%
8802 \Hy@DisableOption{pdfinfo}%
8803 }
8804 \def\PDF@SetupDoc{%
8805 \ifx\@baseurl\@empty
8806 \else
8807 \special{PDF: Base \@baseurl}%
8808 \fi
8809 \ifx\@pdfpagescrop\@empty\else
8810 \special{PDF: BBox \@pdfpagescrop}%
8811 \fi
8812 \def\Hy@temp{}%
8813 \ifx\@pdfstartpage\@empty

```

```

8814 \else
8815 \ifx\@pdfstartview\@empty
8816 \else
8817 \edef\Hy@temp{%
8818 ,Page=\@pdfstartpage
8819 ,View=\@pdfstartview
8820 }%
8821 \fi
8822 \fi
8823 \edef\Hy@temp{%
8824 \noexpand\pdfmark{%
8825 pdfmark=/DOCVIEW,%
8826 PageMode=/\@pdfpagemode
8827 \Hy@temp
8828 }%
8829 }%
8830 \Hy@temp
8831 \ifx\@pdfpagescrop\@empty
8832 \else
8833 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8834 \fi
8835 \edef\Hy@temp{%
8836 \ifHy@toolbar\else /HideToolbar true\fi
8837 \ifHy@menubar\else /HideMenubar true\fi
8838 \ifHy>windowui\else /HideWindowUI true\fi
8839 \ifHy@fitwindow /FitWindow true\fi
8840 \ifHy@centerwindow /CenterWindow true\fi
8841 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8842 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
8843 \Hy@UseNameKey{Direction}\@pdfdirection
8844 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8845 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8846 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8847 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8848 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8849 \Hy@UseNameKey{Duplex}\@pdfduplex
8850 \ifx\@pdfpicktraybypdfsize\@empty
8851 \else
8852 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8853 \fi
8854 \ifx\@pdfprintpagerange\@empty
8855 \else
8856 /PrintPageRange[\@pdfprintpagerange]%
8857 \fi
8858 \ifx\@pdfnumcopies\@empty
8859 \else
8860 /NumCopies \@pdfnumcopies
8861 \fi
8862 }%
8863 \pdfmark{pdfmark=/PUT,%
8864 Raw={%
8865 \string{Catalog\string}<<%
8866 \ifx\Hy@temp\@empty
8867 \else
8868 /ViewerPreferences<<\Hy@temp>>%
8869 \fi
8870 \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```

```

8871      \ifx\@pdflang\@empty
8872      \else
8873      /Lang(\@pdflang)%
8874      \fi
8875      >>%
8876      }%
8877      }%
8878      }
8879      </dviwindo>
8880      <*dvi pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8881 \providecommand*{\XR@ext}{pdf}
8882 \Hy@setbreaklinks{true}
8883 \newsavebox{\pdfm@box}
8884 \def\@pdfm@mark#1{\special{pdf:#1}}
8885 \def\@pdfm@dest#1{%
8886   \Hy@SaveLastskip
8887   \Hy@VerboseAnchor{#1}%
8888   \begingroup
8889   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8890   \def\x{XYZ}%
8891   \ifx\x\@pdfview
8892     \def\x{XYZ @xpos @ypos null}%
8893   \else
8894     \def\x{FitH}%
8895     \ifx\x\@pdfview
8896       \def\x{FitH @ypos}%
8897     \else
8898       \def\x{FitBH}%
8899       \ifx\x\@pdfview
8900         \def\x{FitBH @ypos}%
8901       \else
8902         \def\x{FitV}%
8903         \ifx\x\@pdfview
8904           \def\x{FitV @xpos}%
8905         \else
8906           \def\x{FitBV}%
8907           \ifx\x\@pdfview
8908             \def\x{FitBV @xpos}%
8909           \else
8910             \def\x{Fit}%
8911             \ifx\x\@pdfview
8912               \let\x\@pdfview
8913             \else
8914               \def\x{FitB}%
8915               \ifx\x\@pdfview
8916                 \let\x\@pdfview
8917               \else
8918                 \def\x{FitR}%
8919                 \ifx\x\@pdfview
8920                   \Hy@Warning{'pdfview=FitR' is not supported}%
8921                   \def\x{XYZ @xpos @ypos null}%
8922                 \else
8923                   \@onelevel@sanitize\@pdfview

```



```

8924         \Hy@Warning{%
8925             Unknown value '\@pdfview' for pdfview%
8926         }%
8927         \def\x{XYZ @xpos @ypos null}%
8928     \fi
8929 \fi
8930 \fi
8931 \fi
8932 \fi
8933 \fi
8934 \fi
8935 \fi
8936 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8937 \endgroup
8938 \Hy@RestoreLastskip
8939 }
8940 \providecommand*\@pdfview{XYZ}
8941 \providecommand*\@pdfborder{0 0 1}
8942 \providecommand*\@pdfborderstyle{}
8943 \def\hyper@anchor#1{%
8944     \@pdfm@dest{#1}%
8945 }
8946 \def\hyper@anchorstart#1{%
8947     \Hy@activeanchortrue
8948     \@pdfm@dest{#1}%
8949 }
8950 \def\hyper@anchorend{%
8951     \Hy@activeanchorfalse
8952 }
8953 \newcounter{Hy@AnnotLevel}
8954 \ifHy@ocgcolorlinks
8955     \def\OBJ@OCG@view{@OCG@view}%
8956     \@pdfm@mark{%
8957         obj \OBJ@OCG@view <<%
8958             /Type/OCG%
8959             /Name(View)%
8960             /Usage<<%
8961             /Print<<%
8962             /PrintState/OFF%
8963             >>%
8964             /View<<%
8965             /ViewState/ON%
8966             >>%
8967             >>%
8968             >>%
8969         }%
8970     \@pdfm@mark{close \OBJ@OCG@view}%
8971     \def\OBJ@OCG@print{@OCG@print}%
8972     \@pdfm@mark{%
8973         obj \OBJ@OCG@print <<%
8974             /Type/OCG%
8975             /Name(Print)%
8976             /Usage<<%
8977             /Print<<%
8978             /PrintState/ON%
8979             >>%
8980             /View<<%

```

```

8981      /ViewState/OFF%
8982      >>%
8983      >>%
8984      >>%
8985  }%
8986  \@pdfm@mark{close \OBJ@OCG@print}%
8987  \def\OBJ@OCGs{\@OCGs}%
8988  \@pdfm@mark{%
8989    obj \OBJ@OCGs [%
8990      \OBJ@OCG@view\space\OBJ@OCG@print
8991    ]%
8992  }%
8993  \@pdfm@mark{close \OBJ@OCGs}%
8994  \@pdfm@mark{%
8995    put @catalog <<%
8996      /OCProperties<<%
8997      /OCGs \OBJ@OCGs
8998      /D<<%
8999      /OFF[\OBJ@OCG@print]%
9000      /AS[%
9001        <<%
9002          /Event/View%
9003          /OCGs \OBJ@OCGs
9004          /Category[/View]%
9005        >>%
9006        <<%
9007          /Event/Print%
9008          /OCGs \OBJ@OCGs
9009          /Category[/Print]%
9010        >>%
9011        <<%
9012          /Event/Export%
9013          /OCGs \OBJ@OCGs
9014          /Category[/Print]%
9015        >>%
9016      ]%
9017    >>%
9018    >>%
9019    >>%
9020  }%
9021  \AtBeginShipout{%
9022    \setbox\AtBeginShipoutBox=\hbox{%
9023      \copy\AtBeginShipoutBox
9024      \@pdfm@mark{%
9025        put @resources <<%
9026          /Properties<<%
9027          /OCView \OBJ@OCG@view
9028          /OCPrint \OBJ@OCG@print
9029        >>%
9030      >>%
9031    }%
9032  }%
9033  }%
9034  \Hy@AtBeginDocument{%
9035    \def\Hy@colorlink#1{%
9036      \begingroup
9037        \ifHy@ocgcolorlinks

```

```

9038     \def\Hy@ocgcolor{#1}%
9039     \setbox0=\color@hbox
9040     \else
9041     \HyColor@UseColor#1%
9042     \fi
9043 }%
9044 \def\Hy@endcolorlink{%
9045 \ifHy@ocgcolorlinks
9046 \color@endbox
9047 \mbox{%
9048 \@pdfm@mark{content /OC/OCPrint BDC}%
9049 \rlap{\copy0}%
9050 \@pdfm@mark{content EMC/OC/OCView BDC}%
9051 \begingroup
9052 \expandafter\HyColor@UseColor\Hy@ocgcolor
9053 \box0 %
9054 \endgroup
9055 \@pdfm@mark{content EMC}%
9056 }%
9057 \fi
9058 \endgroup
9059 }%
9060 }%
9061 \else
9062 \Hy@DisableOption{ocgcolorlinks}%
9063 \fi

9064 \def\Hy@BeginAnnot#1{%
9065 \stepcounter{Hy@AnnotLevel}%
9066 \ifnum\value{Hy@AnnotLevel}=\@ne
9067 #1%
9068 \fi
9069 }
9070 \def\Hy@endAnnot{%
9071 \ifnum\value{Hy@AnnotLevel}=\@ne
9072 \Hy@endcolorlink
9073 \@pdfm@mark{eann}%
9074 \fi
9075 \addtocounter{Hy@AnnotLevel}\m@ne
9076 }

9077 \def\Hy@undefinedname{UNDEFINED}
9078 \def\hyper@linkstart#1#2{%
9079 \Hy@VerboseLinkStart{#1}{#2}%
9080 \Hy@BeginAnnot{%
9081 \protected@edef\Hy@testname{#2}%
9082 \ifx\Hy@testname\@empty
9083 \Hy@Warning{%
9084 Empty destination name,\MessageBreak
9085 using '\Hy@undefinedname'%
9086 }%
9087 \let\Hy@testname\Hy@undefinedname
9088 \else
9089 \Hy@pstringdef\Hy@testname{%
9090 \expandafter\HyperDestNameFilter\expandafter{%
9091 \Hy@testname
9092 }%
9093 }%
9094 \fi

```

```

9095 \pdfmark{
9096   bann<<
9097   /Type/Annot
9098   /Subtype/Link
9099   \ifHy@pdfa /F 4\fi
9100   \Hy@setpdfborder
9101   \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9102   \else
9103     /C[\csname @#1bordercolor\endcsname]
9104   \fi
9105   /A<<
9106   /S/GoTo
9107   /D(\Hy@testname)
9108   >>
9109   >>
9110 }
9111 \expandafter\Hy@colorlink\csname @#1color\endcsname
9112 }
9113 }
9114 \def\hyper@linkend{\Hy@EndAnnot}%
9115 \def\hyper@link#1#2#3{
9116   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9117 }
9118 \def\hyper@linkfile#1#2#3{
9119   \leavevmode
9120   \Hy@BeginAnnot{
9121     \Hy@pstringdef\Hy@pstringF{#2}
9122     \Hy@pstringdef\Hy@pstringD{#3}
9123     \pdfmark{
9124       bann<<
9125       /Type/Annot
9126       /Subtype/Link
9127       \ifHy@pdfa /F 4\fi
9128       \Hy@setpdfborder
9129       \ifx\@filebordercolor\relax
9130       \else
9131         /C[\@filebordercolor]
9132       \fi
9133       /A<<
9134       /S/GoToR
9135       /F(\Hy@pstringF)
9136       /D\ifx\#3\[\0 \pdfstartview\else(\Hy@pstringD)\fi
9137       \Hy@SetNewWindow
9138       >>
9139       >>
9140     }
9141     \Hy@colorlink\@filecolor
9142   }
9143   #1
9144   \Hy@EndAnnot
9145 }
9146 \def\hyper@linkurl#1#2{
9147   \leavevmode
9148   \Hy@BeginAnnot{
9149     \Hy@pstringdef\Hy@pstringURI{#2}
9150     \pdfmark{
9151       bann<<

```

```

9152      /Type/Annot%
9153      /Subtype/Link%
9154      \ifHy@pdfa /F 4\fi
9155      \Hy@setpdfborder
9156      \ifx\@urlbordercolor\relax
9157      \else
9158      /C[\@urlbordercolor]%
9159      \fi
9160      /A<<%
9161      /S/URI%
9162      /URI(\Hy@pstringURI)%
9163      >>%
9164      >>%
9165      }%
9166      \Hy@colorlink\@urlcolor
9167      }%
9168      #1%
9169      \Hy@endAnnot
9170      }
9171      \def\Acrobatmenu#1#2{%
9172      \Hy@Acrobatmenu{#1}{#2}{%
9173      \Hy@BeginAnnot{%
9174      \@pdfm@mark{%
9175      bann<<%
9176      /Type/Annot%
9177      /Subtype/Link%
9178      \ifHy@pdfa /F 4\fi
9179      /A<<%
9180      /S/Named%
9181      /N/#1%
9182      >>%
9183      \Hy@setpdfborder
9184      \ifx\@menubordercolor\relax
9185      \relax
9186      /C[\@menubordercolor]%
9187      \fi
9188      >>%
9189      }%
9190      \Hy@colorlink\@menucolor
9191      }%
9192      #2%
9193      \Hy@endAnnot
9194      }%
9195      }
9196      \ifx\@pdfproducer\relax
9197      \def\@pdfproducer{dvipdfm}%

```

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

```

9198      \begingroup\expandafter\expandafter\expandafter\endgroup
9199      \expandafter\ifx\csname XeTeXversion\endcsname\relax
9200      \else
9201      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9202      \fi
9203      \fi
9204      \def\PDF@FinishDoc{%
9205      \Hy@UseMaketitleInfos
9206      \HyInfo@GenerateAddons
9207      \@pdfm@mark{%

```

```

9208 docinfo<<%
9209   /Title(\@pdftitle)%
9210   /Subject(\@pdfsubject)%
9211   /Creator(\@pdfcreator)%
9212   \ifx\@pdfcreationdate\@empty
9213   \else
9214     /CreationDate(\@pdfcreationdate)%
9215   \fi
9216   \ifx\@pdfmoddate\@empty
9217   \else
9218     /ModDate(\@pdfmoddate)%
9219   \fi
9220   /Author(\@pdfauthor)%
9221   \ifx\@pdfproducer\relax
9222   \else
9223     /Producer(\@pdfproducer)%
9224   \fi
9225   /Keywords(\@pdfkeywords)%
9226   \ifx\@pdftrapped\@empty
9227   \else
9228     /Trapped/\@pdftrapped
9229   \fi
9230   \HyInfo@Addons
9231   >>%
9232 }%
9233 \Hy@DisableOption{pdfauthor}%
9234 \Hy@DisableOption{pdftitle}%
9235 \Hy@DisableOption{pdfsubject}%
9236 \Hy@DisableOption{pdfcreator}%
9237 \Hy@DisableOption{pdfcreationdate}%
9238 \Hy@DisableOption{pdfmoddate}%
9239 \Hy@DisableOption{pdfproducer}%
9240 \Hy@DisableOption{pdfkeywords}%
9241 \Hy@DisableOption{pdftrapped}%
9242 \Hy@DisableOption{pdfinfo}%
9243 }

9244 \def\PDF@SetupDoc{%
9245   \edef\Hy@temp{%
9246     \ifHy@toolbar\else /HideToolbar true\fi
9247     \ifHy@menubar\else /HideMenubar true\fi
9248     \ifHy@windowui\else /HideWindowUI true\fi
9249     \ifHy@fitwindow /FitWindow true\fi
9250     \ifHy@centerwindow /CenterWindow true\fi
9251     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9252     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9253     \Hy@UseNameKey{Direction}\@pdfdirection
9254     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9255     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9256     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9257     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9258     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9259     \Hy@UseNameKey{Duplex}\@pdfduplex
9260     \ifx\@pdfpicktraybypdfsize\@empty
9261     \else
9262       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9263     \fi
9264     \ifx\@pdfprintpagerange\@empty

```

```

9265 \else
9266   /PrintPageRange[\@pdfprintpagerange]%
9267 \fi
9268 \ifx\@pdfnumcopies\@empty
9269 \else
9270   /NumCopies \@pdfnumcopies
9271 \fi
9272 }%
9273 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9274 \@pdfm@mark{%
9275   docview<<%
9276   \ifx\@pdfstartpage\@empty
9277   \else
9278     \ifx\@pdfstartview\@empty
9279     \else
9280       /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9281     \fi
9282   \fi
9283   \ifx\@baseurl\@empty
9284   \else
9285     /URI<</Base(\Hy@pstringB)>>%
9286   \fi
9287   /PageMode/\@pdfpagemode
9288   \ifx\Hy@temp\@empty
9289   \else
9290     /ViewerPreferences<<\Hy@temp>>%
9291   \fi
9292   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9293   \ifx\@pdflang\@empty
9294   \else
9295     /Lang(\@pdflang)%
9296   \fi
9297   >>%
9298 }%
9299 \ifx\@pdfpagescrop\@empty
9300 \else
9301   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9302 \fi
9303 }
9304 </dvipdfm | xetex>

```

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

```

9305 <*dvipdfm>
9306 \AtBeginShipoutFirst{%
9307   \ifHy@setpagesize
9308     \begingroup
9309     \@ifundefined{stockwidth}{%
9310       \ifdim\paperwidth>\z@
9311       \ifdim\paperheight>\z@
9312         \special{papersize=\the\paperwidth,\the\paperheight}%
9313       \fi
9314     \fi
9315   }{%
9316     \ifdim\stockwidth>\z@
9317     \ifdim\stockheight>\z@
9318       \special{papersize=\the\stockwidth,\the\stockheight}%
9319     \fi

```

```

9320     \fi
9321   }%
9322 \endgroup
9323 \fi
9324 \Hy@DisableOption{setpagesize}%
9325 }
9326 </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.

```

9327 < *vtexhtml>
9328 \providecommand*{\XR@ext}{htm}
9329 \RequirePackage{vtexhtml}
9330 \newif\if@Localurl
9331 \def\PDF@FinishDoc{}
9332 \def\PDF@SetupDoc{%
9333   \ifx\@baseurl\@empty
9334     \else
9335       \special{!direct <base href="\@baseurl">}%
9336   \fi
9337 }
9338 \def\@urltype{url}
9339 \def\hyper@link#1#2#3{%
9340   \Hy@VerboseLinkStart{#1}{#2}%
9341   \leavevmode
9342   \special{!direct <a href=%
9343     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9344   #3%
9345   \special{!direct </a>}%
9346 }
9347 \def\hyper@linkurl#1#2{%
9348   \begingroup
9349     \hyper@chars
9350     \leavevmode
9351     \MathBSuppress=1\relax
9352     \special{!direct <a href=%
9353       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9354     #1%
9355     \MathBSuppress=0\relax
9356     \special{!direct </a>}%
9357   \endgroup
9358 }
9359 \def\hyper@linkfile#1#2#3{%
9360   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
9361 }
9362 \def\hyper@linkstart#1#2{%
9363   \Hy@VerboseLinkStart{#1}{#2}%
9364   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
9365     \@Localurltrue
9366     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9367   \else
9368     \@Localurlfalse
9369   \begingroup
9370     \hyper@chars
9371     \special{!aref \HyperDestNameFilter{#2}}%

```



```

9372 \endgroup
9373 \fi
9374 }
9375 \def\hyper@linkend{%
9376 \if@Localurl
9377 \special{!endaref}%
9378 \else
9379 \special{!direct </a>}%
9380 \fi
9381 }
9382 \def\hyper@anchorstart#1{%
9383 \Hy@SaveLastskip
9384 \Hy@VerboseAnchor{#1}%
9385 \begingroup
9386 \hyper@chars
9387 \special{!aname #1}%
9388 \special{!direct <a name=%
9389 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9390 \endgroup
9391 \Hy@Activeanchortrue
9392 }
9393 \def\hyper@anchorend{%
9394 \special{!direct </a>}%
9395 \Hy@Activeanchortrue
9396 \Hy@RestoreLastskip
9397 }
9398 \def\hyper@anchor#1{%
9399 \Hy@SaveLastskip
9400 \Hy@VerboseAnchor{#1}%
9401 \begingroup
9402 \let\protect=\string
9403 \hyper@chars
9404 \leavevmode
9405 \special{!aname #1}%
9406 \special{!direct <a name=%
9407 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9408 \endgroup
9409 \Hy@Activeanchortrue
9410 \bgroup\anchor@spot\egroup
9411 \special{!direct </a>}%
9412 \Hy@Activeanchortrue
9413 \Hy@RestoreLastskip
9414 }
9415 \def\@Form[#1]{%
9416 \typeout{Sorry, TeXpider does not yet support FORMs}%
9417 }
9418 \def\@endForm{}
9419 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9420 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9421 }
9422 \def\@TextField[#1]#2{% parameters, label
9423 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9424 }
9425 \def\@CheckBox[#1]#2{% parameters, label
9426 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9427 }
9428 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

9429 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9430 }
9431 \def\@PushButton[#1]#2{% parameters, label
9432 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9433 }
9434 \def\@Reset[#1]#2{%
9435 \typeout{Sorry, TeXpider does not yet support FORMs}%
9436 }
9437 \def\@Submit[#1]#2{%
9438 \typeout{Sorry, TeXpider does not yet support FORMs}%
9439 }
9440 \</vtexhtml>
9441 \< *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.

```

9442 \ifx\mediaheight\@undefined
9443 \else
9444 \ifx\mediaheight\relax
9445 \else
9446 \ifHy@setpagesize
9447 \providecommand*\VTeXInitMediaSize{%
9448 \ltx@ifundefined{stockwidth}{%
9449 \ifdim\paperheight>0pt %
9450 \setlength\mediaheight\paperheight
9451 \fi
9452 \ifdim\paperheight>0pt %
9453 \setlength\mediawidth\paperwidth
9454 \fi
9455 }{%
9456 \ifdim\stockheight>0pt %
9457 \setlength\mediaheight\stockheight
9458 \fi
9459 \ifdim\stockwidth>0pt %
9460 \setlength\mediawidth\stockwidth
9461 \fi
9462 }%
9463 }%
9464 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9465 \fi
9466 \Hy@DisableOption{setpagesize}%
9467 \fi
9468 \fi

```

Older versions of VTeX require xyz in lower case.

```

9469 \providecommand*\@pdfview{xyz}
9470 \providecommand*\@pdfborder{0 0 1}
9471 \providecommand*\@pdfborderstyle{}
9472 \let\CurrentBorderColor\@linkbordercolor
9473 \def\hyper@anchor#1{%
9474 \Hy@SaveLastskip
9475 \Hy@VerboseAnchor{#1}%
9476 \begingroup
9477 \let\protect=\string
9478 \hyper@chars
9479 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9480 \endgroup

```

```

9481 \Hy@activeanchortrue
9482 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9483 \Hy@activeanchorfalse
9484 \Hy@RestoreLastskip
9485 }
9486 \def\hyper@anchorstart#1{%
9487 \Hy@SaveLastskip
9488 \Hy@VerboseAnchor{#1}%
9489 \begingroup
9490 \hyper@chars
9491 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9492 \endgroup
9493 \Hy@activeanchortrue
9494 }
9495 \def\hyper@anchorend{%
9496 \Hy@activeanchorfalse
9497 \Hy@RestoreLastskip
9498 }
9499 \def\@urltype{url}
9500 \def\Hy@undefinedname{UNDEFINED}
9501 \def\hyper@linkstart#1#2{%
9502 \Hy@VerboseLinkStart{#1}{#2}%
9503 \Hy@pstringdef\Hy@pstringURI{#2}%
9504 \expandafter\Hy@colorlink\csname @#1color\endcsname
9505 \ltx@ifundefined{@#1bordercolor}{%
9506 \let\CurrentBorderColor\relax
9507 }{%
9508 \edef\CurrentBorderColor{%
9509 \csname @#1bordercolor\endcsname
9510 }%
9511 }%
9512 \def\Hy@tempa{#1}%
9513 \ifx\Hy@tempa\@urltype
9514 \special{!%
9515 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9516 a=<%
9517 \ifHy@pdfa /F 4\fi
9518 \Hy@setpdfborder
9519 \ifx\CurrentBorderColor\relax
9520 \else
9521 /C [\CurrentBorderColor]%
9522 \fi
9523 >%
9524 }%
9525 \else
9526 \protected@edef\Hy@testname{#2}%
9527 \ifx\Hy@testname\@empty
9528 \Hy@Warning{%
9529 Empty destination name,\MessageBreak
9530 using '\Hy@undefinedname'%
9531 }%
9532 \let\Hy@testname\Hy@undefinedname
9533 \fi
9534 \special{!%
9535 aref \expandafter\HyperDestNameFilter
9536 \expandafter{\Hy@testname};%
9537 a=<%

```

```

9538     \ifHy@pdfa /F 4\fi
9539     \Hy@setpdfborder
9540     \ifx\CurrentBorderColor\relax
9541     \else
9542         /C [\CurrentBorderColor]%
9543     \fi
9544     >%
9545     }%
9546 \fi
9547 }
9548 \def\hyper@linkend{%
9549 \special{!endaref}%
9550 \Hy@endcolorlink
9551 }
9552 \def\hyper@linkfile#1#2#3{%
9553 \leavevmode
9554 \special{!%
9555   aref <%
9556   \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9557   f=#2>#3;%
9558   a=<%
9559   \ifHy@pdfa /F 4\fi
9560   \Hy@setpdfborder
9561   \ifx\@filebordercolor\relax
9562   \else
9563       /C [\@filebordercolor]%
9564   \fi
9565   >%
9566   }%
9567   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9568   \special{!endaref}%
9569 }
9570 \def\hyper@linkurl#1#2{%
9571 \begingroup
9572 \Hy@pstringdef\Hy@pstringURI{#2}%
9573 \hyper@chars
9574 \leavevmode
9575 \special{!%
9576   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9577   a=<%
9578   \ifHy@pdfa /F 4\fi
9579   \Hy@setpdfborder
9580   \ifx\@urlbordercolor\relax
9581   \else
9582       /C [\@urlbordercolor]%
9583   \fi
9584   >%
9585   }%
9586   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9587   \special{!endaref}%
9588 \endgroup
9589 }
9590 \def\hyper@link#1#2#3{%
9591 \Hy@VerboseLinkStart{#1}{#2}%
9592 \ltx@ifundefined{@#1bordercolor}{%
9593 \let\CurrentBorderColor\relax
9594 }{%

```

```

9595 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9596 }%
9597 \leavevmode
9598 \protected@edef\Hy@testname{#2}%
9599 \ifx\Hy@testname\@empty
9600 \Hy@Warning{%
9601   Empty destination name,\MessageBreak
9602   using '\Hy@undefinedname'%
9603 }%
9604 \let\Hy@testname\Hy@undefinedname
9605 \fi
9606 \special{!%
9607   aref \expandafter\HyperDestNameFilter
9608   \expandafter{\Hy@testname};%
9609   a=<%
9610   \ifHy@pdfa /F 4\fi
9611   \Hy@setpdfborder
9612   \ifx\CurrentBorderColor\relax
9613   \else
9614     /C [\CurrentBorderColor]%
9615   \fi
9616   >%
9617 }%
9618 \expandafter
9619 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9620 \special{!endaref}%
9621 }
9622 \def\hyper@image#1#2{%
9623 \hyper@linkurl{#2}{#1}%
9624 }
9625 \def\@hyper@launch run:#1\#2#3{%
9626 \Hy@pstringdef\Hy@pstringF{#1}%
9627 \Hy@pstringdef\Hy@pstringP{#3}%
9628 \leavevmode
9629 \special{!aref %
9630   <u=%
9631     /Type/Action%
9632     /S/Launch%
9633     /F(\Hy@pstringF)%
9634     \Hy@SetNewWindow
9635     \ifx\#3\%
9636     \else
9637       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9638     \fi%
9639   >%
9640   a=<%
9641     \ifHy@pdfa /F 4\fi
9642     \Hy@setpdfborder
9643     \ifx\@runbordercolor\relax
9644     \else
9645       /C[\@runbordercolor]%
9646     \fi
9647     >%
9648   }%
9649 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9650 \special{!endaref}%
9651 }

```

```

9652 \def\Acrobatmenu#1#2{%
9653   \Hy@Acrobatmenu{#1}{#2}{%
9654     \special{!%
9655       aref <u=/S /Named /N /#1>;%
9656       a=<%
9657         \ifHy@pdfa /F 4\fi
9658         \Hy@setpdfborder
9659         \ifx\@menubordercolor\relax
9660         \else
9661           /C[\@menubordercolor]%
9662         \fi
9663       >%
9664     }%
9665     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9666     \special{!endaref}%
9667   }%
9668 }

```

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*.

```

9669 \ifnum\Hy@VTeXversion<702 %
9670 \else
9671   \def\hyper@pagetransition{%
9672     \ifx\@pdfpagetransition\relax
9673     \else
9674       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9675   \else
9676     \hvtex@parse@trans\@pdfpagetransition
9677   \fi
9678 \fi
9679 }%

```

I have to write an “honest” parser to convert raw PDF code into VT_EX \special.
(AVK)

Syntax of VT_EX \special{!trans <transition_effect>}:</p>
</div>
<div>
</div>
<div>
<p>Transition codes:</p>
</div>
<div>
</div>
<div>
<p>214</p>
</div>

```

9682 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}}%
9683 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}}%
9684 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}}%
9685 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}}%
9686 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%

```

Optional parameters:

```

9687 \def\hvtex@par@dimension{/Dm}%
9688 \def\hvtex@par@direction{/Di}%
9689 \def\hvtex@par@duration{/D}%
9690 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9691 \def\hvtex@gettoken{%
9692   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9693 }%

```

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

```

9694 \def\hvtex@gettoken@#1 #2\@nil{%
9695   \edef\hvtex@token{#1}%
9696   \edef\hvtex@buffer{#2}%
9697 }%
9698 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9699 \let\hvtex@trans@code\@empty
9700 \let\hvtex@param@dimension\@empty
9701 \let\hvtex@param@direction\@empty
9702 \let\hvtex@param@duration\@empty
9703 \let\hvtex@param@motion\@empty
9704 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9705 \hvtex@gettoken
9706 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9707   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9708   \else
9709     \hvtex@gettoken
9710   \fi
9711 \fi
9712 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9713 \hvtex@trans@params
9714 }%

```

Reentrant macro to parse optional parameters.

```

9715 \def\hvtex@trans@params{%
9716   \ifx\hvtex@buffer\@empty
9717   \else
9718     \hvtex@gettoken
9719     \let\hvtex@trans@par\hvtex@token
9720     \ifx\hvtex@buffer\@empty
9721     \else
9722       \hvtex@gettoken
9723       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```
9724     \let\hvtex@param@duration\hvtex@token
9725     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9726     \expandafter\edef\expandafter\hvtex@param@motion
9727     \expandafter{\expandafter\@gobble\hvtex@token}%
9728     \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9729     \expandafter\edef\expandafter\hvtex@param@dimension
9730     \expandafter{\expandafter\@gobble\hvtex@token}%
9731     \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).

```
9732     \let\hvtex@param@direction\hvtex@token
9733     \fi\fi\fi
9734     \fi
9735     \fi
9736     \ifx\hvtex@buffer\@empty
9737     \let\next\hvtex@produce@trans
9738     \else
9739     \let\next\hvtex@trans@params
9740     \fi
9741     \next
9742 }%
```

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

```
9743 \def\hvtex@produce@trans{%
9744 \let\vtex@trans@special\@empty
9745 \if S\hvtex@trans@code
9746 \edef\vtex@trans@special{\hvtex@trans@code
9747 \hvtex@param@dimension\hvtex@param@motion}%
9748 \else\if B\hvtex@trans@code
9749 \edef\vtex@trans@special{%
9750 \hvtex@trans@code\hvtex@param@dimension
9751 }%
9752 \else\if X\hvtex@trans@code
9753 \edef\vtex@trans@special{%
9754 \hvtex@trans@code\hvtex@param@motion
9755 }%
9756 \else\if W\hvtex@trans@code
9757 \edef\vtex@trans@special{%
9758 \hvtex@trans@code\hvtex@param@direction
9759 }%
9760 \else\if D\hvtex@trans@code
9761 \let\vtex@trans@special\hvtex@trans@code
9762 \else\if R\hvtex@trans@code
9763 \let\vtex@trans@special\hvtex@trans@code
9764 \else\if G\hvtex@trans@code
9765 \edef\vtex@trans@special{%
9766 \hvtex@trans@code\hvtex@param@direction
9767 }%
9768 \fi\fi\fi\fi\fi
9769 \ifx\vtex@trans@special\@empty
9770 \else
9771 \ifx\hvtex@param@duration\@empty
```



```

9772 \else
9773 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9774 \multiply\dimen@\@m
9775 \edef\vtex@trans@special{%
9776 \vtex@trans@special,\strip@pt\dimen@
9777 }%
9778 \fi

```

And all the mess is just for this.

```

9779 \special{!trans \vtex@trans@special}%
9780 \fi
9781 }%

9782 \def\hyper@pageduration{%
9783 \ifx\@pdfpageduration\relax
9784 \else
9785 \ifx\@pdfpageduration\@empty
9786 \special{!duration-}%
9787 \else
9788 \special{!duration \@pdfpageduration}%
9789 \fi
9790 \fi
9791 }%

9792 \def\hyper@pagehidden{%
9793 \ifHy@useHidKey
9794 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9795 \fi
9796 }%

9797 \g@addto@macro\Hy@EveryPageBoxHook{%
9798 \hyper@pagetransition
9799 \hyper@pageduration
9800 \hyper@pagehidden
9801 }%
9802 \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

```

9803 \ifx\@pdfproducer\relax
9804 \def\@pdfproducer{VTeX}%
9805 \ifnum\Hy@VTeXversion>\z@
9806 \count@\VTeXversion
9807 \divide\count@ 100 %
9808 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9809 \multiply\count@ -100 %
9810 \advance\count@\VTeXversion
9811 \edef\@pdfproducer{%
9812 \@pdfproducer
9813 .\ifnum\count@<10 0\fi\the\count@
9814 \ifx\VTeXOS\@undefined\else

```

```

9815 \ifnum\VTeXOS>0 %
9816 \ifnum\VTeXOS<6 %
9817 \space(
9818 \ifcase\VTeXOS
9819 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9820 \fi
9821 )%
9822 \fi
9823 \fi
9824 \fi
9825 ,\space
9826 \ifnum\OpMode=\@ne PDF\else PS\fi
9827 \space backend%
9828 \ifx\gexmode\@undefined\else
9829 \ifnum\gexmode>\z@\space with GeX\fi
9830 \fi
9831 }%
9832 \fi
9833 \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).

```

9834 \def\PDF@SetupDoc{%
9835 \ifx\@pdfpagescrop\@empty
9836 \else
9837 \special{!pdfinfo b=<\@pdfpagescrop>}%
9838 \fi
9839 \ifx\@pdfstartpage\@empty
9840 \else
9841 \ifx\@pdfstartview\@empty
9842 \else
9843 \special{!onopen Page\@pdfstartpage}%
9844 \fi
9845 \fi
9846 \special{!pdfinfo p=</\@pdfpagemode>}%
9847 \ifx\@baseurl\@empty
9848 \else
9849 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9850 \fi
9851 \special{!pdfinfo v=<<<%
9852 \ifHy@toolbar\else /HideToolbar true\fi
9853 \ifHy@menubar\else /HideMenubar true\fi
9854 \ifHy>windowui\else /HideWindowUI true\fi
9855 \ifHy@fitwindow /FitWindow true\fi
9856 \ifHy@centerwindow /CenterWindow true\fi

```

```

9857 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9858 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9859 \Hy@UseNameKey{Direction}\@pdfdirection
9860 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9861 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9862 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9863 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9864 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9865 \Hy@UseNameKey{Duplex}\@pdfduplex
9866 \ifx\@pdfpicktraybypdfsize\@empty
9867 \else
9868 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9869 \fi
9870 \ifx\@pdfprintpagerange\@empty
9871 \else
9872 /PrintPageRange[\@pdfprintpagerange]%
9873 \fi
9874 \ifx\@pdfnumcopies\@empty
9875 \else
9876 /NumCopies \@pdfnumcopies
9877 \fi
9878 >>>}%
9879 \ifx\@pdfpagelayout\@empty
9880 \else
9881 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9882 \fi
9883 }%
9884 \HyInfo@AddonUnsupportedtrue
9885 \def\PDF@FinishDoc{%
9886 \Hy@UseMaketitleInfos
9887 \HyInfo@TrappedUnsupported
9888 \special{!pdfinfo a=<\@pdfauthor>}%
9889 \special{!pdfinfo t=<\@pdftitle>}%
9890 \special{!pdfinfo s=<\@pdfsubject>}%
9891 \special{!pdfinfo c=<\@pdfcreator>}%
9892 \ifx\@pdfproducer\relax
9893 \else
9894 \special{!pdfinfo r=<\@pdfproducer>}%
9895 \fi
9896 \special{!pdfinfo k=<\@pdfkeywords>}%
9897 \Hy@DisableOption{pdfauthor}%
9898 \Hy@DisableOption{pdftitle}%
9899 \Hy@DisableOption{pdfsubject}%
9900 \Hy@DisableOption{pdfcreator}%
9901 \Hy@DisableOption{pdfcreationdate}%
9902 \Hy@DisableOption{pdfmoddate}%
9903 \Hy@DisableOption{pdfproducer}%
9904 \Hy@DisableOption{pdfkeywords}%
9905 \Hy@DisableOption{pdftrapped}%
9906 \Hy@DisableOption{pdfinfo}%
9907 }
9908 </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.

```
9909 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
9910 <package>\providecommand*\Hy@DistillerDestFix{}%  
9911 <*pdfmark | dviwindo>  
9912 \def\Hy@DistillerDestFix{%  
9913   \begingroup  
9914     \let\x\literalps@out
```

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

```
9915   \ifnum \@ifundefined{OpMode}{0}{}%  
9916     \@ifundefined{gexmode}{0}{}%  
9917     \ifnum\gexmode>0 \OpMode\else 0\fi  
9918   }>1 %  
9919   \def\x##1{%  
9920     \immediate\special{!=##1}%  
9921   }%  
9922   \fi  
9923   \x{%  
9924     /product where{%  
9925       pop %  
9926       product(Distiller)search{%  
9927         pop pop pop %  
9928         version(.)search{%  
9929           exch pop exch pop%  
9930           (3011)eq{%  
9931             gsave %  
9932             newpath 0 0 moveto closepath clip%  
9933             /Courier findfont 10 scalefont setfont %  
9934             72 72 moveto(.)show %  
9935             grestore%  
9936           }if%  
9937         }{pop}ifelse%  
9938       }{pop}ifelse%  
9939     }if%  
9940   }%  
9941   \endgroup  
9942 }  
9943 </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

```

9944 (*pdfmark)
9945 \Hy@breaklinks@unsupported
9946 \def\hyper@anchor#1{%
9947   \Hy@SaveLastskip
9948   \Hy@VerboseAnchor{#1}%
9949   \begingroup
9950   \pdfmark[\anchor@spot]{%
9951     pdfmark=/DEST,%
9952     linktype=anchor,%
9953     View=/\@pdfview \@pdfviewparams,%
9954     DestAnchor={#1}%
9955   }%
9956   \endgroup
9957   \Hy@RestoreLastskip
9958 }
9959 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
9960 \def\hyper@anchorstart#1{%
9961   \Hy@SaveLastskip
9962   \Hy@VerboseAnchor{#1}%
9963   \literalps@out{H.S}%
9964   \Hy@AllowHyphens
9965   \xdef\hyper@currentanchor{#1}%
9966   \Hy@activeanchortrue
9967 }
9968 \def\hyper@anchorend{%
9969   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9970   \pdfmark{%
9971     pdfmark=/DEST,%
9972     linktype=anchor,%
9973     View=/\@pdfview \@pdfviewparams,%
9974     DestAnchor=\hyper@currentanchor,%
9975   }%
9976   \Hy@activeanchorfalse
9977   \Hy@RestoreLastskip
9978 }
9979 \def\hyper@linkstart#1#2{%
9980   \Hy@VerboseLinkStart{#1}{#2}%
9981   \ifHy@breaklinks
9982     \else
9983     \leavevmode\hbox\bgroup
9984     \fi
9985     \expandafter\Hy@colorlink\csname @#1color\endcsname
9986     \literalps@out{H.S}%
9987     \Hy@AllowHyphens
9988     \xdef\hyper@currentanchor{#2}%
9989     \gdef\hyper@currentlinktype{#1}%
9990 }
9991 \def\hyper@linkend{%
9992   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9993   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%

```

```

9994 \let\Hy@tempcolor\relax
9995 }{%
9996 \edef\Hy@tempcolor{%
9997 \csname @\hyper@currentlinktype bordercolor\endcsname
9998 }%
9999 }%
10000 \pdfmark{%
10001 pdfmark=/ANN,%
10002 linktype=link,%
10003 Subtype=/Link,%
10004 PDFAFlags=4,%
10005 Dest=\hyper@currentanchor,%
10006 AcroHighlight=\@pdfhighlight,%
10007 Border=\@pdfborder,%
10008 BorderStyle=\@pdfborderstyle,%
10009 Color=\Hy@tempcolor,%
10010 Raw=H.B%
10011 }%
10012 \Hy@endcolorlink
10013 \ifHy@breaklinks
10014 \else
10015 \egroup
10016 \fi
10017 }

```

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.

```

10018 \begingroup
10019 \catcode'P=12 %
10020 \catcode'T=12 %
10021 \lowercase{\endgroup
10022 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
10023 }
10024 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10025 \def\hyper@pagetransition{%
10026 \ifx\@pdfpagetransition\relax
10027 \else
10028 \ifx\@pdfpagetransition\@empty
10029 % 1. Does an old entry have to be deleted?
10030 % 2. If 1=yes, how to delete?
10031 \else
10032 \pdfmark{%
10033 pdfmark=/PUT,%
10034 Raw={%
10035 \string{ThisPage\string}%
10036 <</Trans << /S /\@pdfpagetransition\space >> >>%
10037 }%
10038 }%
10039 \fi
10040 \fi
10041 }

```

\hyper@pageduration

```

10042 \def\hyper@pageduration{%

```

```

10043 \ifx\@pdfpageduration\relax
10044 \else
10045 \ifx\@pdfpageduration\@empty
10046 % 1. Does an old entry have to be deleted?
10047 % 2. If 1=yes, how to delete?
10048 \else
10049 \pdfmark{%
10050 pdfmark=/PUT,%
10051 Raw={%
10052 \string{ThisPage\string}%
10053 <</Dur \@pdfpageduration>>%
10054 }%
10055 }%
10056 \fi
10057 \fi
10058 }

```

\hyper@pagehidden

```

10059 \def\hyper@pagehidden{%
10060 \ifHy@useHidKey
10061 \pdfmark{%
10062 pdfmark=/PUT,%
10063 Raw={%
10064 \string{ThisPage\string}%
10065 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10066 }%
10067 }%
10068 \fi
10069 }

10070 \g@addto@macro\Hy@EveryPageBoxHook{%
10071 \hyper@pagetransition
10072 \hyper@pageduration
10073 \hyper@pagehidden
10074 }

10075 \def\hyper@image#1#2{%
10076 \hyper@linkurl{#2}{#1}%
10077 }

10078 \def\Hy@undefinedname{UNDEFINED}
10079 \def\hyper@link#1#2#3{%
10080 \Hy@VerboseLinkStart{#1}{#2}%
10081 \ltx@ifundefined{@#1bordercolor}{%
10082 \let\Hy@tempcolor\relax
10083 }{%
10084 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10085 }%
10086 \begingroup
10087 \protected@edef\Hy@testname{#2}%
10088 \ifx\Hy@testname\@empty
10089 \Hy@Warning{%
10090 Empty destination name,\MessageBreak
10091 using '\Hy@undefinedname'%
10092 }%
10093 \let\Hy@testname\Hy@undefinedname
10094 \fi
10095 \pdfmark[{#3}]{%
10096 Color=\Hy@tempcolor,%

```

```

10097     linktype={#1},%
10098     AcroHighlight=\@pdfhighlight,%
10099     Border=\@pdfborder,%
10100     BorderStyle=\@pdfborderstyle,%
10101     pdfmark=/ANN,%
10102     Subtype=/Link,%
10103     PDFAFlags=4,%
10104     Dest=\Hy@testname
10105   }%
10106 \endgroup
10107 }
10108 \newtoks\pdf@docset
10109 \def\PDF@FinishDoc{%
10110   \Hy@UseMaketitleInfos
10111   \HyInfo@GenerateAddons
10112   \let\Hy@temp\@empty
10113   \ifx\@pdfcreationdate\@empty
10114   \else
10115     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10116   \fi
10117   \ifx\@pdfmoddate\@empty
10118   \else
10119     \expandafter\def\expandafter\Hy@temp\expandafter{%
10120       \Hy@temp
10121       ModDate=\@pdfmoddate,%
10122     }%
10123   \fi
10124   \ifx\@pdfproducer\relax
10125   \else
10126     \expandafter\def\expandafter\Hy@temp\expandafter{%
10127       \Hy@temp
10128       Producer=\@pdfproducer,%
10129     }%
10130   \fi
10131   \expandafter
10132   \pdfmark\expandafter{%
10133     \Hy@temp
10134     pdfmark=/DOCINFO,%
10135     Title=\@pdftitle,%
10136     Subject=\@pdfsubject,%
10137     Creator=\@pdfcreator,%
10138     Author=\@pdfauthor,%
10139     Keywords=\@pdfkeywords,%
10140     Trapped=\@pdftrapped
10141   }%
10142   \ifx\HyInfo@Addons\@empty
10143   \else
10144     \pdfmark{%
10145       pdfmark=/DOCINFO,%
10146       Raw={\HyInfo@Addons}%
10147     }%
10148   \fi
10149   \Hy@DisableOption{pdfauthor}%
10150   \Hy@DisableOption{pdftitle}%
10151   \Hy@DisableOption{pdfsubject}%
10152   \Hy@DisableOption{pdfcreator}%
10153   \Hy@DisableOption{pdfcreationdate}%

```



```

10154 \Hy@DisableOption{pdfmoddate}%
10155 \Hy@DisableOption{pdfproducer}%
10156 \Hy@DisableOption{pdfkeywords}%
10157 \Hy@DisableOption{pdftrapped}%
10158 \Hy@DisableOption{pdfinfo}%
10159 }
10160 \def\PDF@SetupDoc{%
10161   \def\Hy@temp{%
10162     \ifx\@pdfstartpage\@empty
10163     \else
10164       \ifx\@pdfstartview\@empty
10165       \else
10166         \edef\Hy@temp{%
10167           ,Page=\@pdfstartpage
10168           ,View=\@pdfstartview
10169         }%
10170       \fi
10171     \fi
10172     \edef\Hy@temp{%
10173       \noexpand\pdfmark{%
10174         pdfmark=/DOCVIEW,%
10175         PageMode=/\@pdfpagemode
10176       }\Hy@temp
10177     }%
10178   }%
10179   \Hy@temp
10180   \ifx\@pdfpagescrop\@empty
10181   \else
10182     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10183   \fi
10184   \edef\Hy@temp{%
10185     \ifHy@toolbar\else /HideToolbar true\fi
10186     \ifHy@menubar\else /HideMenubar true\fi
10187     \ifHy>windowui\else /HideWindowUI true\fi
10188     \ifHy@fitwindow /FitWindow true\fi
10189     \ifHy@centerwindow /CenterWindow true\fi
10190     \ifHy@displaydoctitle /DisplayDocTitle true\fi
10191     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10192     \Hy@UseNameKey{Direction}\@pdfdirection
10193     \Hy@UseNameKey{ViewArea}\@pdfviewarea
10194     \Hy@UseNameKey{ViewClip}\@pdfviewclip
10195     \Hy@UseNameKey{PrintArea}\@pdfprintarea
10196     \Hy@UseNameKey{PrintClip}\@pdfprintclip
10197     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10198     \Hy@UseNameKey{Duplex}\@pdfduplex
10199     \ifx\@pdfpicktraybypdfsize\@empty
10200     \else
10201       /PickTrayByPDFSize \@pdfpicktraybypdfsize
10202     \fi
10203     \ifx\@pdfprintpagerange\@empty
10204     \else
10205       /PrintPageRange\@pdfprintpagerange}%
10206   \fi
10207   \ifx\@pdfnumcopies\@empty
10208   \else
10209     /NumCopies \@pdfnumcopies
10210   \fi

```

```

10211 }%
10212 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10213 \pdfmark{%
10214   pdfmark=/PUT,%
10215   Raw={%
10216     \string{Catalog\string}<<%
10217     \ifx\Hy@temp\@empty
10218       \else
10219         /ViewerPreferences<<\Hy@temp>>%
10220       \fi
10221       \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10222       \ifx\@pdflang\@empty
10223         \else
10224           /Lang(\@pdflang)%
10225         \fi
10226         \ifx\@baseurl\@empty
10227         \else
10228           /URI<</Base(\Hy@pstringB)>>%
10229         \fi
10230       >>%
10231     }%
10232   }%
10233 }
10234 </pdfmark>
10235 <*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.

```

10236 \newif\ifHy@pdfmarkerror
10237 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10238 \def\pdfmark@[#1]#2{%
10239   \Hy@pdfmarkerrorfalse
10240   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10241   \@processme
10242   \let\pdf@type\relax
10243   \kvsetkeys{PDF}{#2}%
10244   \ifHy@pdfmarkerror
10245     \else
10246     \ifx\pdf@type\relax
10247       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10248       \ifx\#1\%
10249       \else
10250         \pdf@rect{#1}%
10251       \fi
10252     \else
10253       \ifx\#1\%
10254         \literalps@out{%
10255           [\the\pdf@toks\space\pdf@type\space pdfmark%
10256           ]%
10257         \else
10258           \ltx@ifundefined{@\pdf@linktype color}{%
10259             \Hy@colorlink\@linkcolor
10260           }{%
10261             \expandafter\Hy@colorlink

```

```

10262         \csname @\pdf@linktype color\endcsname
10263     }%
10264     \pdf@rect{#1}%
10265     \literalps@out{%
10266         [\the\pdf@toks\space\pdf@type\space pdfmark%
10267     }%
10268     \Hy@endcolorlink
10269     \fi
10270 \fi
10271 \fi
10272 }

```

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}

```

```

10273 \newsavebox{\pdf@box}
10274 \providecommand*{\Hy@setouterhbox}{\sbox}
10275 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10276 \def\Hy@DEST{/DEST}
10277 \def\pdf@rect#1{%
10278     \begingroup
10279     \chardef\x=1 %
10280     \def\Hy@temp{#1}%
10281     \ifx\Hy@temp\ltx@empty
10282         \chardef\x=0 %
10283     \else
10284         \def\y{\anchor@spot}%
10285         \ifx\Hy@temp\y
10286             \def\y{\relax}%
10287             \ifx\anchor@spot\y
10288                 \chardef\x=0 %
10289             \fi
10290         \fi
10291     \fi
10292     \expandafter\endgroup
10293     \ifcase\x
10294         \literalps@out{H.S}%
10295         \literalps@out{H.R}%
10296     \else
10297         \leavevmode
10298         \ifHy@breaklinks
10299             \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10300         \else
10301             \sbox\pdf@box{#1}%
10302         \fi
10303         \dimen@ht\pdf@box
10304         \ifdim\dp\pdf@box=\z@
10305             \literalps@out{H.S}%
10306         \else
10307             \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10308         \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...).

```
10309 \ifHy@breaklinks
10310 \expandafter\Hy@breaklinksunhbox
10311 \else
10312 \expandafter\box
10313 \fi
10314 \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

10315 \ifdim\dimen@=\z@
10316 \literalps@out{H.R}%
10317 \else
10318 \raise\dimen@\hbox{\literalps@out{H.R}}%
10319 \fi
10320 \fi
10321 \ifx\pdf@type\Hy@DEST
10322 \else
10323 \pdf@addtoksx{H.B}%
10324 \fi
10325 }
```

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.

```
10326 \newtoks\pdf@toks
10327 \newtoks\pdf@defaulttoks
10328 \pdf@defaulttoks={}%
10329 \def\pdf@addtoks#1#2{%
10330 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10331 \@processme
10332 }
10333 \def\pdf@addtoksx#1{%
10334 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10335 \@processme
10336 }
10337 \def\PDFdefaults#1{%
10338 \pdf@defaulttoks={#1}%
10339 }
```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```
10340 % what is the type of pdfmark?
10341 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10342 % what is the link type?
10343 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10344 \def\pdf@linktype{link}
10345 % parameter is a stream of PDF
10346 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10347 % parameter is a name
10348 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10349 % parameter is a array
10350 \define@key{PDF}{Border}{}%
10351 \edef\Hy@temp{#1}%
10352 \ifx\Hy@temp\@empty
10353 \else
```

```

10354 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10355 \fi
10356 }
10357 \let\Hy@BorderArrayPatch\@empty
10358 % parameter is a dictionary
10359 \define@key{PDF}{BorderStyle}{%
10360 \edef\Hy@temp{#1}%
10361 \ifx\Hy@temp\@empty
10362 \else
10363 \pdf@addtoks{<<#1>>}{BS}%
10364 \fi
10365 }
10366 % parameter is a array
10367 \define@key{PDF}{Color}{%
10368 \ifx\relax#1\relax
10369 \else
10370 \pdf@addtoks{[#1]}{Color}% hash-ok
10371 \fi
10372 }
10373 % parameter is a string
10374 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10375 % parameter is a integer
10376 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10377 % parameter is a array
10378 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10379 % parameter is a string
10380 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10381 % parameter is a string or file
10382 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10383 % parameter is a destination
10384 \define@key{PDF}{Dest}{%
10385 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10386 \ifx\Hy@pstringDest\@empty
10387 \Hy@pdfmarkerrortrue
10388 \Hy@Warning{Destination with empty name ignored}%
10389 \else
10390 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10391 \fi
10392 }
10393 \define@key{PDF}{DestAnchor}{%
10394 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10395 \ifx\Hy@pstringDest\@empty
10396 \Hy@pdfmarkerrortrue
10397 \Hy@Warning{Destination with empty name ignored}%
10398 \else
10399 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10400 \fi
10401 }
10402 % parameter is a string
10403 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10404 % parameter is a string
10405 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10406 % parameter is a int
10407 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10408 \define@key{PDF}{PDFAFlags}{%
10409 \ifHy@pdfa
10410 \pdf@addtoks{#1}{F}%

```

```

10411 \fi
10412 }
10413 % parameter is a name
10414 \define@key{PDF}{AcroHighlight}{%
10415 \begingroup
10416 \edef\x{#1}%
10417 \expandafter\endgroup\ifx\x\@empty
10418 \else
10419 \pdf@addtoks{#1}{H}%
10420 \fi
10421 }
10422 % parameter is a string
10423 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
10424 % parameter is a string
10425 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
10426 % parameter is a string
10427 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10428 % parameter is a string
10429 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
10430 % parameter is a Boolean
10431 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10432 % parameter is a integer or name
10433 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10434 % parameter is a name
10435 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10436 % parameter is a string
10437 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
10438 % parameter is a array
10439 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
10440 % parameter is a integer
10441 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10442 % parameter is a name
10443 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10444 % parameter is a string
10445 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
10446 % parameter is a string
10447 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
10448 % parameter is a string
10449 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
10450 % parameter is an array
10451 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
10452 % parameter is a string
10453 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10454 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
10455 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
10456 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
10457 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10458 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
10459 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
10460 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
10461 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10462 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
10463 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10464 \define@key{PDF}{Trapped}{%
10465 \edef\Hy@temp{#1}%
10466 \ifx\Hy@temp\@empty

```

```

10467 \else
10468 \pdf@addtoks{/#1}{Trapped}%
10469 \fi
10470 }
10471
10472 </pdfmarkbase>
10473 <*pdfmark>
10474 \def\Acrobatmenu#1#2{%
10475 \Hy@Acrobatmenu{#1}{#2}{%
10476 \pdfmark[{#2}]{%
10477 linktype=menu,%
10478 pdfmark=/ANN,%
10479 AcroHighlight=\@pdfhighlight,%
10480 Border=\@pdfborder,%
10481 BorderStyle=\@pdfborderstyle,%
10482 Action={<< /Subtype /Named /N /#1 >>},%
10483 Subtype=/Link,%
10484 PDFAFlags=4%
10485 }%
10486 }%
10487 }

```

And now for some useful examples:

```

10488 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10489 \def\PDFNextPage@[#1]#2{%
10490 \pdfmark[{#2}]{%
10491 #1,%
10492 Border=\@pdfborder,%
10493 BorderStyle=\@pdfborderstyle,%
10494 Color=.2 .1 .5,%
10495 pdfmark=/ANN,%
10496 Subtype=/Link,%
10497 PDFAFlags=4,%
10498 Page=/Next%
10499 }%
10500 }
10501 \def\PDFPreviousPage{%
10502 \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10503 }
10504 \def\PDFPreviousPage@[#1]#2{%
10505 \pdfmark[{#2}]{%
10506 #1,%
10507 Border=\@pdfborder,%
10508 BorderStyle=\@pdfborderstyle,%
10509 Color=.4 .4 .1,%
10510 pdfmark=/ANN,%
10511 Subtype=/Link,%
10512 PDFAFlags=4,%
10513 Page=/Prev%
10514 }%
10515 }
10516 \def\PDFOpen#1{%
10517 \pdfmark{#1,pdfmark=/DOCVIEW}%
10518 }

```

This will only work if you use Distiller 2.1 or higher.

```

10519 \def\hyper@linkurl#1#2{%
10520 \begingroup

```

```

10521 \Hy@pstringdef\Hy@pstringURI{#2}%
10522 \hyper@chars
10523 \leavevmode
10524 \pdfmark[{#1}]{%
10525   pdfmark=/ANN,%
10526   linktype=url,%
10527   AcroHighlight=\@pdfhighlight,%
10528   Border=\@pdfborder,%
10529   BorderStyle=\@pdfborderstyle,%
10530   Color=\@urlbordercolor,%
10531   Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10532   Subtype=/Link,%
10533   PDFAFlags=4%
10534 }%
10535 \endgroup
10536 }
10537 \def\hyper@linkfile#1#2#3{%
10538 \begingroup
10539 \Hy@pstringdef\Hy@pstringF{#2}%
10540 \Hy@pstringdef\Hy@pstringD{#3}%
10541 \leavevmode
10542 \pdfmark[{#1}]{%
10543   pdfmark=/ANN,%
10544   Subtype=/Link,%
10545   PDFAFlags=4,%
10546   AcroHighlight=\@pdfhighlight,%
10547   Border=\@pdfborder,%
10548   BorderStyle=\@pdfborderstyle,%
10549   linktype=file,%
10550   Color=\@filebordercolor,%
10551   Action={%
10552     <<%
10553     /S/GoToR%
10554     \Hy@SetNewWindow
10555     /F(\Hy@pstringF)%
10556     /D\ifx\#3\[\[0 \@pdfstartview\]\else(\Hy@pstringD)cvn\fi
10557     >>%
10558   }%
10559 }%
10560 \endgroup
10561 }
10562 \def\@hyper@launch run:#1\#2#3{%
10563 \begingroup
10564 \Hy@pstringdef\Hy@pstringF{#1}%
10565 \Hy@pstringdef\Hy@pstringP{#3}%
10566 \leavevmode
10567 \pdfmark[{#2}]{%
10568   pdfmark=/ANN,%
10569   Subtype=/Link,%
10570   PDFAFlags=4,%
10571   AcroHighlight=\@pdfhighlight,%
10572   Border=\@pdfborder,%
10573   BorderStyle=\@pdfborderstyle,%
10574   linktype=run,%
10575   Color=\@runbordercolor,%
10576   Action={%
10577     <<%

```



```

10578      /S/Launch%
10579      \Hy@SetNewWindow
10580      /F(\Hy@pstringF)%
10581      \ifx\#3\%
10582      \else
10583      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10584      \fi
10585      >>%
10586      }%
10587      }%
10588      \endgroup
10589      }
10590      \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.

```

10591      <*dvips>
10592      \providecommand*\XR@ext}{pdf}
10593      \def\Hy@raisedlink{}
10594      \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10595      \def\headerps@out#1{\special{! #1}}%
10596      \input{pdfmark.def}%
10597      \ifx\@pdfproducer\relax
10598      \def\@pdfproducer{dvips + Distiller}%
10599      \fi
10600      \providecommand*\@pdfborder{0 0 1}
10601      \providecommand*\@pdfborderstyle{}
10602      \providecommand*\@pdfview{XYZ}
10603      \providecommand*\@pdfviewparams{ H.V}
10604      \def\Hy@BorderArrayPatch{BorderArrayPatch}
10605      \g@addto@macro\Hy@FirstPageHook{%
10606      \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.

```

10607      /DvipsToPDF{72.27 mul Resolution div} def%
10608      /PDFToDvips{72.27 div Resolution mul} def%
10609      /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.

```
10610 /BorderArrayPatch{%
10611   [exch{%
10612     dup dup type/integertype eq exch type/realttype eq or%
10613     {BPToDvips}if%
10614   }forall]%
10615 }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.

```
10616 /HyperBorder {1 PDFToDvips} def%
10617 /H.V {pdf@hoff pdf@voff null} def%
10618 /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

```
10619 /H.S {%
10620   currentpoint %
10621   HyperBorder add /pdf@lly exch def %
10622   dup DvipsToPDF 72 add /pdf@hoff exch def %
10623   HyperBorder sub /pdf@llx exch def%
10624 } def%
```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The x and y coordinates of the current point, minus the `baselineskip`

```
10625 /H.L {%
10626   2 sub dup%
10627   /HyperBasePt exch def %
10628   PDFToDvips /HyperBaseDvips exch def %
10629   currentpoint %
10630   HyperBaseDvips sub /pdf@ury exch def%
10631   /pdf@urx exch def%
10632 } def%
10633 /H.A {%
10634   H.L %
10635 % |pdf@voff| = the distance from the top of the page to a point
10636 % |\baselineskip| above the current point in PDF coordinates
10637   currentpoint exch pop %
10638   vsize 72 sub exch DvipsToPDF %
10639   HyperBasePt sub % baseline skip
10640   sub /pdf@voff exch def%
10641 } def%
10642 /H.R {%
10643   currentpoint %
10644   HyperBorder sub /pdf@ury exch def %
10645   HyperBorder add /pdf@urx exch def %
10646 % |pdf@voff| = the distance from the top of the page to the current point, in
10647 % PDF coordinates
10648   currentpoint exch pop vsize 72 sub %
10649   exch DvipsToPDF sub /pdf@voff exch def%
10650 } def%
```

```

10651 }%
10652 }
10653 \AtBeginShipoutFirst{%
10654   \ifHy@setpagesize
10655     \begingroup
10656       \ifundefined{stockwidth}{%
10657         \ifdim\paperwidth>\z@
10658           \ifdim\paperheight>\z@
10659             \special{papersize=\the\paperwidth,\the\paperheight}%
10660           \fi
10661         \fi
10662       }{%
10663         \ifdim\stockwidth>\z@
10664           \ifdim\stockheight>\z@
10665             \special{papersize=\the\stockwidth,\the\stockheight}%
10666           \fi
10667         \fi
10668       }%
10669     \endgroup
10670   \fi
10671   \Hy@DisableOption{setpagesize}%
10672 }
10673 </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.

```

10674 <*vtexpdfmark>
10675 \providecommand*{\XR@ext}{pdf}
10676 \def\Hy@raisedlink{}
10677 \def\literalps@out#1{\special{pS:#1}}%
10678 \def\headerps@out#1{\immediate\special{pS:#1}}%
10679 \input{pdfmark.def}%
10680 \ifx\@pdfproducer\relax
10681   \ifnum\OpMode=\@ne
10682     \def\@pdfproducer{VTeX}%
10683   \else
10684     \def\@pdfproducer{VTeX + Distiller}%
10685   \fi
10686 \fi
10687 \providecommand*\@pdfborder{0 0 1}
10688 \providecommand*\@pdfborderstyle{}
10689 \providecommand*\@pdfview{XYZ}
10690 \providecommand*\@pdfviewparams{ H.V}
10691 \g@addto@macro\Hy@FirstPageHook{%
10692   \headerps@out{%
10693     /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.

```

10694   /HyperBorder {1} def%
10695   /H.V {pdf@hoff pdf@voff null} def%
10696   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10697 /H.S {%
10698   currentpoint %
10699   HyperBorder sub%
10700   /pdf@lly exch def %
10701   dup 72 add /pdf@hoff exch def %
10702   HyperBorder sub%
10703   /pdf@llx exch def%
10704 } def%
```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10705 /H.L {%
10706   2 sub%
10707   /HyperBasePt exch def %
10708   currentpoint %
10709   HyperBasePt add HyperBorder add%
10710   /pdf@ury exch def %
10711   HyperBorder add%
10712   /pdf@urx exch def%
10713 } def%
10714 /H.A {%
10715   H.L %
10716   currentpoint exch pop %
10717   vsize 72 sub exch %
10718   HyperBasePt add add%
10719   /pdf@voff exch def%
10720 } def%
```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10721 /H.R {%
10722   currentpoint %
10723   HyperBorder add%
10724   /pdf@ury exch def %
10725   HyperBorder add%
10726   /pdf@urx exch def %
10727   currentpoint exch pop vsize 72 sub add%
10728   /pdf@voff exch def%
10729 } def%
10730 }%
10731 }
10732 </vtxpdfmark>
```

46.11 Textures

```

10733 <*textures>
10734 \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.

```
10735 \begingroup
10736 \obeylines %
10737 \gdef\Hy@ps@CR{\noexpand
10738 }%
10739 \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.

```
10740 \def\literalps@out#1{%
10741 \special{postscript 0 0 transform}%
10742 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10743 }%
10744 %
```

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.

```
10745 \def\headerps@out#1{%
10746 \special{%
10747 prepostscript TeXdict begin\Hy@ps@CR
10748 #1\Hy@ps@CR
10749 end%
10750 }%
10751 }%
10752 %
```

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.

```
10753 \g@addto@macro\Hy@FirstPageHook{%
10754 \headerps@out{%
10755 /betterpdfmark {%
10756 systemdict begin %
10757 dup /BP eq%
10758 {cleartomark gsave nulldevice []%
10759 {dup /EP eq%
10760 {cleartomark cleartomark grestore}%
10761 {cleartomark}%
10762 ifelse%
10763 }ifelse %
10764 end%
10765 }def\Hy@ps@CR
10766 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10767 }% end of \headerps@out
10768 }% end of \AtBeginShipoutFirst
10769 %
10770 \input{pdfmark.def}%
10771 %
10772 \ifx\@pdfproducer\relax
```

```

10773 \def\@pdfproducer{Textures + Distiller}%
10774 \fi
10775 \providecommand*\@pdfborder{0 0 1}
10776 \providecommand*\@pdfborderstyle{}
10777 \providecommand*\@pdfview{XYZ}
10778 \providecommand*\@pdfviewparams{ H.V}
10779 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

10780 \Hy@AtBeginDocument{%
10781 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

10782 /vsize {\Hy@pageheight} def%
10783 /DvipsToPDF {} def%
10784 /PDFToDvips {} def%
10785 /BPToDvips {} def%
10786 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10787 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10788 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10789 /H.S {%
10790 currentpoint %
10791 HyperBorder add /pdf@lly exch def %
10792 dup DvipsToPDF 72 add /pdf@hoff exch def %
10793 HyperBorder sub /pdf@llx exch def%
10794 } def\Hy@ps@CR
10795 /H.L {%
10796 2 sub %
10797 PDFToDvips /HyperBase exch def %
10798 currentpoint %
10799 HyperBase sub /pdf@ury exch def%
10800 /pdf@urx exch def%
10801 } def\Hy@ps@CR
10802 /H.A {%
10803 H.L %
10804 currentpoint exch pop %
10805 vsize 72 sub exch DvipsToPDF %
10806 HyperBase sub % baseline skip
10807 sub /pdf@voff exch def%
10808 } def\Hy@ps@CR
10809 /H.R {%
10810 currentpoint %
10811 HyperBorder sub /pdf@ury exch def %
10812 HyperBorder add /pdf@urx exch def %
10813 currentpoint exch pop vsize 72 sub %
10814 exch DvipsToPDF sub /pdf@voff exch def%
10815 } def\Hy@ps@CR
10816 }%
10817 }

10818 \Hy@AtBeginDocument{%
10819 \ifHy@colorlinks
10820 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10821 \fi

```

10822 }

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.

```
10823 \expandafter\let\expandafter\keepPDF@SetupDoc
10824   \csname PDF@SetupDoc\endcsname
10825 \def\PDF@SetupDoc{%
10826   \ifx\@baseurl\@empty
10827   \else
10828     \special{html:<base href="\@baseurl">}%
10829   \fi
10830   \keepPDF@SetupDoc
10831 }
10832 \def\hyper@anchor#1{%
10833   \Hy@SaveLastskip
10834   \Hy@VerboseAnchor{#1}%
10835   \begingroup
10836     \let\protect=\string
10837     \special{html:<a name=%
10838       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10839   \endgroup
10840   \Hy@activeanchortrue
10841   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10842   \special{html:</a>}%
10843   \Hy@activeanchorfalse
10844   \Hy@RestoreLastskip
10845 }
10846 \def\hyper@anchorstart#1{%
10847   \Hy@SaveLastskip
10848   \Hy@VerboseAnchor{#1}%
10849   \begingroup
10850     \hyper@chars
10851     \special{html:<a name=%
10852       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10853   \endgroup
10854   \Hy@activeanchortrue
10855 }
10856 \def\hyper@anchorend{%
10857   \special{html:</a>}%
10858   \Hy@activeanchorfalse
10859   \Hy@RestoreLastskip
10860 }
10861 \def\@urltype{url}
10862 \def\hyper@linkstart#1#2{%
10863   \Hy@VerboseLinkStart{#1}{#2}%
10864   \expandafter\Hy@colorlink\csname @#1color\endcsname
10865   \def\Hy@tempa{#1}%
10866   \ifx\Hy@tempa\@urltype
10867     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10868   \else
10869     \begingroup
10870       \hyper@chars
10871       \special{%
10872         html:<a href=%
10873           \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>
10874         }%
10875     \endgroup
10876   \fi
```

```

10877 }
10878 \def\hyper@linkend{%
10879   \special{html:</a>}%
10880   \Hy@endcolorlink
10881 }
10882 \def\hyper@linkfile#1#2#3{%
10883   \hyper@linkurl{#1}{%
10884     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10885   }%
10886 }
10887 \def\hyper@linkurl#1#2{%
10888   \leavevmode
10889   \ifHy@raiselinks
10890     \setbox\@tempboxa=\color@hbox #1\color@endbox
10891     \@linkdim\dp\@tempboxa
10892     \lower\@linkdim\hbox{%
10893       \hyper@chars
10894       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10895     }%
10896     \Hy@colorlink\@urlcolor#1%
10897     \@linkdim\ht\@tempboxa
10898     \advance\@linkdim by -6.5\p@
10899     \raise\@linkdim\hbox{\special{html:</a>}}%
10900     \Hy@endcolorlink
10901   \else
10902     \begingroup
10903     \hyper@chars
10904     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10905     \Hy@colorlink\@urlcolor#1%
10906     \special{html:</a>}%
10907     \Hy@endcolorlink
10908   \endgroup
10909   \fi
10910 }

```

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

```

10911 \def\hyper@link#1#2#3{%
10912   \Hy@VerboseLinkStart{#1}{#2}%
10913   \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
10914 }
10915 \def\hyper@image#1#2{%
10916   \begingroup
10917   \hyper@chars
10918   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10919   \endgroup
10920 }
10921 </textures>

```

46.12 dvipsone

```

10922 % \subsection{dvipsone driver}
10923 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10924 % |\special| commands.
10925 <*dvipsone>
10926 \providecommand*\XR@ext}{pdf}
10927 \def\Hy@raisedlink{}
10928 \providecommand*\@pdfborder{0 0 1}
10929 \providecommand*\@pdfborderstyle{}

```



```

10930 \def\literalps@out#1{\special{ps:#1}}%
10931 \def\headerps@out#1{\special{headertext=#1}}%
10932 \input{pdfmark.def}%
10933 \ifx\@pdfproducer\relax
10934 \def\@pdfproducer{dvipsone + Distiller}%
10935 \fi
10936 \HyInfo@AddonUnsupportedtrue
10937 \def\PDF@FinishDoc{%
10938 \Hy@UseMaketitleInfos
10939 \HyInfo@TrappedUnsupported
10940 \special{PDF: Keywords \@pdfkeywords}%
10941 \special{PDF: Title \@pdftitle}%
10942 \special{PDF: Creator \@pdfcreator}%
10943 \ifx\@pdfcreationdate\@empty
10944 \else
10945 \special{PDF: CreationDate \@pdfcreationdate}%
10946 \fi
10947 \ifx\@pdfmoddate\@empty
10948 \else
10949 \special{PDF: ModDate \@pdfmoddate}%
10950 \fi
10951 \special{PDF: Author \@pdfauthor}%
10952 \ifx\@pdfproducer\relax
10953 \else
10954 \special{PDF: Producer \@pdfproducer}%
10955 \fi
10956 \special{PDF: Subject \@pdfsubject}%
10957 \Hy@DisableOption{pdfauthor}%
10958 \Hy@DisableOption{pdftitle}%
10959 \Hy@DisableOption{pdfsubject}%
10960 \Hy@DisableOption{pdfcreator}%
10961 \Hy@DisableOption{pdfcreationdate}%
10962 \Hy@DisableOption{pdfmoddate}%
10963 \Hy@DisableOption{pdfproducer}%
10964 \Hy@DisableOption{pdfkeywords}%
10965 \Hy@DisableOption{pdftrapped}%
10966 \Hy@DisableOption{pdfinfo}%
10967 }
10968 \def\PDF@SetupDoc{%
10969 \def\Hy@temp{}%
10970 \ifx\@pdfstartpage\@empty
10971 \else
10972 \ifx\@pdfstartview\@empty
10973 \else
10974 \edef\Hy@temp{%
10975 ,Page=\@pdfstartpage
10976 ,View=\@pdfstartview
10977 }%
10978 \fi
10979 \fi
10980 \edef\Hy@temp{%
10981 \noexpand\pdfmark{%
10982 pdfmark=/DOCVIEW,%
10983 PageMode=/\@pdfpagemode
10984 \Hy@temp
10985 }%
10986 }%

```

```

10987 \Hy@temp
10988 \ifx\@pdfpagescrop\@empty
10989 \else
10990 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10991 \fi
10992 \edef\Hy@temp{%
10993 \ifHy@toolbar\else /HideToolbar true\fi
10994 \ifHy@menubar\else /HideMenubar true\fi
10995 \ifHy>windowui\else /HideWindowUI true\fi
10996 \ifHy@fitwindow /FitWindow true\fi
10997 \ifHy@centerwindow /CenterWindow true\fi
10998 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10999 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11000 \Hy@UseNameKey{Direction}\@pdfdirection
11001 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11002 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11003 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11004 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11005 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11006 \Hy@UseNameKey{Duplex}\@pdfduplex
11007 \ifx\@pdfpicktraybypdfsize\@empty
11008 \else
11009 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11010 \fi
11011 \ifx\@pdfprintpagerange\@empty
11012 \else
11013 /PrintPageRange[\@pdfprintpagerange]%
11014 \fi
11015 \ifx\@pdfnumcopies\@empty
11016 \else
11017 /NumCopies \@pdfnumcopies
11018 \fi
11019 }%
11020 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11021 \pdfmark{%
11022 pdfmark=/PUT,%
11023 Raw={%
11024 \string{Catalog}\string}<<%
11025 \ifx\Hy@temp\@empty
11026 \else
11027 /ViewerPreferences<<\Hy@temp>>%
11028 \fi
11029 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11030 \ifx\@pdflang\@empty
11031 \else
11032 /Lang(\@pdflang)%
11033 \fi
11034 \ifx\@baseurl\@empty
11035 \else
11036 /URI<</Base(\Hy@pstringB)>>%
11037 \fi
11038 >>%
11039 }%
11040 }%
11041 }
11042 \providecommand*\@pdfview{XYZ}
11043 \providecommand*\@pdfviewparams{ %

```

```

11044 gsave revscl currentpoint grestore %
11045 72 add exch pop null exch null%
11046 }
11047 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```

11048 \g@addto@macro\Hy@FirstPageHook{%
11049 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

11050 /DvipsToPDF { 65781 div } def%
11051 /PDFToDvips { 65781 mul } def%
11052 /BPToDvips{65781 mul}def%
11053 /HyperBorder { 1 PDFToDvips } def%
11054 /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.

```

11055 /BorderArrayPatch{%
11056   [exch{%
11057     dup dup type/integertype eq exch type/realtype eq or%
11058     {BPToDvips}if%
11059   }forall]%
11060 }def%
11061 /H.S {%
11062   currentpoint %
11063   HyperBorder add /pdf@lly exch def %
11064   dup DvipsToPDF 72 add /pdf@hoff exch def %
11065   HyperBorder sub /pdf@llx exch def%
11066 } def%
11067 /H.L {%
11068   2 sub %
11069   PDFToDvips /HyperBase exch def %
11070   currentpoint %
11071   HyperBase sub /pdf@ury exch def%
11072   /pdf@urx exch def%
11073 } def%
11074 /H.A {%
11075   H.L %
11076   currentpoint exch pop %
11077   HyperBase sub % baseline skip
11078   DvipsToPDF /pdf@voff exch def%
11079 } def%
11080 /H.R {%
11081   currentpoint %
11082   HyperBorder sub /pdf@ury exch def %
11083   HyperBorder add /pdf@urx exch def %
11084   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11085 } def%
11086 }%
11087 }
11088 \</dvipsone>

```

46.13 TeX4ht

```

11089 \*tex4ht}
11090 \providecommand*{\XR@ext}{html}
11091 \def\Hy@raisedlink{}
11092 \@ifpackageloaded{tex4ht}{%
11093   \typeout{hyperref tex4ht: tex4ht already loaded}%
11094 }{%
11095   \RequirePackage[hx4ht]{tex4ht}%
11096 }
11097 \hyperlinkfileprefix{}
11098 \def\PDF@FinishDoc{}
11099 \def\PDF@SetupDoc{%
11100   \ifx\@baseurl\@empty
11101   \else
11102     \special{t4ht=<base href="\@baseurl">}%
11103   \fi
11104 }
11105 \def\hyper@anchor#1{%
11106   \Hy@SaveLastskip
11107   \Hy@VerboseAnchor{#1}%
11108   \begingroup
11109     \let\protect=\string
11110     \special{t4ht=<a name=%
11111       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11112   \endgroup
11113   \Hy@activeanchortrue
11114   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11115   \special{t4ht=</a>}%
11116   \Hy@activeanchorfalse
11117   \Hy@RestoreLastskip
11118 }
11119 \def\hyper@anchorstart#1{%
11120   \Hy@SaveLastskip
11121   \Hy@VerboseAnchor{#1}%
11122   \begingroup
11123     \hyper@chars\special{t4ht=<a name=%
11124       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11125   \endgroup
11126   \Hy@activeanchortrue
11127 }
11128 \def\hyper@anchorend{%
11129   \special{t4ht=</a>}%
11130   \Hy@activeanchorfalse
11131   \Hy@RestoreLastskip
11132 }
11133 \def\@urltype{url}
11134 \def\hyper@linkstart#1#2{%
11135   \Hy@VerboseLinkStart{#1}{#2}%
11136   \expandafter\Hy@colorlink\csname @#1color\endcsname
11137   \def\Hy@tempa{#1}%
11138   \ifx\Hy@tempa\@urltype
11139     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11140   \else
11141     \begingroup
11142       \hyper@chars
11143       \special{t4ht=<a href=%
11144         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
11145     \endgroup

```

```

11146 \fi
11147 }
11148 \def\hyper@linkend{%
11149 \special{t4ht=</a>}%
11150 \Hy@endcolorlink
11151 }
11152 \def\hyper@linkfile#1#2#3{%
11153 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\#3\fi}%
11154 }
11155 \def\hyper@linkurl#1#2{%
11156 \leavevmode
11157 \ifHy@raiselinks
11158 \setbox\@tempboxa=\color@hbox #1\color@endbox
11159 \@linkdim\dp\@tempboxa
11160 \lower\@linkdim\hbox{%
11161 \begingroup
11162 \hyper@chars
11163 \special{%
11164 t4ht=<a href=\hyper@quote#2\hyper@quote>%
11165 }%
11166 \endgroup
11167 }%
11168 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11169 \@linkdim\ht\@tempboxa
11170 \advance\@linkdim by -6.5p@
11171 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11172 \else
11173 \begingroup
11174 \hyper@chars
11175 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11176 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11177 \special{t4ht=</a>}%
11178 \endgroup
11179 \fi
11180 }

Poor implementation of \hyper@link without considering #1.
11181 \def\hyper@link#1#2#3{%
11182 \Hy@VerboseLinkStart{#1}{#2}%
11183 \hyper@linkurl{#3}{\Hy@HyperDestNameFilter{#2}}%
11184 }
11185 \def\hyper@image#1#2{%
11186 \begingroup
11187 \hyper@chars
11188 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11189 \endgroup
11190 }
11191 \let\autoref\ref
11192 \ifx \rEfLiNK \UnDef
11193 \def\rEfLiNK #1#2{#2}%
11194 \fi
11195 \def\backref#1{}
11196 </tex4ht>
11197 <*tex4htcfg>
11198 \IfFileExists{\jobname.cfg}{\endinput}{}
11199 \Preamble{html}
11200 \begin{document}%
11201 \EndPreamble

```

```

11202 \def\TeX{\TeX}
11203 \def\OMEGA{\Omega}
11204 \def\LaTeX{\LaTeX}
11205 \def\LaTeXe{\LaTeX2e}
11206 \def\TeXe{\TeX}
11207 \def\MF{Metafont}
11208 \def\MP{MetaPost}
11209 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11210 <*pdfmark>
11211 \long\def\@Form[#1]{%
11212 \g@addto@macro\Hy@FirstPageHook{%
11213 \headerps@out{%
11214 [%
11215 /__objdef{pdfDocEncoding}%
11216 /type/dict%
11217 /OBJ pdfmark%
11218 [%
11219 {pdfDocEncoding}%
11220 <<%
11221 /Type/Encoding%
11222 /Differences[%
11223 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11224 /tilde %
11225 39/quotesingle %
11226 96/grave %
11227 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11228 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11229 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11230 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11231 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11232 164/currency %
11233 166/brokenbar %
11234 168/dieresis/copyright/ordfeminine %
11235 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11236 /twosuperior/threesuperior/acute/mu %
11237 183/periodcentered/cedilla/onesuperior/ordmasculine %
11238 188/onequarter/onehalf/threequarters %
11239 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11240 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11241 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11242 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11243 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11244 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11245 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11246 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11247 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11248 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11249 ]%
11250 >>%
11251 /PUT pdfmark%
11252 [%
11253 /__objdef{ZaDb}%
11254 /type/dict%

```

```

11255 /OBJ pdfmark%
11256 [%
11257   {ZaDb}%
11258   <<%
11259     /Type/Font%
11260     /Subtype/Type1%
11261     /Name/ZaDb%
11262     /BaseFont/ZapfDingbats%
11263   >>%
11264 /PUT pdfmark%
11265 [%
11266   /_objdef{Helv}%
11267   /type/dict%
11268 /OBJ pdfmark%
11269 [%
11270   {Helv}%
11271   <<%
11272     /Type/Font%
11273     /Subtype/Type1%
11274     /Name/Helv%
11275     /BaseFont/Helvetica%
11276     /Encoding{pdfDocEncoding}%
11277   >>%
11278 /PUT pdfmark%
11279 [%
11280   /_objdef{aform}%
11281   /type/dict%
11282 /OBJ pdfmark%
11283 [%
11284   /_objdef{afields}%
11285   /type/array%
11286 /OBJ pdfmark%
11287 {%
11288   [%
11289     /BBox[0 0 100 100]%
11290     /_objdef{Check}%
11291   /BP pdfmark %
11292   1 0 0 setrgbcolor%
11293   /ZapfDingbats 80 selectfont %
11294   20 20 moveto%
11295   (4)show%
11296 [/EP pdfmark%
11297 [%
11298   /BBox[0 0 100 100]%
11299   /_objdef{Cross}%
11300 /BP pdfmark %
11301   1 0 0 setrgbcolor%
11302   /ZapfDingbats 80 selectfont %
11303   20 20 moveto%
11304   (8)show%
11305 [/EP pdfmark%
11306 [%
11307   /BBox[0 0 250 100]%
11308   /_objdef{Submit}%
11309 /BP pdfmark %
11310   0.6 setgray %
11311   0 0 250 100 rectfill %

```

```

11312 1 setgray %
11313 2 2 moveto %
11314 2 98 lineto %
11315 248 98 lineto %
11316 246 96 lineto %
11317 4 96 lineto %
11318 4 4 lineto %
11319 fill %
11320 0.34 setgray %
11321 248 98 moveto %
11322 248 2 lineto %
11323 2 2 lineto %
11324 4 4 lineto %
11325 246 4 lineto %
11326 246 96 lineto %
11327 fill%
11328 /Helvetica 76 selectfont %
11329 0 setgray %
11330 8 22.5 moveto%
11331 (Submit)show%
11332 [/EP pdfmark%
11333 [%
11334 /BBox[0 0 250 100]%
11335 /_objdef{SubmitP}%
11336 /BP pdfmark %
11337 0.6 setgray %
11338 0 0 250 100 rectfill %
11339 0.34 setgray %
11340 2 2 moveto %
11341 2 98 lineto %
11342 248 98 lineto %
11343 246 96 lineto %
11344 4 96 lineto %
11345 4 4 lineto %
11346 fill %
11347 1 setgray %
11348 248 98 moveto %
11349 248 2 lineto %
11350 2 2 lineto %
11351 4 4 lineto %
11352 246 4 lineto %
11353 246 96 lineto %
11354 fill%
11355 /Helvetica 76 selectfont %
11356 0 setgray %
11357 10 20.5 moveto%
11358 (Submit)show%
11359 [/EP pdfmark%
11360 } ?pdfmark%
11361 [%
11362 {aform}%
11363 <<%
11364 /Fields{afields}%
11365 /DR<<%
11366 /Font<<%
11367 /ZaDb{ZaDb}%
11368 /Helv{Helv}%

```



```

11369    >>%
11370    >>%
11371    /DA(/Helv 10 Tf 0 g)%
11372    /CO{corder}%
11373    \ifHy@pdfa
11374    \else
11375    /NeedAppearances true%
11376    \fi
11377    >>%
11378    /PUT pdfmark%
11379    [%
11380    {Catalog}%
11381    <<%
11382    /AcroForm{aform}%
11383    >>%
11384    /PUT pdfmark%
11385    [%
11386    /__objdef{corder}%
11387    /type/array%
11388    /OBJ pdfmark% dps
11389    }]%
11390    \kvsetkeys{Form}{#1}%
11391    }
11392    \def\@endForm{}
11393    \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11394    \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11395    }
11396    \def\@TextField[#1]#2{% parameters, label
11397    \def\Fld@name{#2}%
11398    \def\Fld@default{}%
11399    \let\Fld@value\@empty
11400    \def\Fld@width{\DefaultWidthofText}%
11401    \def\Fld@height{%
11402    \ifFld@multiline
11403    \DefaultHeightofTextMultiline
11404    \else
11405    \DefaultHeightofText
11406    \fi
11407    }%
11408    \begingroup
11409    \Field@toks={ }%
11410    \expandafter\HyField@SetKeys\expandafter{%
11411    \DefaultOptionsofText,#1%
11412    }%
11413    \HyField@FlagsText
11414    \ifFld@hidden\def\Fld@width{1sp}\fi
11415    \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11416    \LayoutTextField{#2}{%
11417    \Hy@escapeform\PDFForm@Text
11418    \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11419    pdfmark=/ANN,Raw={\PDFForm@Text}%
11420    }%
11421    }%
11422    \endgroup
11423    }
11424    \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11425    \def\Fld@name{#2}%

```

```

11426 \let\Fld@default\relax
11427 \let\Fld@value\relax
11428 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11429 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11430 \begingroup
11431 \Fld@menulength=0 %
11432 \@tempdima\z@
11433 \@for\@curropt:=#3\do{%
11434 \expandafter\Fld@checkequals\@curropt==\\%
11435 \Hy@StepCount\Fld@menulength
11436 \settowidth{\@tempdimb}{\@currDisplay}%
11437 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11438 }%
11439 \advance\@tempdima by 15\p@
11440 \Field@toks={ }%
11441 \begingroup
11442 \HyField@SetKeys{#1}%
11443 \edef\x{\endgroup
11444 \noexpand\expandafter
11445 \noexpand\HyField@SetKeys
11446 \noexpand\expandafter{%
11447 \expandafter\noexpand\csname DefaultOptionsof%
11448 \ifFld@radio
11449 Radio%
11450 \else
11451 \ifFld@combo
11452 \ifFld@popdown
11453 PopdownBox%
11454 \else
11455 ComboBox%
11456 \fi
11457 \else
11458 ListBox%
11459 \fi
11460 \fi
11461 \endcsname
11462 }%
11463 }\x
11464 \HyField@SetKeys{#1}%
11465 \ifFld@hidden\def\Fld@width{1sp}\fi
11466 \ifx\Fld@value\relax
11467 \let\Fld@value\Fld@default
11468 \fi
11469 \LayoutChoiceField{#2}{%
11470 \ifFld@radio
11471 \HyField@FlagsRadioButton
11472 \@@Radio{#3}%
11473 \else
11474 \begingroup
11475 \HyField@FlagsChoice
11476 \ifdim\Fld@width<\@tempdima
11477 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11478 \edef\Fld@width{\the\@tempdima}%
11479 \fi
11480 \ifFld@combo
11481 \else
11482 \@tempdima=\the\Fld@menulength\Fld@charsize

```

```

11483      \advance\@tempdima by \Fld@borderwidth bp %
11484      \advance\@tempdima by \Fld@borderwidth bp %
11485      \edef\Fld@height{\the\@tempdima}%
11486      \fi
11487      \@@ListBox{#3}%
11488      \endgroup
11489      \fi
11490      }%
11491      \endgroup
11492  }
11493  \def\@@Radio#1{%
11494    \Fld@listcount=0 %
11495    \@for\@curropt:=#1\do{%
11496      \expandafter\Fld@checkequals\@curropt==\%
11497      \Hy@StepCount\Fld@listcount
11498      \@currDisplay\space
11499      \Hy@escapeform\PDFForm@Radio
11500      \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11501        pdfmark=/ANN,%
11502        Raw={%
11503          \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11504        }%
11505      } % deliberate space between radio buttons
11506    }%
11507  }
11508  \newcount\Fld@listcount
11509  \def\@@ListBox#1{%
11510    \HyField@PDFChoices{#1}%
11511    \Hy@escapeform\PDFForm@List
11512    \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11513      pdfmark=/ANN,Raw={\PDFForm@List}%
11514    }%
11515  }
11516  \def\@PushButton[#1]#2{% parameters, label
11517    \def\Fld@name{#2}%
11518    \begingroup
11519    \Field@toks={ }%
11520    \expandafter\HyField@SetKeys\expandafter{%
11521      \DefaultOptionsofPushButton,#1%
11522    }%
11523    \ifHy@pdfa
11524      \PackageError{hyperref}{%
11525        PDF/A: Push button with JavaScript is prohibited%
11526      }\@ehc
11527      \LayoutPushButtonField{%
11528        \leavevmode
11529        \MakeButtonField{#2}%
11530      }%
11531    \else
11532      \HyField@FlagsPushButton
11533      \ifFld@hidden\def\Fld@width{1sp}\fi
11534      \LayoutPushButtonField{%
11535        \leavevmode
11536        \Hy@escapeform\PDFForm@Push
11537        \pdfmark[\MakeButtonField{#2}]{%
11538          pdfmark=/ANN,Raw={\PDFForm@Push}%
11539        }%

```

```

11540     }%
11541     \fi
11542 \endgroup
11543 }
11544 \def\@Submit[#1]#2{%
11545   \Field@toks={ }%
11546   \def\Fld@width{\DefaultWidthofSubmit}%
11547   \def\Fld@height{\DefaultHeightofSubmit}%
11548   \begingroup
11549     \expandafter\HyField@SetKeys\expandafter{%
11550       \DefaultOptionsofSubmit,#1%
11551     }%
11552     \HyField@FlagsPushButton
11553     \HyField@FlagsSubmit
11554     \ifFld@hidden\def\Fld@width{1sp}\fi
11555     \Hy@escapeform\PDFForm@Submit
11556     \pdfmark[\MakeButtonField{#2}]{%
11557       pdfmark=/ANN,%
11558       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11559     }%
11560 \endgroup
11561 }
11562 \def\@Reset[#1]#2{%
11563   \Field@toks={ }%
11564   \def\Fld@width{\DefaultWidthofReset}%
11565   \def\Fld@height{\DefaultHeightofReset}%
11566   \begingroup
11567     \expandafter\HyField@SetKeys\expandafter{%
11568       \DefaultOptionsofReset,#1%
11569     }%
11570     \leavevmode
11571     \ifHy@pdfa
11572       \PackageError{hyperref}{%
11573         PDF/A: Reset action is prohibited%
11574       }\@ehc
11575       \MakeButtonField{#2}%
11576     \else
11577       \HyField@FlagsPushButton
11578       \ifFld@hidden\def\Fld@width{1sp}\fi
11579       \Hy@escapeform\PDFForm@Reset
11580       \pdfmark[\MakeButtonField{#2}]{%
11581         pdfmark=/ANN,Raw={\PDFForm@Reset}%
11582       }%
11583     \fi
11584 \endgroup
11585 }%
11586 \def\@CheckBox[#1]#2{% parameters, label
11587   \def\Fld@name{#2}%
11588   \def\Fld@default{0}%
11589   \begingroup
11590     \def\Fld@width{\DefaultWidthofCheckBox}%
11591     \def\Fld@height{\DefaultHeightofCheckBox}%
11592     \Field@toks={ }%
11593     \expandafter\HyField@SetKeys\expandafter{%
11594       \DefaultOptionsofCheckBox,#1%
11595     }%
11596     \HyField@FlagsCheckBox

```

```

11597 \ifFld@hidden\def\Fld@width{1sp}\fi
11598 \LayoutCheckField{#2}{%
11599 \Hy@escapeform\PDFForm@Check
11600 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11601 pdfmark=/ANN,Raw={\PDFForm@Check}%
11602 }%
11603 }%
11604 \endgroup
11605 }
11606 \pdfmark>

```

47.2 HyperTeX

```

11607 <*hypertex>
11608 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11609 \def\@endForm{}
11610 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11611 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11612 }
11613 \def\@TextField[#1]#2{% parameters, label
11614 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11615 }
11616 \def\@CheckBox[#1]#2{% parameters, label
11617 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11618 }
11619 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11620 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11621 }
11622 \def\@PushButton[#1]#2{% parameters, label
11623 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11624 }
11625 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11626 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11627 </hypertex>

```

47.3 TeX4ht

```

11628 <*tex4ht>
11629 \def\@Form[#1]{%
11630 \kvsetkeys{Form}{#1}%
11631 \HCode{<form action="\Form@action" method="\Form@method">}%
11632 }
11633 \def\@endForm{\HCode{</form>}}
11634 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11635 \typeout{Sorry, TeX4ht does not support gauges}%
11636 }
11637 \def\@TextField[#1]#2{% parameters, label
11638 \let\Hy@reserved@a\@empty
11639 \def\Fld@name{#2}%
11640 \def\Fld@default{}%
11641 \bgroup
11642 \Field@toks={ }%
11643 \kvsetkeys{Field}{#1}%
11644 \HCode{<label for="\Fld@name">#2</label>}%
11645 \ifFld@password
11646 \@@PasswordField
11647 \else
11648 \@@TextField
11649 \fi

```

```

11650 \egroup
11651 }
11652 \def\@@PasswordField{%
11653   \HCode{%
11654     <input type="password" %
11655       id="\Fld@name" %
11656       name="\Fld@name" %
11657       \ifFld@hidden type="hidden" \fi
11658       value="\Fld@default" %
11659       \the\Field@toks
11660     >%
11661   }%
11662 }
11663 \def\@@TextField{%
11664   \ifFld@multiline
11665     \HCode{<textarea %
11666       \ifFld@readonly readonly \fi
11667       id="\Fld@name" %
11668       name="\Fld@name" %
11669       \ifFld@hidden type="hidden" \fi
11670       \the\Field@toks>%
11671   }%
11672   \Fld@default
11673   \HCode{</textarea>}%
11674 \else
11675   \HCode{<input type="text" %
11676     \ifFld@readonly readonly \fi
11677     id="\Fld@name" %
11678     name="\Fld@name" %
11679     \ifFld@hidden type="hidden" \fi
11680     value="\Fld@default" %
11681     \the\Field@toks>%
11682   }%
11683 \fi
11684 }
11685 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11686   \def\Fld@name{#2}%
11687   \def\Fld@default{#3}%
11688   \let\Hy@reserved@a\relax
11689   \begingroup
11690     \expandafter\Fld@findlength#3\\%
11691     \Field@toks={ }%
11692     \kvsetkeys{Field}{#1}%
11693     #2%
11694     \ifFld@radio
11695       \expandafter\@@Radio#3\\%
11696     \else
11697       \expandafter\@@Menu#3\\%
11698     \fi
11699   \endgroup
11700 }
11701 \def\Fld@findlength#1\\{%
11702   \Fld@menulength=0 %
11703   \@for\@currupt:=#1\do{\Hy@StepCount\Fld@menulength}%
11704 }
11705 \def\@@Menu#1\\{%
11706   \HCode{<select size="\the\Fld@menulength" %

```

```

11707     name="\Fld@name" %
11708     \the\Field@toks>%
11709 }%
11710 \@for\@curropt:=#1\do{%
11711     \expandafter\Fld@checkequals\@curropt==\\%
11712     \HCode{<option %
11713         \ifx\@curropt\Fld@default selected \fi
11714         value="\@currValue">\@currDisplay</option>%
11715     }%
11716 }%
11717 \HCode{</select>}}%
11718 }
11719 \def\@@Radio#1\\{%
11720     \@for\@curropt:=#1\do{%
11721         \expandafter\Fld@checkequals\@curropt==\\%
11722         \HCode{<input type="radio" %
11723             \ifx\@curropt\Fld@default checked \fi
11724             name="\Fld@name" %
11725             value="\@currValue" %
11726             \the\Field@toks>%
11727         }%
11728         \@currDisplay
11729     }%
11730 }
11731 \def\@PushButton[#1]#2{% parameters, label
11732     \def\Fld@name{#2}%
11733     \bgroup
11734     \Field@toks={ }%
11735     \kvsetkeys{Field}{#1}%
11736     \HCode{<input type="button" %
11737         name="\Fld@name" %
11738         value="#2" %
11739         \the\Field@toks>%
11740     }%
11741     \HCode{</button>}}%
11742     \egroup
11743 }
11744 \def\@Submit[#1]#2{%
11745     \HCode{<button type="submit">#2</button>}}%
11746 }
11747 \def\@Reset[#1]#2{%
11748     \HCode{<button type="reset">#2</button>}}%
11749 }
11750 \def\@CheckBox[#1]#2{% parameters, label
11751     \let\Hy@reserved@a\@empty
11752     \def\Fld@name{#2}%
11753     \def\Fld@default{0}%
11754     \bgroup
11755     \Field@toks={ }%
11756     \kvsetkeys{Field}{#1}%
11757     \HCode{<input type="checkbox" %
11758         \ifFld@checked checked \fi
11759         \ifFld@disabled disabled \fi
11760         \ifFld@readonly readonly \fi
11761         name="\Fld@name" %
11762         \ifFld@hidden type="hidden" \fi
11763         value="\Fld@default" %

```

```

11764 \the\Field@toks>%
11765 #2%
11766 }%
11767 \egroup
11768 }
11769 </tex4ht>

```

47.4 pdfTeX

```

11770 <*pdfTeX>
11771 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11772 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11773 }
11774 \def\MakeFieldObject#1#2{\sbox0{#1}%
11775 \immediate\pdfxform0 %
11776 \expandafter\edef\csname #2Object\endcsname{%
11777 \the\pdfastxform\space 0 R%
11778 }%
11779 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
11780 }%
11781 \def\HyField@afields{}
11782 \begingroup\expandafter\expandafter\expandafter\endgroup
11783 \expandafter\ifx\csname pdfastlink\endcsname\relax
11784 \let\HyField@AddToFields\relax
11785 \PackageInfo{hyperref}{%
11786 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11787 \MessageBreak
11788 Adobe Reader/Acrobat accepts an empty /Field array,%
11789 \MessageBreak
11790 but other PDF viewers might complain%
11791 }%
11792 \else
11793 \def\HyField@AuxAddToFields#1{%
11794 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11795 \Hy@AtBeginDocument{%
11796 \if@filesw
11797 \immediate\write\@mainaux{%
11798 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11799 }%
11800 \fi
11801 \let\HyField@AfterAuxOpen\@firstofone
11802 \def\HyField@AuxAddToFields#1{%
11803 \xdef\HyField@afields{%
11804 \ifx\HyField@afields\@empty
11805 \else
11806 \HyField@afields
11807 \space
11808 \fi
11809 #1 0 R%
11810 }%
11811 }%
11812 }%
11813 \def\HyField@AddToFields{%
11814 \expandafter\HyField@@AddToFields\expandafter{%
11815 \the\pdfastlink
11816 }%
11817 }%
11818 \def\HyField@@AddToFields#1{%

```



```

11819 \HyField@AfterAuxOpen{%
11820 \if@filesw
11821 \write\@mainaux{%
11822 \string\HyField@AuxAddToFields{#1}%
11823 }%
11824 \fi
11825 }%
11826 }%
11827 \fi
11828 \def\@Form[#1]{%
11829 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11830 \kvsetkeys{Form}{#1}%
11831 \Hy@FormObjects
11832 \ifnum\pdfTeXversion>13 %
11833 \pdfrefobj\OBJ@pdfdocencoding
11834 \pdfrefobj\OBJ@ZaDb
11835 \pdfrefobj\OBJ@Helv
11836 \fi
11837 \AtVeryEndDocument{%
11838 \immediate\pdfobj{%
11839 <<%
11840 /Fields[\HyField@afields]%
11841 /DR<<%
11842 /Font<<%
11843 /ZaDb \OBJ@ZaDb\space 0 R%
11844 /Helv \OBJ@Helv\space 0 R%
11845 >>%
11846 >>%
11847 /DA(/Helv 10 Tf 0 g)%
11848 \ifHy@pdfa
11849 \else
11850 /NeedAppearances true%
11851 \fi
11852 >>%
11853 }%
11854 \edef\OBJ@acroform{\the\pdfastobj}%
11855 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11856 }%
11857 \MakeFieldObject{%
Same as \ding{123} of package pifont.
11858 \begingroup
11859 \fontfamily{pzd}%
11860 \fontencoding{U}%
11861 \fontseries{m}%
11862 \fontshape{n}%
11863 \selectfont
11864 \char123 %
11865 \endgroup
11866 }{Ding}%
11867 \MakeFieldObject{%
11868 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11869 }{Submit}%
11870 \MakeFieldObject{%
11871 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11872 }{SubmitP}%
11873 }
11874 \def\@endForm{}

```

```

11875 \def\@TextField[#1]#2{% parameters, label
11876   \def\Fld@name{#2}%
11877   \def\Fld@default{}%
11878   \let\Fld@value\@empty
11879   \def\Fld@width{\DefaultWidthofText}%
11880   \def\Fld@height{%
11881     \ifFld@multiline
11882       \DefaultHeightofTextMultiline
11883     \else
11884       \DefaultHeightofText
11885     \fi
11886   }%
11887   \begingroup
11888     \Field@toks={ }%
11889     \expandafter\HyField@SetKeys\expandafter{%
11890       \DefaultOptionsofText,#1%
11891     }%
11892     \PDFForm@Name
11893     \HyField@FlagsText
11894     \ifFld@hidden\def\Fld@width{1sp}\fi
11895     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11896     \LayoutTextField{#2}{%
11897       \Hy@escapeform\PDFForm@Text
11898       \pdfstartlink user {\PDFForm@Text}\relax
11899       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11900       \HyField@AddToFields
11901     }%
11902   \endgroup
11903 }
11904 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11905   \def\Fld@name{#2}%
11906   \let\Fld@default\relax
11907   \let\Fld@value\relax
11908   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11909   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11910   \begingroup
11911     \Fld@menulength=0 %
11912     \@tempdima\z@
11913     \@for\@curropt:=#3\do{%
11914       \expandafter\Fld@checkequals\@curropt==\%
11915       \Hy@StepCount\Fld@menulength
11916       \settowidth{\@tempdimb}{\@currDisplay}%
11917       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11918     }%
11919     \advance\@tempdima by 15\p@
11920     \Field@toks={ }%
11921     \begingroup
11922       \HyField@SetKeys{#1}%
11923     \edef\x{\endgroup
11924       \noexpand\expandafter
11925       \noexpand\HyField@SetKeys
11926       \noexpand\expandafter{%
11927         \expandafter\noexpand\csname DefaultOptionsof%
11928           \ifFld@radio
11929             Radio%
11930           \else
11931             \ifFld@combo

```

```

11932         \ifFld@popdown
11933         PopdownBox%
11934     \else
11935         ComboBox%
11936     \fi
11937 \else
11938     ListBox%
11939 \fi
11940 \fi
11941 \endcsname
11942 }%
11943 } \x
11944 \HyField@SetKeys{#1}%
11945 \PDFForm@Name
11946 \ifFld@hidden\def\Fld@width{1sp}\fi
11947 \ifx\Fld@value\relax
11948     \let\Fld@value\Fld@default
11949 \fi
11950 \LayoutChoiceField{#2}{%
11951     \ifFld@radio
11952         \HyField@FlagsRadioButton
11953         \@@Radio{#3}%
11954     \else
11955         \begingroup
11956         \HyField@FlagsChoice
11957         \ifdim\Fld@width<\@tempdima
11958             \ifdim\@tempdima<1cm\@tempdima1cm\fi
11959             \edef\Fld@width{\the\@tempdima}%
11960         \fi
11961         \ifFld@combo
11962         \else
11963             \@tempdima=\the\Fld@menulength\Fld@charsize
11964             \advance\@tempdima by \Fld@borderwidth bp %
11965             \advance\@tempdima by \Fld@borderwidth bp %
11966             \edef\Fld@height{\the\@tempdima}%
11967         \fi
11968         \@@Listbox{#3}%
11969     \endgroup
11970 \fi
11971 }%
11972 \endgroup
11973 }
11974 \def\@@Radio#1{%
11975     \Fld@listcount=0 %
11976     \@for\@curropt:=#1\do{%
11977         \expandafter\Fld@checkequals\@curropt==\%
11978         \Hy@StepCount\Fld@listcount
11979         \@currDisplay\space
11980         \leavevmode
11981         \Hy@escapeform\PDFForm@Radio
11982         \pdfstartlink user {%
11983             \PDFForm@Radio
11984             /AP<<%
11985             /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.

```

11986      /\@currValue\space \DingObject
11987      >>%
11988      >>%
11989      }%
11990      \relax
11991      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11992      \ifnum\Fld@listcount=1 %
11993      \HyField@AddToFields
11994      \fi
11995      \space % deliberate space between radio buttons
11996      }%
11997      }
11998      \newcount\Fld@listcount
11999      \def\@@ListBox#1{%
12000      \HyField@PDFChoices{#1}%
12001      \leavevmode
12002      \Hy@escapeform\PDFForm@List
12003      \pdfstartlink user {\PDFForm@List}\relax
12004      \MakeChoiceField{\Fld@width}{\Fld@height}%
12005      \pdfendlink
12006      \HyField@AddToFields
12007      }
12008      \def\@PushButton[#1]#2{% parameters, label
12009      \def\Fld@name{#2}%
12010      \begingroup
12011      \Field@toks={ }%
12012      \expandafter\HyField@SetKeys\expandafter{%
12013      \DefaultOptionsofPushButton,#1%
12014      }%
12015      \PDFForm@Name
12016      \ifHy@pdfa
12017      \PackageError{hyperref}{%
12018      PDF/A: Push button with JavaScript is prohibited%
12019      }\@ehc
12020      \LayoutPushButtonField{%
12021      \leavevmode
12022      \MakeButtonField{#2}%
12023      }%
12024      \else
12025      \HyField@FlagsPushButton
12026      \ifFld@hidden\def\Fld@width{1sp}\fi
12027      \LayoutPushButtonField{%
12028      \leavevmode
12029      \Hy@escapeform\PDFForm@Push
12030      \pdfstartlink user {\PDFForm@Push}\relax
12031      \MakeButtonField{#2}%
12032      \pdfendlink
12033      \HyField@AddToFields
12034      }%
12035      \fi
12036      \endgroup
12037      }
12038      \def\@Submit[#1]#2{%
12039      \Field@toks={ }%
12040      \def\Fld@width{\DefaultWidthofSubmit}%
12041      \def\Fld@height{\DefaultHeightofSubmit}%
12042      \begingroup

```

```

12043 \expandafter\HyField@SetKeys\expandafter{%
12044 \DefaultOptionsofSubmit,#1%
12045 }%
12046 \HyField@FlagsPushButton
12047 \HyField@FlagsSubmit
12048 \ifFld@hidden\def\Fld@width{1sp}\fi
12049 \leavevmode
12050 \Hy@escapeform\PDFForm@Submit
12051 \pdfstartlink user {%
12052 \PDFForm@Submit
12053 /AP<</N \SubmitObject/D \SubmitPObject>>%
12054 }%
12055 \relax
12056 \MakeButtonField{#2}%
12057 \pdfendlink
12058 \HyField@AddToFields
12059 \endgroup
12060 }
12061 \def\@Reset[#1]#2{%
12062 \Field@toks={ }%
12063 \def\Fld@width{\DefaultWidthofReset}%
12064 \def\Fld@height{\DefaultHeightofReset}%
12065 \begingroup
12066 \expandafter\HyField@SetKeys\expandafter{%
12067 \DefaultOptionsofReset,#1%
12068 }%
12069 \leavevmode
12070 \ifHy@pdfa
12071 \PackageError{hyperref}{%
12072 PDF/A: Reset action is prohibited%
12073 }\@ehc
12074 \MakeButtonField{#2}%
12075 \else
12076 \HyField@FlagsPushButton
12077 \ifFld@hidden\def\Fld@width{1sp}\fi
12078 \Hy@escapeform\PDFForm@Reset
12079 \pdfstartlink user {\PDFForm@Reset}\relax
12080 \MakeButtonField{#2}%
12081 \pdfendlink
12082 \HyField@AddToFields
12083 \fi
12084 \endgroup
12085 }
12086 \def\@CheckBox[#1]#2{% parameters, label
12087 \def\Fld@name{#2}%
12088 \def\Fld@default{0}%
12089 \begingroup
12090 \def\Fld@width{\DefaultWidthofCheckBox}%
12091 \def\Fld@height{\DefaultHeightofCheckBox}%
12092 \Field@toks={ }%
12093 \expandafter\HyField@SetKeys\expandafter{%
12094 \DefaultOptionsofCheckBox,#1%
12095 }%
12096 \PDFForm@Name
12097 \HyField@FlagsCheckBox
12098 \ifFld@hidden\def\Fld@width{1sp}\fi
12099 \LayoutCheckField{#2}{%

```

```

12100 \Hy@escapeform\PDFForm@Check
12101 \pdfstartlink user {\PDFForm@Check}\relax
12102 \MakeCheckField{\Fld@width}{\Fld@height}%
12103 \pdfendlink
12104 \HyField@AddToFields
12105 }%
12106 \endgroup
12107 }
12108 \def\Hy@FormObjects{%
12109 \pdfobj {%
12110 <<%
12111 /Type/Encoding%
12112 /Differences[%
12113 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12114 /ring/tilde %
12115 39/quotesingle %
12116 96/grave %
12117 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12118 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12119 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12120 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12121 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12122 164/currency %
12123 166/brokenbar %
12124 168/dieresis/copyright/ordfeminine %
12125 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12126 /twosuperior/threesuperior/acute/mu %
12127 183/periodcentered/cedilla/onesuperior/ordmasculine %
12128 188/onequarter/onehalf/threequarters %
12129 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12130 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12131 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12132 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12133 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12134 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12135 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12136 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12137 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12138 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12139 ]%
12140 >>%
12141 }%
12142 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12143 \pdfobj{%
12144 <<%
12145 /Type/Font%
12146 /Subtype/Type1%
12147 /Name/ZaDb%
12148 /BaseFont/ZapfDingbats%
12149 >>%
12150 }%
12151 \xdef\OBJ@ZaDb{\the\pdflastobj}%
12152 \pdfobj{%
12153 <<%
12154 /Type/Font%
12155 /Subtype/Type1%
12156 /Name/Helv%

```

```

12157 /BaseFont/Helvetica%
12158 /Encoding \OBJ@pdfdocencoding\space 0 R%
12159 >>%
12160 }%
12161 \xdef\OBJ@Helv{\the\pdfastobj}%
12162 \global\let\Hy@FormObjects\relax
12163 }
12164 \pdfTeX

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

12165 \*dvipdfm | xetex

```

\@Gauge

```

12166 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12167 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12168 }

```

\@Form

```

12169 \def\@Form[#1]{%
12170 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12171 \kvsetkeys{Form}{#1}%
12172 \Hy@FormObjects
12173 \@pdfm@mark{obj @afields []}%
12174 \@pdfm@mark{obj @corder []}%
12175 \@pdfm@mark{%
12176 obj @aform <<%
12177 /Fields @afields%
12178 /DR<<%
12179 /Font<<%
12180 /ZaDb @OBJZaDb%
12181 /Helv @OBJHelv%
12182 >>%
12183 >>%
12184 /DA(/Helv 10 Tf 0 g)%
12185 /CO @corder%
12186 \ifHy@pdfa
12187 \else
12188 /NeedAppearances true%
12189 \fi
12190 >>%
12191 }%
12192 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12193 }

```

\@endForm

```

12194 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

12195 \def\dvipdfm@setdim{%
12196 height \the\ht\pdfm@box\space
12197 width \the\wd\pdfm@box\space
12198 depth \the\dp\pdfm@box\space
12199 }

```

\HyField@AnnotCount

```
12200 \newcount\HyField@AnnotCount
12201 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
12202 \def\HyField@AdvanceAnnotCount{%
12203   \global\advance\HyField@AnnotCount\@ne
12204 }
```

\HyField@TheAnnotCount

```
12205 \def\HyField@TheAnnotCount{%
12206   \the\HyField@AnnotCount
12207 }
```

\@TextField

```
12208 \def\@TextField[#1]#2{% parameters, label
12209   \def\Fld@name{#2}%
12210   \def\Fld@default{}%
12211   \let\Fld@value\@empty
12212   \def\Fld@width{\DefaultWidthofText}%
12213   \def\Fld@height{%
12214     \ifFld@multiline
12215       \DefaultHeightofTextMultiline
12216     \else
12217       \DefaultHeightofText
12218     \fi
12219   }%
12220   \begingroup
12221     \Field@toks={ }%
12222     \expandafter\HyField@SetKeys\expandafter{%
12223       \DefaultOptionsofText,#1%
12224     }%
12225     \PDFForm@Name
12226     \HyField@FlagsText
12227     \ifFld@hidden\def\Fld@width{1sp}\fi
12228     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12229     \setbox\pdfm@box=\hbox{%
12230       \MakeTextField{\Fld@width}{\Fld@height}%
12231     }%
12232     \HyField@AdvanceAnnotCount
12233     \LayoutTextField{#2}{%
12234       \Hy@escapeform\PDFForm@Text
12235       \@pdfm@mark{%
12236         ann @text\HyField@TheAnnotCount\space
12237         \dvipdfm@setdim << \PDFForm@Text >>%
12238       }%
12239     }%
12240     \unhbox\pdfm@box
12241     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12242     % record in @afields array
12243   \endgroup
12244 }
```

\@ChoiceMenu

```
12245 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12246   \def\Fld@name{#2}%
```



```

12247 \let\Fld@default\relax
12248 \let\Fld@value\relax
12249 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12250 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12251 \begingroup
12252 \Fld@menulength=0 %
12253 \@tempdima\z@
12254 \@for\@curropt:=#3\do{%
12255 \expandafter\Fld@checkequals\@curropt==\%
12256 \Hy@StepCount\Fld@menulength
12257 \settowidth{\@tempdimb}{\@currDisplay}%
12258 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12259 }%
12260 \advance\@tempdima by 15\p@
12261 \Field@toks={ }%
12262 \begingroup
12263 \HyField@SetKeys{#1}%
12264 \edef\x{\endgroup
12265 \noexpand\expandafter
12266 \noexpand\HyField@SetKeys
12267 \noexpand\expandafter{%
12268 \expandafter\noexpand\csname DefaultOptionsof%
12269 \ifFld@radio
12270 Radio%
12271 \else
12272 \ifFld@combo
12273 \ifFld@popdown
12274 PopdownBox%
12275 \else
12276 ComboBox%
12277 \fi
12278 \else
12279 ListBox%
12280 \fi
12281 \fi
12282 \endcsname
12283 }%
12284 }\x
12285 \HyField@SetKeys{#1}%
12286 \PDFForm@Name
12287 \ifFld@hidden\def\Fld@width{1sp}\fi
12288 \ifx\Fld@value\relax
12289 \let\Fld@value\Fld@default
12290 \fi
12291 \LayoutChoiceField{#2}{%
12292 \ifFld@radio
12293 \HyField@FlagsRadioButton
12294 \@@Radio{#3}%
12295 \else
12296 \begingroup
12297 \HyField@FlagsChoice
12298 \ifdim\Fld@width<\@tempdima
12299 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12300 \edef\Fld@width{\the\@tempdima}%
12301 \fi
12302 \ifFld@combo
12303 \else

```

```

12304         \@tempdima=\the\Fld@menulength\Fld@charsize
12305         \advance\@tempdima by \Fld@borderwidth bp %
12306         \advance\@tempdima by \Fld@borderwidth bp %
12307         \edef\Fld@height{\the\@tempdima}%
12308     \fi
12309     \@@ListBox{#3}%
12310 \endgroup
12311 \fi
12312 }%
12313 \endgroup
12314 }

```

\@@Radio

```

12315 \def\@@Radio#1{%
12316     \Fld@listcount=0 %
12317     \setbox\pdfm@box=\hbox{%
12318         \MakeRadioField{\Fld@width}{\Fld@height}%
12319     }%
12320     \for\@curropt:=#1\do{%
12321         \expandafter\Fld@checkequals\@curropt==\%
12322         \Hy@StepCount\Fld@listcount
12323         \@currDisplay\space
12324         \leavevmode
12325         \Hy@escapeform\PDFForm@Radio
12326         \ifnum\Fld@listcount=1 %
12327             \HyField@AdvanceAnnotCount
12328         \fi
12329         \@pdfm@mark{%
12330             ann %
12331             \ifnum\Fld@listcount=1 %
12332                 @radio\HyField@TheAnnotCount%
12333                 \space
12334             \fi
12335             \dvipdfm@setdim
12336             <<%
12337             \PDFForm@Radio
12338             /AP<</N<</\@currValue /null>>>>%
12339             >>%
12340         }%
12341         \unhcopy\pdfm@box\space% deliberate space between radio buttons
12342         \ifnum\Fld@listcount=1 %
12343             \@pdfm@mark{%
12344                 put @afields @radio\HyField@TheAnnotCount
12345             }%
12346         \fi
12347     }%
12348 }

```

\Fld@listcount

```

12349 \newcount\Fld@listcount

```

\@@ListBox

```

12350 \def\@@ListBox#1{%
12351     \HyField@PDFChoices{#1}%
12352     \setbox\pdfm@box=\hbox{%
12353         \MakeChoiceField{\Fld@width}{\Fld@height}%
12354     }%

```

```

12355 \leavevmode
12356 \Hy@escapeform\PDFForm@List
12357 \HyField@AdvanceAnnotCount
12358 \@pdfm@mark{%
12359   ann @list\HyField@TheAnnotCount\space
12360   \dvipdfm@setdim
12361   <<\PDFForm@List>>%
12362 }%
12363 \unhbox\pdfm@box
12364 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12365 }

```

\@PushButton

```

12366 \def\@PushButton[#1]#2{% parameters, label
12367   \def\Fld@name{#2}%
12368   \begingroup
12369     \Field@toks={ }%
12370     \expandafter\HyField@SetKeys\expandafter{%
12371       \DefaultOptionsofPushButton,#1%
12372     }%
12373     \PDFForm@Name
12374     \ifHy@pdfa
12375       \PackageError{hyperref}{%
12376         PDF/A: Push button with JavaScript is prohibited%
12377       }\@ehc
12378       \LayoutPushButtonField{%
12379         \leavevmode
12380         \MakeButtonField{#2}%
12381       }%
12382     \else
12383       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12384       \HyField@FlagsPushButton
12385       \ifFld@hidden\def\Fld@width{1sp}\fi
12386       \HyField@AdvanceAnnotCount
12387       \LayoutPushButtonField{%
12388         \leavevmode
12389         \Hy@escapeform\PDFForm@Push
12390         \@pdfm@mark{%
12391           ann @push\HyField@TheAnnotCount\space
12392           \dvipdfm@setdim
12393           <<\PDFForm@Push>>%
12394         }%
12395       }%
12396       \unhbox\pdfm@box
12397       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12398     \fi
12399   \endgroup
12400 }

```

\@Submit

```

12401 \def\@Submit[#1]#2{%
12402   \Field@toks={ }%
12403   \def\Fld@width{\DefaultWidthofSubmit}%
12404   \def\Fld@height{\DefaultHeightofSubmit}%
12405   \begingroup
12406     \expandafter\HyField@SetKeys\expandafter{%
12407       \DefaultOptionsofSubmit,#1%

```

```

12408 }%
12409 \HyField@FlagsPushButton
12410 \HyField@FlagsSubmit
12411 \ifFld@hidden\def\Fld@width{1sp}\fi
12412 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12413 \leavevmode
12414 \Hy@escapeform\PDFForm@Submit
12415 \HyField@AdvanceAnnotCount
12416 \@pdfm@mark{%
12417   ann @submit\HyField@TheAnnotCount\space
12418   \dvipdfm@setdim
12419   <<\PDFForm@Submit>>%
12420 }%
12421 \unhbox\pdfm@box%
12422 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12423 \endgroup
12424 }

```

\@Reset

```

12425 \def\@Reset[#1]#2{%
12426   \Field@toks={ }%
12427   \def\Fld@width{\DefaultWidthofReset}%
12428   \def\Fld@height{\DefaultHeightofReset}%
12429   \begingroup
12430     \expandafter\HyField@SetKeys\expandafter{%
12431       \DefaultOptionsofReset,#1%
12432     }%
12433     \leavevmode
12434     \ifHy@pdfa
12435       \PackageError{hyperref}{%
12436         PDF/A: Reset action is prohibited%
12437       }\@ehc
12438       \MakeButtonField{#2}%
12439     \else
12440       \HyField@FlagsPushButton
12441       \ifFld@hidden\def\Fld@width{1sp}\fi
12442       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12443       \Hy@escapeform\PDFForm@Reset
12444       \HyField@AdvanceAnnotCount
12445       \@pdfm@mark{%
12446         ann @reset\HyField@TheAnnotCount\space
12447         \dvipdfm@setdim
12448         <<\PDFForm@Reset>>%
12449       }%
12450       \unhbox\pdfm@box
12451       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12452     \fi
12453   \endgroup
12454 }

```

\@CheckBox

```

12455 \def\@CheckBox[#1]#2{% parameters, label
12456   \def\Fld@name{#2}%
12457   \def\Fld@default{0}%
12458   \begingroup
12459     \def\Fld@width{\DefaultWidthofCheckBox}%
12460     \def\Fld@height{\DefaultHeightofCheckBox}%

```

```

12461 \Field@toks={ }%
12462 \expandafter\HyField@SetKeys\expandafter{%
12463 \DefaultOptionsofCheckBox,#1%
12464 }%
12465 \PDFForm@Name
12466 \HyField@FlagsCheckBox
12467 \ifFld@hidden\def\Fld@width{1sp}\fi
12468 \setbox\pdfm@box=\hbox{%
12469 \MakeCheckField{\Fld@width}{\Fld@height}%
12470 }%
12471 \HyField@AdvanceAnnotCount
12472 \LayoutCheckField{#2}{%
12473 \Hy@escapeform\PDFForm@Check
12474 \@pdfm@mark{%
12475 ann @check\HyField@TheAnnotCount\space
12476 \dvipdfm@setdim
12477 <<\PDFForm@Check>>%
12478 }%
12479 \unhbox\pdfm@box
12480 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12481 }%
12482 \endgroup
12483 }

12484 \def\Hy@FormObjects{%
12485 \@pdfm@mark{obj @OBJpdfdocencoding%
12486 <<%
12487 /Type/Encoding%
12488 /Differences%
12489 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12490 39/quotesingle %
12491 96/grave %
12492 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12493 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12494 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12495 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12496 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12497 164/currency %
12498 166/brokenbar %
12499 168/dieresis/copyright/ordfeminine %
12500 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12501 /twosuperior/threesuperior/acute/mu %
12502 183/periodcentered/cedilla/onesuperior/ordmasculine %
12503 188/onequarter/onehalf/threequarters %
12504 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12505 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12506 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12507 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12508 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12509 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12510 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12511 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12512 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12513 /thorn/ydieresis%
12514 ]%
12515 >>%
12516 }%
12517 \@pdfm@mark{obj @OBJZaDb%

```

```

12518 <<%
12519 /Type/Font%
12520 /Subtype/Type1%
12521 /Name/ZaDb%
12522 /BaseFont/ZapfDingbats%
12523 >>%
12524 }%
12525 \@pdfm@mark{obj @OBJHelv%
12526 <<%
12527 /Type/Font%
12528 /Subtype/Type1%
12529 /Name/Helv%
12530 /BaseFont/Helvetica%
12531 /Encoding @OBJpdfdocencoding%
12532 >>%
12533 }%
12534 \global\let\Hy@FormObjects\relax
12535 }
12536 </dvipdfm | xetex>

```

47.6 Common forms part

```
12537 <*pdfform>
```

\Hy@escapestring

```

12538 \begingroup\expandafter\expandafter\expandafter\endgroup
12539 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12540 \let\Hy@escapestring\@firstofone
12541 \def\Hy@escapeform#1{%
12542 \ifHy@escapeform
12543 \def\Hy@escapestring##1{%
12544 \noexpand\Hy@escapestring{\noexpand##1}%
12545 }%
12546 \edef\Hy@temp{#1}%
12547 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
12548 \def\Hy@escapestring##1{%
12549 \@ifundefined{Hy@esc@\string##1}{%
12550 ##1%
12551 \ThisShouldNotHappen
12552 }{%
12553 \csname Hy@esc@\string##1\endcsname
12554 }%
12555 }%
12556 \else
12557 \let\Hy@escapestring\@firstofone
12558 \fi
12559 }%
12560 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12561 \ifx\#3\%
12562 \else
12563 \expandafter
12564 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12565 \Hy@ReturnAfterFi{%
12566 \Hy@@escapeform#3\@nil
12567 }%
12568 \fi
12569 }%

```

```

12570 \else
12571   \def\Hy@escapeform#1{%
12572     \ifHy@escapeform
12573       \let\Hy@escapestring\pdfescapestring
12574     \else
12575       \let\Hy@escapestring\@firstofone
12576     \fi
12577   }%
12578   \Hy@escapeform{}}%
12579 \fi

```

\PDFForm@Name

```

12580 \def\PDFForm@Name{%
12581   \begingroup
12582   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12583     \ifHy@unicode
12584       \Hy@unicodedefalse
12585     \fi
12586   \fi
12587   \HyPsd@XeTeXBigCharstrue
12588   \pdfstringdef\Hy@gtemp\Fld@name
12589 \endgroup
12590 \let\Fld@name\Hy@gtemp
12591 }

```

\PDFForm@Check

```

12592 \def\PDFForm@Check{%
12593   /Subtype/Widget%
12594   \Fld@annotflags
12595   /T(\Fld@name)%
12596   /FT/Btn%
12597   \Fld@flags
12598   /Q \Fld@align
12599   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12600   /MK<<%
12601     \ifnum\Fld@rotation=\z@
12602     \else
12603       /R \Fld@rotation
12604     \fi
12605     \ifx\Fld@bordercolor\relax
12606     \else
12607       /BC[\Fld@bordercolor]%
12608     \fi
12609     \ifx\Fld@bcolor\relax
12610     \else
12611       /BG[\Fld@bcolor]%
12612     \fi
12613     /CA(\Hy@escapestring{\Fld@cbsymbol})}%
12614   >>%
12615   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12616     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12617   /H/P%
12618   \ifFld@checked /V/Yes\else /V/Off\fi
12619 }

```

\PDFForm@Push

```

12620 \ifHy@pdfa

```

```

12621 \else
12622   \def\PDFForm@Push{%
12623     /Subtype/Widget%
12624     \Fld@annotflags
12625     /T(\Fld@name)%
12626     /FT/Btn%
12627     \Fld@flags
12628     /H/P%
12629     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12630     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12631       \ifx\Fld@bordercolor\relax\else 1\fi
12632       \space
12633     \else
12634       /MK<<%
12635         \ifnum\Fld@rotation=\z@
12636         \else
12637           /R \Fld@rotation
12638         \fi
12639         \ifx\Fld@bordercolor\relax
12640         \else
12641           /BC[\Fld@bordercolor]%
12642         \fi
12643       >>%
12644     \fi
12645     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12646   }%
12647 \fi

```

\Fld@additionalactions

```

12648 \def\Fld@@additionalactions{%
K input (keystroke) format
12649 \ifx\Fld@keystroke@code\@empty
12650 \else
12651   /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12652 \fi
F display format
12653 \ifx\Fld@format@code\@empty
12654 \else
12655   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12656 \fi
V validation
12657 \ifx\Fld@validate@code\@empty
12658 \else
12659   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12660 \fi
C calculation
12661 \ifx\Fld@calculate@code\@empty
12662 \else
12663   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12664 \fi
Fo receiving the input focus
12665 \ifx\Fld@onfocus@code\@empty
12666 \else
12667   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12668 \fi

```


Bl loosing the input focus (blurred)

```
12669 \ifx\Fld@onblur@code\@empty
12670 \else
12671 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12672 \fi
```

D pressing the mouse button (down)

```
12673 \ifx\Fld@onmousedown@code\@empty
12674 \else
12675 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12676 \fi
```

U releasing the mouse button (up)

```
12677 \ifx\Fld@onmouseup@code\@empty
12678 \else
12679 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12680 \fi
```

E cursor enters the annotation's active area.

```
12681 \ifx\Fld@onenter@code\@empty
12682 \else
12683 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12684 \fi
```

X cursor exits the annotation's active area.

```
12685 \ifx\Fld@onexit@code\@empty
12686 \else
12687 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12688 \fi
```

```
12689 }
12690 \def\Fld@additionalactions{%
12691 \if\Fld@@additionalactions-%
12692 \else
12693 \ifHy@pdfa
12694 \else
12695 /AA<<\Fld@@additionalactions>>%
12696 \fi
12697 \fi
12698 }
```

\PDFForm@List

```
12699 \def\PDFForm@List{%
12700 /Subtype/Widget%
12701 \Fld@annotflags
12702 /T(\Fld@name)%
12703 /FT/Ch%
12704 \Fld@flags
12705 /Q \Fld@align
12706 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12707 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12708 \ifx\Fld@bordercolor\relax\else 1\fi
12709 \ifx\Fld@bcolor\relax \else 1\fi
12710 \space
12711 \else
12712 /MK<<%
12713 \ifnum\Fld@rotation=\z@
12714 \else
12715 /R \Fld@rotation
12716 \fi
```

```

12717 \ifx\Fld@bordercolor\relax
12718 \else
12719 /BC[\Fld@bordercolor]%
12720 \fi
12721 \ifx\Fld@bcolor\relax
12722 \else
12723 /BG[\Fld@bcolor]%
12724 \fi
12725 >>%
12726 \fi
12727 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12728 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12729 \Fld@choices
12730 \Fld@additionalactions
12731 }

```

\PDFForm@Radio

```

12732 \def\PDFForm@Radio{%
12733 /Subtype/Widget%
12734 \Fld@annotflags
12735 /T(\Fld@name)%
12736 /FT/Btn%
12737 \Fld@flags
12738 /H/P%
12739 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12740 /MK<<%
12741 \ifnum\Fld@rotation=\z@
12742 \else
12743 /R \Fld@rotation
12744 \fi
12745 \ifx\Fld@bordercolor\relax
12746 \else
12747 /BC[\Fld@bordercolor]%
12748 \fi
12749 \ifx\Fld@bcolor\relax
12750 \else
12751 /BG[\Fld@bcolor]%
12752 \fi
12753 /CA(\Fld@radiosymbol)%
12754 >>%
12755 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12756 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12757 \ifx\@currValue\Fld@default
12758 /V/\Fld@default
12759 \else
12760 /V/Off%
12761 \fi
12762 \Fld@additionalactions
12763 }

```

\PDFForm@Text

```

12764 \def\PDFForm@Text{%
12765 /Subtype/Widget%
12766 \Fld@annotflags
12767 /T(\Fld@name)%
12768 /FT/Tx%
12769 \Fld@flags

```

```

12770 /Q \Fld@align
12771 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12772 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12773     \ifx\Fld@bordercolor\relax\else 1\fi
12774     \ifx\Fld@bcolor\relax \else 1\fi
12775     \space
12776 \else
12777 /MK<<%
12778     \ifnum\Fld@rotation=\z@
12779     \else
12780     /R \Fld@rotation
12781     \fi
12782     \ifx\Fld@bordercolor\relax
12783     \else
12784     /BC[\Fld@bordercolor]%
12785     \fi
12786     \ifx\Fld@bcolor\relax
12787     \else
12788     /BG[\Fld@bcolor]%
12789     \fi
12790 >>%
12791 \fi
12792 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12793     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12794 /DV(\Hy@escapestring{\Fld@default})%
12795 /V(\Hy@escapestring{\Fld@value})%
12796 \Fld@additionalactions
12797 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12798 }

```

\PDFForm@Submit

```

12799 \def\PDFForm@Submit{%
12800 /Subtype/Widget%
12801 \Fld@annotflags
12802 /T(\Fld@name)%
12803 /FT/Btn%
12804 \Fld@flags
12805 /H/P%
12806 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12807 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12808     \ifx\Fld@bordercolor\relax\else 1\fi
12809     \space
12810 \else
12811 /MK<<%
12812     \ifnum\Fld@rotation=\z@
12813     \else
12814     /R \Fld@rotation
12815     \fi
12816     \ifx\Fld@bordercolor\relax
12817     \else
12818     /BC[\Fld@bordercolor]%
12819     \fi
12820 >>%
12821 \fi
12822 /A<<%
12823 /S/SubmitForm%
12824 /F<<%

```

```

12825    /FS/URL%
12826    /F(\Hy@escapestring{\Form@action})%
12827    >>%
12828    \Fld@submitflags
12829    >>%
12830 }

```

\PDFForm@Reset

```

12831 \ifHy@pdfa
12832 \else
12833 \def\PDFForm@Reset{%
12834   /Subtype/Widget%
12835   \Fld@annotflags
12836   /T(\Fld@name)%
12837   /FT/Btn%
12838   \Fld@flags
12839   /H/P%
12840   /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12841   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12842     \ifx\Fld@bordercolor\relax\else 1\fi
12843     \space
12844   \else
12845     /MK<<%
12846     \ifnum\Fld@rotation=\z@
12847     \else
12848       /R \Fld@rotation
12849     \fi
12850     \ifx\Fld@bordercolor\relax
12851     \else
12852       /BC[\Fld@bordercolor]%
12853     \fi
12854 %    /CA (Clear)
12855 %    /AC (Done)
12856    >>%
12857    \fi
12858    /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12859    /A<</S/ResetForm>>%
12860 }%
12861 \fi

12862 </pdfform>
12863 <*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`

```

12864 \def\phantomsection{%
12865   \Hy@MakeCurrentHrefAuto{section*}%
12866   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12867 }

```

12868 \langle /package \rangle

48.1 Bookmarks

12869 \langle *outlines \rangle

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See paper.pdf and slides.pdf in the doc directory of hyperref.

When using the right-to-left typesetting based on ε -TeX, the order of the \BOOKMARK commands written to the \@outlinefile could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the bookmark@seq@number counter is used to write the bookmark's sequential number into a comment in the \@outlinefile, which could be used to post-process it to achieve the proper ordering of \BOOKMARK commands in that file.

```
12870 \def\Hy@writebookmark#1#2#3#4#5{%
12871   % section number, text, label, level, file
12872   \ifx\WriteBookmarks\relax%
12873   \else
12874     \ifnum#4>\Hy@bookmarksdepth\relax
12875     \else
12876       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12877     \fi
12878   \fi
12879 }
12880 \def\Hy@currentbookmarklevel{0}
12881 \def\Hy@numberline#1{#1 }
12882 \def\@@@writetorep#1#2#3#4#5{%
12883   \begingroup
12884     \edef\Hy@tempa{#5}%
12885     \ifx\Hy@tempa\Hy@bookmarkstype
12886       \edef\Hy@level{#4}%
12887       \ifx\Hy@levelcheck Y%
12888         \@tempcnta\Hy@level\relax
12889         \advance\@tempcnta by -1 %
12890         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12891           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12892           \advance\@tempcnta by 1 %
12893           \Hy@Warning{%
12894             Difference (\the\@tempcnta) between bookmark levels is %
12895             greater \MessageBreak than one, level fixed%
12896           }%
12897           \@tempcnta\Hy@currentbookmarklevel
12898           \advance\@tempcnta by 1 %
12899           \edef\Hy@level{\the\@tempcnta}%
12900         \fi
12901       \else
12902         \global\let\Hy@levelcheck Y%
12903       \fi
12904       \global\let\Hy@currentbookmarklevel\Hy@level
12905       \@tempcnta\Hy@level\relax
12906       \expandafter\edef\csname Parent\Hy@level\endcsname{#3}%

```

```

12907 \advance\@tempcnta by -1 %
12908 \edef\Hy@tempa{#3}%
12909 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12910 \ifx\Hy@tempa\Hy@tempb
12911 \Hy@Warning{%
12912 The anchor of a bookmark and its parent's must not%
12913 \MessageBreak be the same. Added a new anchor%
12914 }%
12915 \phantomsection
12916 \fi
12917 \ifHy@bookmarksnumbered
12918 \let\numberline\Hy@numberline
12919 \let\booknumberline\Hy@numberline
12920 \let\partnumberline\Hy@numberline
12921 \let\chapternumberline\Hy@numberline
12922 \else
12923 \let\numberline\@gobble
12924 \let\booknumberline\@gobble
12925 \let\partnumberline\@gobble
12926 \let\chapternumberline\@gobble
12927 \fi
12928 \HyPsd@XeTeXBigCharstrue
12929 \pdfstringdef\Hy@tempa{#2}%
12930 \HyPsd@SanitizeForOutFile\Hy@tempa
12931 \if@filesw
12932 \stepcounter{bookmark@seq@number}%
12933 \@ifundefined{@outlinefile}{%
12934 }{%
12935 \protected@write\@outlinefile{}{%
12936 \protect\BOOKMARK
12937 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12938 {\Hy@tempa}\Hy@tempb}%
12939 \@percentchar\space\thebookmark@seq@number
12940 }%
12941 }%
12942 \fi
12943 \fi
12944 \endgroup
12945 }
12946 \newcounter{bookmark@seq@number}

12947 \begingroup
12948 \lccode'('= '{%
12949 \lccode'='='}%
12950 \lccode'1=\z@
12951 \lccode'2=\z@
12952 \lccode'3=\z@
12953 \lccode'5=\z@
12954 \lccode'7=\z@
12955 \lccode'\#=\z@
12956 \lccode'\='=\z@
12957 \lccode'\{=\z@
12958 \lccode'\}=\z@
12959 \lowercase{%
12960 \endgroup
12961 \def\HyPsd@SanitizeForOutFile#1{%
12962 \@onelevel@sanitize\Hy@tempa
12963 \escapechar'\%

```

```

12964 \edef\Hy@tempa{%
12965   \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12966 }%
12967 \edef\Hy@tempa{%
12968   \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12969 }%
12970 }%
12971 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12972   #1%
12973   \ifx\#2\%
12974     \expandafter\ltx@gobble
12975   \else
12976     \expandafter\ltx@firstofone
12977   \fi
12978   {%
12979     \string\173%
12980     \HyPsd@SanitizeOut@BraceLeft#2\@nil
12981   }%
12982 }%
12983 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12984   #1%
12985   \ifx\#2\%
12986     \expandafter\ltx@gobble
12987   \else
12988     \expandafter\ltx@firstofone
12989   \fi
12990   {%
12991     \string\175%
12992     \HyPsd@SanitizeOut@BraceRight#2\@nil
12993   }%
12994 }%
12995 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

12996 \newcommand{\currentpdfbookmark}{%
12997   \pdfbookmark[\Hy@currentbookmarklevel]%
12998 }
12999 \newcommand{\subpdfbookmark}{%
13000   \@tempcnta\Hy@currentbookmarklevel
13001   \Hy@StepCount\@tempcnta
13002   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
13003 }
13004 \newcommand{\belowpdfbookmark}[2]{%
13005   \@tempcnta\Hy@currentbookmarklevel
13006   \Hy@StepCount\@tempcnta
13007   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
13008   \advance\@tempcnta by -1 %
13009   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
13010 }

```

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.

```

13011 \renewcommand\pdfbookmark[3][0]{%
13012   \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
13013   \hyper@anchorstart{#3.#1}\hyper@anchorend
13014 }

```

```

13015 \def\BOOKMARK{%
13016   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
13017 }
13018 \def\@BOOKMARK[#1]{%
13019   \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
13020 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo.pdf macros.

48.1.1 Rerun warning

\Hy@OutlineRerunCheck

```

13021 \RequirePackage{rerunfilecheck}[2009/12/10]
13022 \def\Hy@OutlineRerunCheck{%
13023   \RerunFileCheck{\jobname.out}{%
13024     \immediate\closeout\@outlinefile
13025   }{%
13026     Rerun to get outlines right\MessageBreak
13027     or use package 'bookmark'%
13028   }%
13029 }

```

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 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.

```

13030 \langle *vtex \rangle
13031 \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.

```

13032 \begingroup
13033   \catcode'\='=12 %
13034   \ifnum\Hy@VTeXversion<650 %
13035     \catcode'\="=12 %
13036     \gdef\hv@pdf@char#1#2#3{%
13037       \char
13038       \ifcase'#1#2#3 %
13039         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13040         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13041         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13042         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13043         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13044         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13045         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13046         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13047         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13048         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13049         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13050         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13051         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13052         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13053         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%

```



```

13054 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13055 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13056 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13057 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13058 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13059 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13060 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13061 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13062 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13063 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13064 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13065 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13066 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13067 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
13068 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13069 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13070 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13071 \fi
13072 }%
13073 \else
13074 \gdef\hv@pdf@char{\char'}%
13075 \fi
13076 \endgroup

```

\@@BOOKMARK

```

13077 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13078 \expandafter\edef\csname @count@#3\endcsname{%
13079 \the\@serial@counter
13080 }%
13081 \edef\@mycount{\the\@serial@counter}%
13082 \Hy@StepCount\@serial@counter
13083 \edef\@parcount{%
13084 \expandafter\ifx\csname @count@#5\endcsname\relax
13085 0%
13086 \else
13087 \csname @count@#5\endcsname
13088 \fi
13089 }%
13090 \immediate\special{%
13091 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13092 s=\ifx#2-c\else o\fi,t=#4%
13093 }%
13094 }%

```

\ReadBookmarks

```

13095 \def\ReadBookmarks{%
13096 \begingroup
13097 \def\0{\hv@pdf@char 0}%
13098 \def\1{\hv@pdf@char 1}%
13099 \def\2{\hv@pdf@char 2}%
13100 \def\3{\hv@pdf@char 3}%
13101 \def\({}%
13102 \def\)}%
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 \InputIfFileExists{\jobname.out}{-}{-}%
13115 \endgroup
13116 \ifx\WriteBookmarks\relax
13117 \else
13118   \if@filesw
13119     \newwrite\@outlinefile
13120     \Hy@OutlineRerunCheck
13121     \immediate\openout\@outlinefile=\jobname.out\relax
13122     \ifHy@typexml
13123       \immediate\write\@outlinefile{<relaxxml>\relax}%
13124     \fi
13125   \fi
13126 \fi
13127 }

13128 </vtex>
13129 <!*vtex>
13130 \def\ReadBookmarks{%
13131   \begingroup
13132   \def\do##1{%
13133     \ifnum\catcode'##1=\active
13134       \@makeother##1%
13135     \else
13136       \ifnum\catcode'##1=6 %
13137       \@makeother##1%
13138       \fi
13139     \fi
13140   }%
13141   \dospecials
13142   \Hy@safe@activetrue
13143   \escapechar='\%
13144   \def\@@BOOKMARK[##1][##2]##3##4##5{%
13145     \calc@bm@number{##5}%
13146   }%
13147   \InputIfFileExists{\jobname.out}{-}{-}%
13148   \ifx\WriteBookmarks\relax
13149     \global\let\WriteBookmarks\relax
13150   \fi
13151   \def\@@BOOKMARK[##1][##2]##3##4##5{%
13152     \def\Hy@temp{##4}%
13153   <*pdftex>
13154     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13155     \Hy@OutlineName{\Hy@pstringName{%
13156       ##2\check@bm@number{##3}}%
13157     }{%
13158       \expandafter\strip@prefix\meaning\Hy@temp
13159     }%
13160 </pdftex>
13161 <*pdfmark>
13162   \pdfmark{%
13163     pdfmark=/OUT,%

```

```

13164     Count={##2\check@bm@number{##3}},%
13165     Dest={##3},%
13166     Title=\expandafter\strip@prefix\meaning\Hy@temp
13167 }%
13168 </pdfmark>
13169 <*dvipdfm | xetex>
13170   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13171   \@pdfm@mark{%
13172     outline \ifHy@DvipdfmxOutlineOpen
13173       [%
13174         \ifnum##21>\z@
13175         \else
13176         -%
13177         \fi
13178       ] %
13179       \fi
13180       ##1<<%
13181       /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13182       /A<<%
13183       /S/GoTo%
13184       /D(\Hy@pstringName)%
13185       >>%
13186       >>%
13187     }%
13188 </dvipdfm | xetex>
13189 }%
13190 {%
13191   \def\WriteBookmarks{0}%
13192   \InputIfFileExists{\jobname.out}{\relax}%
13193 }%
13194 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}}%
13195 \ifx\WriteBookmarks\relax
13196 \else
13197   \if@filesw
13198     \newwrite\@outlinefile
13199     \Hy@OutlineRerunCheck
13200     \immediate\openout\@outlinefile=\jobname.out\relax
13201     \ifHy@typexml
13202       \immediate\write\@outlinefile{<relaxxml>\relax}%
13203     \fi
13204   \fi
13205 \fi
13206 \endgroup
13207 }
13208 <*pdftex>
13209 \def\Hy@OutlineName#1#2#3#4{%
13210   \pdfoutline goto name{#2}count#3{#4}%
13211 }
13212 </pdftex>
13213 \def\check@bm@number#1{%
13214   \expandafter\ifx\csname B_#1\endcsname\relax
13215     0%
13216   \else
13217     \csname B_#1\endcsname
13218   \fi
13219 }
13220 \def\calc@bm@number#1{%

```

```

13221 \@tempcnta=\check@bm@number{#1}\relax
13222 \advance\@tempcnta by 1 %
13223 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13224 }
13225 \</!vtex>

13226 \ifHy@implicit
13227 \else
13228 \expandafter\endinput
13229 \fi

13230 \</outlines>
13231 \<*outlines | hypertex>

13232 \newlength\Hy@SectionHShift
13233 \def\Hy@SectionAnchorHref#1{%
13234 \ifx\protect\@typeset@protect
13235 \Hy@@@SectionAnchor{#1}%
13236 \fi
13237 }
13238 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
13239 \leavevmode
13240 \hbox to 0pt{%
13241 \kern-\Hy@SectionHShift
13242 \Hy@raisedlink{%
13243 \hyper@anchorstart{#1}\hyper@anchorend
13244 }%
13245 \hss
13246 }%
13247 }
13248 \let\H@old@ssect\@ssect
13249 \def\@ssect#1#2#3#4#5{%
13250 \Hy@MakeCurrentHrefAuto{section*}%
13251 \setlength{\Hy@SectionHShift}{#1}%
13252 \begingroup
13253 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13254 \toks\tw@\expandafter{%
13255 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13256 #5%
13257 }%
13258 \edef\x{\endgroup
13259 \the\toks@{\the\toks\tw@}}%
13260 }\x
13261 }
13262 \let\H@old@schapter\@schapter
13263 \def\@schapter#1{%
13264 \begingroup
13265 \let\@mkboth\@gobbletwo
13266 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13267 \Hy@raisedlink{%
13268 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13269 }%
13270 \endgroup
13271 \H@old@schapter{#1}%
13272 }

```

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:

```

13273 \ltx@ifundefined{@chapter}{%}{%
13274   \let\Hy@org@chapter\@chapter
13275   \def\@chapter{%
13276     \def\Hy@next{%
13277       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13278       \Hy@raisedlink{%
13279         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13280       }%
13281     }%
13282     \ifnum\c@secnumdepth>\m@ne
13283       \ltx@ifundefined{if@mainmatter}%
13284       \iftrue{\csname if@mainmatter\endcsname}%
13285       \let\Hy@next\relax
13286     \fi
13287   \fi
13288   \Hy@next
13289   \Hy@org@chapter
13290 }%
13291 }

13292 \let\H@old@part\@part
13293 \begingroup\expandafter\expandafter\expandafter\endgroup
13294 \expandafter\ifx\csname chapter\endcsname\relax
13295   \let\Hy@secnum@part\z@
13296 \else
13297   \let\Hy@secnum@part\m@ne
13298 \fi
13299 \def\@part{%
13300   \ifnum\Hy@secnum@part>\c@secnumdepth
13301     \phantomsection
13302   \fi
13303   \H@old@part
13304 }

13305 \let\H@old@spart\@spart
13306 \def\@spart#1{%
13307   \Hy@MakeCurrentHrefAuto{part*}%
13308   \Hy@raisedlink{%
13309     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13310   }%
13311   \H@old@spart{#1}%
13312 }

13313 \let\H@old@sect\@sect
13314 \def\@sect#1#2#3#4#5#6[#7]#8{%
13315   \ifnum #2>\c@secnumdepth
13316     \expandafter\@firstoftwo
13317   \else
13318     \expandafter\@secondoftwo
13319   \fi
13320   {%
13321     \Hy@MakeCurrentHrefAuto{section*}%
13322     \setlength{\Hy@SectionHShift}{#3}%
13323     \begingroup
13324       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13325       \toks\tw@\expandafter{%
13326         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13327         #8%
13328       }%
13329     \edef\x{\endgroup

```

```

13330 \the\toks@{\the\toks\tw@}%
13331 }\x
13332 }{%
13333 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13334 }%
13335 }

13336 </outlines | hypertex>
13337 <*outlines>

13338 \expandafter\def\csname Parent-4\endcsname{}
13339 \expandafter\def\csname Parent-3\endcsname{}
13340 \expandafter\def\csname Parent-2\endcsname{}
13341 \expandafter\def\csname Parent-1\endcsname{}
13342 \expandafter\def\csname Parent0\endcsname{}
13343 \expandafter\def\csname Parent1\endcsname{}
13344 \expandafter\def\csname Parent2\endcsname{}
13345 \expandafter\def\csname Parent3\endcsname{}
13346 \expandafter\def\csname Parent4\endcsname{}

13347 </outlines>

```

49 Compatibility with koma-script classes

```

13348 <*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.

```

13349 \def\Hy@tempa{%
13350 \def\@addchap{##1}##2{%
13351 \typeout{##2}%
13352 \if@twoside
13353 \@mkboth{##1}{}%
13354 \else
13355 \@mkboth{}{##1}%
13356 \fi
13357 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13358 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13359 \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
13360 \Hy@raisedlink{%
13361 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13362 }%
13363 \if@twocolumn
13364 \@topnewpage[\@makeschapterhead{##2}]%
13365 \else
13366 \@makeschapterhead{##2}%
13367 \@afterheading
13368 \fi
13369 \addcontentsline{toc}{chapter}{##1}%
13370 }%
13371 }

13372 \ifclassloaded{scrbook}{%
13373 \ifclasslater{scrbook}{2001/01/01}{%
13374 \let\Hy@tempa\@empty
13375 }{}%
13376 }{}%

```

```

13377 \@ifclassloaded{scrreprt}{%
13378 \@ifclasslater{scrreprt}{2001/01/01}{%
13379 \let\Hy@tempa\@empty
13380 }{}%
13381 }{}%
13382 \let\Hy@tempa\@empty
13383 }%
13384 }%
13385 \Hy@tempa
13386 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13387 <*pd1enc>
13388 \DeclareFontEncoding{PD1}{}{}

Accents
13389 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13390 \DeclareTextAccent{\'}{PD1}{\textacute}
13391 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
13392 \DeclareTextAccent{\~}{PD1}{\texttilde}
13393 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13394 \DeclareTextAccent{\r}{PD1}{\textring}
13395 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13396 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13397 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13398 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13399 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13400 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13401 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13402 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13403 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
13404 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13405 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13406 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13407 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13408 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13409 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13410 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13411 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13412 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13413 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13414 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13415 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
13416 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13417 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13418 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13419 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13420 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13421 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13422 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13423 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13424 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}

```

```

13425 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13426 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13427 \DeclareTextCommand{\newtie}{PD1}[1]{%
13428   \TextSymbolUnavailable{\newtie{#1}}#1%
13429 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

13430 % U+0009 (CHARACTER TABULATION)
13431 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13432 % U+000A (LINE FEED)
13433 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13434 % U+000D (CARRIAGE RETURN)
13435 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

13436 % U+02D8 BREVE; breve
13437 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13438 % U+02C7 CARON; caron
13439 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13440 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13441 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
13442 % U+02D9 DOT ABOVE; dotaccent
13443 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13444 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13445 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13446 % U+02DB OGONEK; ogonek
13447 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13448 % U+02DA RING ABOVE; ring
13449 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13450 % U+02DC SMALL TILDE; ilde, *tilde
13451 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

13452 % U+0022 QUOTATION MARK; quotedbl
13453 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13454 % U+0023 NUMBER SIGN; numbersign
13455 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13456 % U+0024 DOLLAR SIGN; dollar
13457 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13458 % U+0025 PERCENT SIGN; percent
13459 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13460 % U+0026 AMPERSAND; ampersand
13461 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

```

13462 % U+0028 LEFT PARENTHESIS; parenleft
13463 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
13464 % U+0029 RIGHT PARENTHESIS; parenright
13465 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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

```

13466 % U+002E FULL STOP; period
13467 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E

```


\057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero
 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 13468 % U+003C LESS-THAN SIGN; less
 13469 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13470 % U+003E GREATER-THAN SIGN; greater
 13471 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 13472 % U+005C REVERSE SOLIDUS; backslash
 13473 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13474 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13475 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13476 % U+005F LOW LINE; underscore
 13477 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13478 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13479 % U+0060 GRAVE ACCENT; grave
 13480 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13481 % U+0069 LATIN SMALL LETTER I; i
 13482 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13483 % U+007B LEFT CURLY BRACKET; braceleft
 13484 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13485 % U+007C VERTICAL LINE; *bar, verticalbar
 13486 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13487 % U+007D RIGHT CURLY BRACKET; braceright
 13488 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13489 % U+007E TILDE; asciitilde
 13490 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13491 % U+2022 BULLET; bullet
 13492 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13493 % U+2020 DAGGER; dagger
 13494 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13495 % U+2021 DOUBLE DAGGER; daggerdbl
 13496 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13497 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13498 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13499 % U+2014 EM DASH; emdash
 13500 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014

13501 % U+2013 EN DASH; endash
13502 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
13503 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
13504 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
13505 % U+2044 FRACTION SLASH; fraction
13506 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
13507 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
13508 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
13509 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
ingright
13510 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
13511 % U+2212 MINUS SIGN; minus
13512 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
13513 % U+2030 PER MILLE SIGN; perthousand
13514 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
13515 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
13516 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13517 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13518 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13519 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13520 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13521 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13522 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13523 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13524 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13525 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13526 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13527 % U+2122 TRADE MARK SIGN; trademark
13528 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13529 % U+FB01 LATIN SMALL LIGATURE FI; fi
13530 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13531 % U+FB02 LATIN SMALL LIGATURE FL; fl
13532 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13533 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13534 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13535 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13536 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13537 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13538 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13539 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13540 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
13541 \DeclareTextCommand{\IJ}{PD1}{\230}
13542 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13543 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13544 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13545 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13546 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13547 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13548 % U+0153 LATIN SMALL LIGATURE OE; oe
13549 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13550 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13551 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13552 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13553 \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.

13554 % U+20AC EURO SIGN; *Euro, euro
 13555 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13556 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13557 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13558 % U+00A2 CENT SIGN; cent
 13559 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13560 % U+00A3 POUND SIGN; sterling
 13561 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13562 % U+00A4 CURRENCY SIGN; currency
 13563 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13564 % U+00A5 YEN SIGN; yen
 13565 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13566 % U+00A6 BROKEN BAR; brokenbar
 13567 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13568 % U+00A7 SECTION SIGN; section
 13569 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13570 % U+00A8 DIAERESIS; dieresis
 13571 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13572 % U+00A9 COPYRIGHT SIGN; copyright
 13573 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13574 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13575 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13576 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13577 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13578 % U+00AC NOT SIGN; logicalnot
 13579 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13580 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 13581 % U+00AE REGISTERED SIGN; registered
 13582 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13583 % U+00AF MACRON; *macron, overscore
 13584 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13585 % U+00B0 DEGREE SIGN; degree
 13586 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13587 % U+00B1 PLUS-MINUS SIGN; plusminus
 13588 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13589 % U+00B2 SUPERScript TWO; twosuperior
 13590 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13591 % U+00B3 SUPERScript THREE; threesuperior
 13592 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13593 % U+00B4 ACUTE ACCENT; acute
 13594 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13595 % U+00B5 MICRO SIGN; mu, mul
 13596 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13597 % U+00B6 PILCROW SIGN; paragraph
 13598 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13599 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13600 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 13601 % U+00B8 CEDILLA; cedilla
 13602 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13603 % U+00B9 SUPERScript ONE; onesuperior
 13604 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 13605 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13606 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 13607 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright

13608 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13609 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13610 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13611 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13612 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13613 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13614 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13615 % U+00BF INVERTED QUESTION MARK; questiondown
13616 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13617 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13618 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13619 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13620 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13621 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13622 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13623 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13624 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13625 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13626 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
13627 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13628 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13629 % U+00C6 LATIN CAPITAL LETTER AE; AE
13630 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13631 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13632 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13633 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13634 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13635 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13636 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13637 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13638 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13639 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13640 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
13641 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13642 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13643 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13644 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13645 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13646 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13647 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13648 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
13649 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13650 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13651 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13652 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13653 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13654 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13655 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13656 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13657 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13658 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13659 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13660 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13661 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13662 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13663 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13664 % U+00D7 MULTIPLICATION SIGN; multiply

13665 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13666 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13667 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13668 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13669 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13670 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13671 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13672 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13673 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13674 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13675 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13676 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13677 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13678 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13679 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13680 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13681 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13682 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13683 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13684 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13685 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13686 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13687 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13688 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13689 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13690 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13691 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13692 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13693 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13694 % U+00E6 LATIN SMALL LETTER AE; ae
13695 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13696 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13697 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13698 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13699 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13700 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13701 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13702 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13703 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13704 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13705 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13706 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13707 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13708 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13709 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13710 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13711 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13712 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13713 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13714 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13715 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13716 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13717 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13718 % U+00F0 LATIN SMALL LETTER ETH; eth
13719 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13720 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13721 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1

13722 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 13723 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 13724 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 13725 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
 13726 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 13727 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
 13728 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 13729 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 13730 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13731 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
 13732 % U+00F7 DIVISION SIGN; divide
 13733 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 13734 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13735 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13736 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13737 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 13738 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13739 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 13740 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13741 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 13742 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13743 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
 13744 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13745 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
 13746 % U+00FE LATIN SMALL LETTER THORN; thorn
 13747 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13748 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13749 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
 13750 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13751 \DeclareTextCommand{\SS}{PD1}{SS}
 13752 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13753 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13754 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13755 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13756 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13757 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13758 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13759 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13760 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13761 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13762 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13763 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13764 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13765 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13766 \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).

13767 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 13768 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
 13769 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 13770 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
 13771 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute

13772 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
 13773 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
 13774 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
 13775 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
 13776 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
 13777 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
 13778 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
 13779 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
 13780 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
 13781 </pdlenc>

50.2 PU encoding

13782 <*puenc>
 13783 \DeclareFontEncoding{PU}{-}{-}

50.2.1 NFSS2 accents

13784 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13785 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
 13786 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13787 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
 13788 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13789 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13790 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13791 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13792 % U+0304 COMBINING MACRON; macroncmb
 13793 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13794 % U+0306 COMBINING BREVE; brevecmb
 13795 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13796 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13797 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13798 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13799 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13800 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13801 % U+030A COMBINING RING ABOVE; ringcmb
 13802 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13803 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13804 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13805 % U+030C COMBINING CARON; caroncmb
 13806 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13807 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13808 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13809 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13810 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13811 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13812 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13813 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13814 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13815 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13816 % U+0327 COMBINING CEDILLA; cedillacmb
 13817 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13818 % U+0328 COMBINING OGONEK; ogonekcmb
 13819 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13820 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13821 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13822 % U+20DD COMBINING ENCLOSING CIRCLE
 13823 \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.

```

13824 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
13825 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13826 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
13827 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
13828 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13829 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13830 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13831 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13832 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13833 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13834 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13835 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13836 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13837 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13838 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13839 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13840 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13841 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13842 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13843 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13844 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13845 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13846 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13847 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13848 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13849 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13850 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13851 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13852 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13853 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13854 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13855 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13856 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13857 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13858 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13859 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13860 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13861 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13862 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13863 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13864 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13865 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13866 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13867 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13868 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13869 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13870 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13871 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13872 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13873 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13874 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13875 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13876 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```


50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```
13877 % U+0009 (CHARACTER TABULATION)
13878 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13879 % U+000A (LINE FEED)
13880 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13881 % U+000D (CARRIAGE RETURN)
13882 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
13883 % U+0022 QUOTATION MARK; quotedbl
13884 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13885 % U+0023 NUMBER SIGN; numbersign
13886 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13887 % U+0024 DOLLAR SIGN; dollar
13888 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
13889 % U+0025 PERCENT SIGN; percent
13890 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
13891 % U+0026 AMPERSAND; ampersand
13892 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
13893 % U+0027 APOSTROPHE; quotesingle
13894 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
13895 % U+0028 LEFT PARENTHESIS; parenleft
13896 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
13897 % U+0029 RIGHT PARENTHESIS; parenright
13898 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
13899 % U+002A ASTERISK; asterisk
13900 \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
13901 % U+003C LESS-THAN SIGN; less
13902 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
13903 % U+003E GREATER-THAN SIGN; greater
13904 \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
13905 % U+005C REVERSE SOLIDUS; backslash
13906 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
```

13907 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13908 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13909 % U+005F LOW LINE; underscore
 13910 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13911 % U+0060 GRAVE ACCENT; grave
 13912 \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
 13913 % U+0069 LATIN SMALL LETTER I; i
 13914 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 13915 \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
 13916 % U+007B LEFT CURLY BRACKET; braceleft
 13917 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13918 % U+007C VERTICAL LINE; *bar, verticalbar
 13919 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13920 % U+007D RIGHT CURLY BRACKET; braceright
 13921 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13922 % U+007E TILDE; asciitilde
 13923 \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
 13924 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13925 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13926 % U+00A2 CENT SIGN; cent
 13927 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13928 % U+00A3 POUND SIGN; sterling
 13929 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13930 % U+00A4 CURRENCY SIGN; currency
 13931 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13932 % U+00A5 YEN SIGN; yen
 13933 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13934 % U+00A6 BROKEN BAR; brokenbar
 13935 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13936 % U+00A7 SECTION SIGN; section
 13937 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13938 % U+00A8 DIAERESIS; dieresis
 13939 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13940 % U+00A9 COPYRIGHT SIGN; copyright
 13941 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13942 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13943 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13944 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13945 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13946 % U+00AC NOT SIGN; logicalnot
 13947 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13948 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13949 % U+00AE REGISTERED SIGN; registered

13950 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
13951 % U+00AF MACRON; *macron, overscore
13952 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
13953 % U+00B0 DEGREE SIGN; degree
13954 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
13955 % U+00B1 PLUS-MINUS SIGN; plusminus
13956 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
13957 % U+00B2 SUPERSCRIPT TWO; twosuperior
13958 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
13959 % U+00B3 SUPERSCRIPT THREE; threesuperior
13960 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
13961 % U+00B4 ACUTE ACCENT; acute
13962 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
13963 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
13964 % U+00B5 MICRO SIGN; mu, mu1
13965 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
13966 % U+00B6 PILCROW SIGN; paragraph
13967 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
13968 % U+00B7 MIDDLE DOT; middot, *periodcentered
13969 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
13970 % U+00B8 CEDILLA; cedilla
13971 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
13972 % U+00B9 SUPERSCRIPT ONE; onesuperior
13973 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
13974 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13975 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
13976 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13977 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
13978 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13979 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
13980 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13981 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
13982 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13983 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
13984 % U+00BF INVERTED QUESTION MARK; questiondown
13985 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
13986 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13987 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
13988 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13989 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
13990 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13991 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
13992 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13993 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
13994 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13995 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
13996 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13997 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
13998 % U+00C6 LATIN CAPITAL LETTER AE; AE
13999 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
14000 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14001 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
14002 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14003 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
14004 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14005 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9

14006 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14007 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
14008 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14009 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
14010 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14011 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
14012 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14013 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
14014 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14015 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
14016 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14017 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
14018 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14019 \DeclareTextCompositeCommand{\DH}{PU}{\80\320}% U+00D0
14020 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14021 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
14022 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14023 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
14024 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14025 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
14026 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14027 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
14028 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14029 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
14030 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14031 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
14032 % U+00D7 MULTIPLICATION SIGN; multiply
14033 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14034 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14035 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14036 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14037 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
14038 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14039 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14040 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14041 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
14042 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14043 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
14044 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14045 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14046 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14047 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14048 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14049 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
14050 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14051 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
14052 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14053 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14054 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14055 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
14056 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14057 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
14058 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14059 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14060 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14061 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14062 % U+00E6 LATIN SMALL LETTER AE; ae

14063 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14064 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14065 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14066 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14067 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
14068 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14069 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14070 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14071 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14072 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14073 \DeclareTextCompositeCommand{\\"}{PU}{e}{\80\353}% U+00EB
14074 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14075 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
14076 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14077 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14078 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14079 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14080 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14081 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14082 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14083 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14084 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF
14085 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF
14086 % U+00F0 LATIN SMALL LETTER ETH; eth
14087 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14088 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14089 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
14090 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14091 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14092 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14093 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
14094 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14095 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
14096 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14097 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
14098 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14099 \DeclareTextCompositeCommand{\\"}{PU}{o}{\80\366}% U+00F6
14100 % U+00F7 DIVISION SIGN; divide
14101 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
14102 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14103 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
14104 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14105 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
14106 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14107 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
14108 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14109 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
14110 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14111 \DeclareTextCompositeCommand{\\"}{PU}{u}{\80\374}% U+00FC
14112 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14113 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
14114 % U+00FE LATIN SMALL LETTER THORN; thorn
14115 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
14116 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14117 \DeclareTextCompositeCommand{\\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

14118 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
14119 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
14120 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
14121 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
14122 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
14123 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
14124 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
14125 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
14126 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
14127 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
14128 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
14129 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
14130 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
14131 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
14132 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
14133 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
14134 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
14135 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
14136 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
14137 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
14138 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
14139 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
14140 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
14141 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
14142 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
14143 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
14144 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
14145 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
14146 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
14147 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
14148 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
14149 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
14150 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14151 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14152 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14153 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14154 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14155 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14156 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14157 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14158 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14159 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14160 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14161 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14162 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14163 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14164 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14165 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14166 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14167 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14168 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14169 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14170 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14171 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14172 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14173 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B

14174 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14175 \DeclareTextCompositeCommand{\~}{PU}{G}{\81\034}% U+011C
14176 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14177 \DeclareTextCompositeCommand{\~}{PU}{g}{\81\035}% U+011D
14178 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14179 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14180 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14181 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14182 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14183 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14184 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14185 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14186 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14187 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14188 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14189 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14190 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14191 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
14192 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14193 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14194 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14195 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14196 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14197 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14198 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14199 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14200 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14201 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14202 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14203 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14204 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14205 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14206 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14207 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14208 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14209 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14210 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14211 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14212 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14213 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14214 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14215 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14216 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14217 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14218 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14219 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14220 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14221 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14222 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14223 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14224 % U+0133 LATIN SMALL LIGATURE IJ; ij
14225 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14226 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14227 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
14228 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14229 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135

14230 \DeclareTextCompositeCommand{\~}{PU}{\j}{\81\065}% U+0135
14231 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
14232 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14233 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14234 \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.

14235 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14236 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14237 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14238 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14239 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14240 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14241 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
14242 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
14243 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
14244 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
14245 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
14246 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
14247 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
14248 \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.

14249 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
14250 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
14251 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
14252 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
14253 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14254 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
14255 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14256 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
14257 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
14258 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
14259 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
14260 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
14261 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
14262 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
14263 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
14264 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
14265 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
14266 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
14267 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
14268 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
14269 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
14270 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
14271 % U+014A LATIN CAPITAL LETTER ENG; Eng
14272 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
14273 % U+014B LATIN SMALL LETTER ENG; eng
14274 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
14275 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
14276 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

14277 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
14278 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
14279 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
14280 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
14281 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
14282 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
14283 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
14284 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
14285 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
14286 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
14287 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14288 \DeclareTextCompositeCommand{\OE}{PU}{\81\122}% U+0152
14289 % U+0153 LATIN SMALL LIGATURE OE; oe
14290 \DeclareTextCompositeCommand{\oe}{PU}{\81\123}% U+0153
14291 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
14292 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
14293 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
14294 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14295 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14296 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14297 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14298 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14299 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14300 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14301 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14302 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14303 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14304 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14305 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14306 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14307 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14308 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14309 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14310 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14311 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14312 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14313 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14314 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14315 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14316 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14317 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14318 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14319 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14320 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14321 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14322 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14323 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14324 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14325 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14326 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14327 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14328 \DeclareTextCompositeCommand{\textTslash}{PU}{\81\146}% U+0166
14329 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar

14330 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14331 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14332 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14333 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14334 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14335 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14336 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14337 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14338 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14339 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14340 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14341 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14342 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14343 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14344 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14345 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14346 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14347 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
14348 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
14349 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
14350 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
14351 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
14352 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
14353 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
14354 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
14355 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
14356 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
14357 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
14358 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
14359 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
14360 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
14361 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
14362 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
14363 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14364 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
14365 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
14366 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
14367 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
14368 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
14369 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
14370 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
14371 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
14372 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
14373 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14374 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
14375 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14376 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
14377 % U+017F LATIN SMALL LETTER LONG S; longs, slong
14378 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

14379 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14380 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
14381 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
14382 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD

14383 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
14384 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
14385 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
14386 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
14387 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
14388 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14389 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14390 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
14391 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
14392 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
14393 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
14394 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
14395 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
14396 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
14397 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
14398 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
14399 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
14400 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
14401 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
14402 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14403 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14404 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14405 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14406 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14407 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14408 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14409 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14410 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14411 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14412 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14413 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14414 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14415 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14416 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14417 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14418 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14419 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14420 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14421 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14422 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
14423 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14424 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
14425 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14426 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
14427 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14428 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
14429 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14430 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
14431 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14432 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
14433 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14434 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14435 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14436 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14437 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave

14438 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 14439 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 14440 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 14441 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 14442 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 14443 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 14444 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14445 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14446 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 14447 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 14448 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 14449 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 14450 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 14451 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 14452 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 14453 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 14454 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 14455 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 14456 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 14457 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14458 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14459 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14460 % U+021F LATIN SMALL LETTER H WITH CARON
 14461 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14462 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14463 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14464 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14465 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14466 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14467 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14468 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14469 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14470 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14471 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14472 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14473 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14474 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14475 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14476 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14477 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14478 % U+0237 LATIN SMALL LETTER DOTLESS J
 14479 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14480 % U+02C7 CARON; caron
 14481 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14482 % U+02D8 BREVE; breve
 14483 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14484 % U+02D9 DOT ABOVE; dotaccent
 14485 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14486 % U+02DA RING ABOVE; ring
 14487 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14488 % U+02DB OGONEK; ogonek
 14489 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14490 % U+02DC SMALL TILDE; ilde, *tilde
 14491 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14492 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut

14493 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14494 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14495 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14496 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14497 % U+02F7 MODIFIER LETTER LOW TILDE
 14498 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14499 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14500 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14501 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14502 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14503 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14504 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14505 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14506 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14507 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14508 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14509 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14510 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14511 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14512 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14513 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 14514 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14515 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14516 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14517 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14518 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14519 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14520 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 14521 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 cronos
 14522 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 14523 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 14524 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 14525 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14526 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 14527 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
 tadiesistonos
 14528 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 14529 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14530 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14531 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14532 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14533 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14534 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 14535 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 14536 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 14537 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 14538 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 14539 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 14540 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 14541 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 14542 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 14543 % U+0398 GREEK CAPITAL LETTER THETA; Theta

14544 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14545 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14546 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14547 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14548 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14549 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14550 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14551 % U+039C GREEK CAPITAL LETTER MU; Mu
14552 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14553 % U+039D GREEK CAPITAL LETTER NU; Nu
14554 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14555 % U+039E GREEK CAPITAL LETTER XI; Xi
14556 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14557 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14558 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14559 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14560 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14561 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14562 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
14563 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14564 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14565 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14566 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14567 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14568 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14569 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14570 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14571 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14572 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14573 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14574 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14575 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14576 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14577 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14578 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14579 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14580 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilon
14581 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14582 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14583 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14584 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
14585 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14586 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
14587 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14588 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
14589 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14590 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
14591 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
14592 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14593 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14594 % U+03B2 GREEK SMALL LETTER BETA; beta
14595 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
14596 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14597 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14598 % U+03B4 GREEK SMALL LETTER DELTA; delta

14599 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14600 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14601 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14602 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14603 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14604 % U+03B7 GREEK SMALL LETTER ETA; eta
14605 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14606 % U+03B8 GREEK SMALL LETTER THETA; theta
14607 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14608 % U+03B9 GREEK SMALL LETTER IOTA; iota
14609 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14610 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14611 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14612 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14613 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14614 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14615 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14616 % U+03BD GREEK SMALL LETTER NU; nu
14617 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
14618 % U+03BE GREEK SMALL LETTER XI; xi
14619 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14620 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14621 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14622 % U+03C0 GREEK SMALL LETTER PI; pi
14623 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14624 % U+03C1 GREEK SMALL LETTER RHO; rho
14625 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14626 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14627 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14628 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14629 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14630 % U+03C4 GREEK SMALL LETTER TAU; tau
14631 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14632 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14633 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14634 % U+03C6 GREEK SMALL LETTER PHI; phi
14635 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14636 % U+03C7 GREEK SMALL LETTER CHI; chi
14637 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14638 % U+03C8 GREEK SMALL LETTER PSI; psi
14639 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14640 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14641 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14642 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
14643 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14644 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
14645 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14646 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14647 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14648 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14649 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14650 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14651 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
14652 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
14653 % U+03DA GREEK LETTER STIGMA; Stigmagreek
14654 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA

14655 % U+03DB GREEK SMALL LETTER STIGMA
 14656 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14657 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14658 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14659 % U+03DD GREEK SMALL LETTER DIGAMMA
 14660 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14661 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14662 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14663 % U+03DF GREEK SMALL LETTER KOPPA
 14664 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14665 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14666 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14667 % U+03E1 GREEK SMALL LETTER SAMPI
 14668 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vov@vov.vsu.ru) for the help with the Cyrillic glyph names.

14669 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 14670 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
 14671 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 14672 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 14673 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
 14674 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 14675 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 14676 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 14677 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
 14678 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 14679 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 14680 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 14681 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 14682 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyril-
 lic, *afii10055
 14683 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 14684 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 14685 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 14686 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
 14687 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 14688 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 14689 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 14690 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 14691 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 14692 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 14693 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 14694 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 14695 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 14696 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 14697 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 14698 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
 14699 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 14700 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 14701 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 14702 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
 14703 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
 14704 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
 14705 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
 14706 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018

14707 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14708 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14709 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14710 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14711 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14712 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14713 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14714 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14715 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14716 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14717 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14718 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14719 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14720 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14721 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14722 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14723 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14724 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14725 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14726 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14727 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14728 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14729 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14730 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14731 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14732 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14733 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14734 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14735 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14736 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14737 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14738 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14739 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14740 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14741 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14742 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14743 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14744 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14745 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14746 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14747 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14748 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14749 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14750 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14751 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14752 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14753 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14754 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14755 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14756 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14757 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14758 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14759 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14760 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14761 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14762 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14763 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047

14764 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14765 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14766 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14767 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14768 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14769 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14770 \DeclareTextCommand{\cyr a}{PU}{\84\060}% U+0430
14771 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14772 \DeclareTextCommand{\cyr b}{PU}{\84\061}% U+0431
14773 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14774 \DeclareTextCommand{\cyr v}{PU}{\84\062}% U+0432
14775 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14776 \DeclareTextCommand{\cyr g}{PU}{\84\063}% U+0433
14777 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14778 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
14779 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14780 \DeclareTextCommand{\cyr e}{PU}{\84\065}% U+0435
14781 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14782 \DeclareTextCommand{\cyr zh}{PU}{\84\066}% U+0436
14783 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14784 \DeclareTextCommand{\cyr z}{PU}{\84\067}% U+0437
14785 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14786 \DeclareTextCommand{\cyr i}{PU}{\84\070}% U+0438
14787 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14788 \DeclareTextCommand{\cyr ishrt}{PU}{\84\071}% U+0439
14789 \DeclareTextCompositeCommand{\U}{PU}{\cyr i}{\84\071}% U+0439
14790 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14791 \DeclareTextCommand{\cyr k}{PU}{\84\072}% U+043A
14792 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14793 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
14794 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14795 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
14796 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14797 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
14798 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14799 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
14800 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14801 \DeclareTextCommand{\cyr p}{PU}{\84\077}% U+043F
14802 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14803 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
14804 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14805 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
14806 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14807 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
14808 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14809 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
14810 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14811 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
14812 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14813 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
14814 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14815 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446
14816 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14817 \DeclareTextCommand{\cyr ch}{PU}{\84\107}% U+0447
14818 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14819 \DeclareTextCommand{\cyr sh}{PU}{\84\110}% U+0448
14820 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic

14821 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14822 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14823 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14824 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14825 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14826 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14827 \DeclareTextCommand{\cyrstfn}{PU}{\84\114}% U+044C
14828 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14829 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14830 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14831 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
14832 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14833 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
14834 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14835 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14836 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14837 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
14838 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14839 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14840 \DeclareTextCommand{\cyrDje}{PU}{\84\122}% U+0452
14841 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14842 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14843 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14844 \DeclareTextCommand{\cyrIe}{PU}{\84\124}% U+0454
14845 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14846 \DeclareTextCommand{\cyrDze}{PU}{\84\125}% U+0455
14847 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14848 \DeclareTextCommand{\cyrIi}{PU}{\84\126}% U+0456
14849 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14850 \DeclareTextCommand{\cyrYi}{PU}{\84\127}% U+0457
14851 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
14852 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14853 \DeclareTextCommand{\cyrJe}{PU}{\84\130}% U+0458
14854 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14855 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
14856 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14857 \DeclareTextCommand{\cyrNje}{PU}{\84\132}% U+045A
14858 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14859 \DeclareTextCommand{\cyrTshe}{PU}{\84\133}% U+045B
14860 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14861 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14862 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14863 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14864 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14865 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14866 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14867 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14868 \DeclareTextCommand{\cyrDzhe}{PU}{\84\137}% U+045F
14869 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14870 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14871 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14872 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14873 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14874 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14875 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14876 \DeclareTextCommand{\cyrYat}{PU}{\84\143}% U+0463

14877 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 14878 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 14879 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 14880 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 14881 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 14882 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 14883 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 14884 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 14885 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
 tifiedcyrillic
 14886 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 14887 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
 fiedcyrillic
 14888 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 14889 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 14890 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 14891 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 14892 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 14893 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 14894 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14895 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
 lic
 14896 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14897 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14898 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14899 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14900 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 14901 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14902 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14903 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14904 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14905 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afi10147
 14906 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14907 % U+0473 CYRILLIC SMALL LETTER FITA; *afi10195, fitacyrillic
 14908 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 14909 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afi10148
 14910 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14911 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afi10196, izhitsacyrillic
 14912 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14913 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; Izhitsadblgravecyrillic
 14914 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14915 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; izhitsadblgravecyrillic
 14916 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14917 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14918 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14919 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14920 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14921 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 14922 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14923 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14924 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14925 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-
 cyrillic

14926 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14927 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 14928 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14929 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14930 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14931 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14932 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14933 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14934 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14935 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14936 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14937 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14938 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14939 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14940 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14941 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14942 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14943 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14944 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14945 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14946 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14947 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14948 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14949 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14950 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14951 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 14952 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14953 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14954 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14955 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 14956 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14957 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14958 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14959 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14960 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14961 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14962 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14963 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14964 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496

14965 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14966 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14967 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14968 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14969 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14970 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14971 \DeclareTextCommand{\cyrzdesc}{PU}{\84\231}% U+0499
 14972 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14973 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14974 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14975 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 14976 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 14977 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kavericalstrokecyrillic
 14978 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 14979 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kavericalstrokecyrillic
 14980 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 14981 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 14982 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 14983 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 14984 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 14985 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 14986 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 14987 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 14988 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 14989 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 14990 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 14991 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 14992 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 14993 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 14994 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 14995 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 14996 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 14997 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 14998 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 14999 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 15000 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 15001 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 15002 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 15003 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 15004 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 15005 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 15006 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 15007 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

15008 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-cyrillic
 15009 \DeclareTextCommand{\cyrtdsc}{PU}{\84\253}% U+04AB
 15010 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
 15011 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 15012 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 15013 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-cyrillic
 15014 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 15015 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 15016 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 15017 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 15018 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF
 15019 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 15020 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 15021 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
 15022 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 15023 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
 15024 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 15025 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescender-cyrillic
 15026 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 15027 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 15028 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 15029 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 15030 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 15031 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
 15032 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 15033 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 15034 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 15035 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 erticalstrokecyrillic
 15036 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 15037 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 erticalstrokecyrillic
 15038 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 15039 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 15040 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 15041 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 15042 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 15043 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-cyrillic
 15044 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 15045 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 15046 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 15047 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 15048 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 15049 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE

15050 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 15051 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 15052 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 15053 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 15054 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 15055 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 15056 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 15057 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15058 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15059 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15060 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15061 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15062 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15063 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15064 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15065 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15066 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 15067 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15068 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15069 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 15070 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15071 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
 15072 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15073 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
 15074 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15075 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15076 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15077 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15078 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15079 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15080 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15081 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15082 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15083 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15084 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 15085 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15086 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 15087 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15088 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15089 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15090 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15091 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 15092 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15093 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 15094 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15095 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15096 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15097 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 15098 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15099 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 15100 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA

15101 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
 siscyrillic
 15102 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 15103 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 15104 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 15105 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 15106 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 15107 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 15108 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 15109 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 15110 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 15111 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 15112 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15113 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15114 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15115 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15116 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
 15117 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 15118 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
 15119 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 15120 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 15121 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 15122 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 15123 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyril-
 lic
 15124 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 15125 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 15126 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 15127 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 15128 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 15129 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 15130 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 15131 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERE-
 SIS; Obarreddieresiscyrillic
 15132 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 15133 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarred-
 dieresiscyrillic
 15134 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 15135 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 15136 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 15137 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 15138 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 15139 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 15140 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 15141 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 15142 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 15143 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 15144 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 15145 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 15146 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15147 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15148 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

15149 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15150 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15151 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15152 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
 15153 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 15154 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
 15155 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15156 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15157 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15158 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15159 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15160 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 15161 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15162 \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
 15163 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15164 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15165 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15166 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15167 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15168 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15169 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15170 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15171 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15172 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15173 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15174 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15175 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15176 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15177 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15178 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15179 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15180 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15181 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15182 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15183 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15184 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15185 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15186 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 15187 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 15188 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 15189 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 15190 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E

15191 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15192 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
15193 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15194 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15195 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15196 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15197 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15198 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
15199 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15200 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
15201 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15202 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
15203 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15204 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
15205 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15206 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15207 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15208 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15209 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15210 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15211 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15212 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15213 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15214 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15215 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15216 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15217 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15218 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15219 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15220 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15221 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15222 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15223 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15224 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15225 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15226 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15227 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15228 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15229 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15230 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15231 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15232 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15233 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15234 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15235 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15236 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15237 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15238 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15239 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15240 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15241 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15242 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15243 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15244 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15245 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15246 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15247 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent

15248 \DeclareTextCompositeCommand{.}{PU}{r}{\9036\131}% U+1E59
15249 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15250 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15251 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15252 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15253 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15254 \DeclareTextCompositeCommand{.}{PU}{S}{\9036\140}% U+1E60
15255 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15256 \DeclareTextCompositeCommand{.}{PU}{s}{\9036\141}% U+1E61
15257 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15258 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15259 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15260 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15261 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15262 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15263 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15264 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15265 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15266 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
15267 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15268 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
15269 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15270 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82
15271 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15272 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83
15273 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15274 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
15275 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15276 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
15277 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15278 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
15279 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15280 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
15281 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15282 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
15283 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15284 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
15285 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15286 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
15287 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15288 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
15289 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15290 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
15291 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15292 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
15293 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
15294 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
15295 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
15296 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
15297 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
15298 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
15299 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
15300 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
15301 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
15302 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
15303 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
15304 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97

15305 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15306 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15307 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15308 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15309 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15310 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15311 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15312 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15313 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15314 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15315 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15316 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15317 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15318 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15319 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15320 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15321 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15322 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15323 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 15324 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15325 % U+2013 EN DASH; endash
 15326 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15327 % U+2014 EM DASH; emdash
 15328 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15329 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15330 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15331 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15332 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15333 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15334 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15335 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15336 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15337 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbleft
 15338 \DeclareTextCommand{\textquotedbleft}{PU}{\9040\034}% U+201C
 15339 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedbright
 15340 \DeclareTextCommand{\textquotedbright}{PU}{\9040\035}% U+201D
 15341 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15342 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15343 % U+2020 DAGGER; dagger
 15344 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15345 % U+2021 DOUBLE DAGGER; daggerdbl
 15346 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15347 % U+2022 BULLET; bullet
 15348 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15349 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15350 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15351 % U+2030 PER MILLE SIGN; perthousand
 15352 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15353 % U+2031 PER TEN THOUSAND SIGN
 15354 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15355 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15356 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039

15357 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsingright
15358 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
15359 % U+203B REFERENCE MARK; referencemark
15360 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
15361 % U+203D INTERROBANG
15362 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
15363 % U+2044 FRACTION SLASH; fraction
15364 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
15365 % U+2045 LEFT SQUARE BRACKET WITH QUILL
15366 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
15367 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
15368 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
15369 % U+2052 COMMERCIAL MINUS SIGN
15370 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15371 % U+2070 SUPERSCRIPT ZERO; zerosuperior
15372 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
15373 % U+2074 SUPERSCRIPT FOUR; foursuperior
15374 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
15375 % U+2075 SUPERSCRIPT FIVE; fivesuperior
15376 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
15377 % U+2076 SUPERSCRIPT SIX; sixsuperior
15378 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
15379 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
15380 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
15381 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
15382 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
15383 % U+2079 SUPERSCRIPT NINE; ninesuperior
15384 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
15385 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
15386 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
15387 % U+207B SUPERSCRIPT MINUS
15388 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
15389 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
15390 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
15391 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
15392 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
15393 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
15394 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
15395 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
15396 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
15397 % U+2080 SUBSCRIPT ZERO; zeroinferior
15398 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
15399 % U+2081 SUBSCRIPT ONE; oneinferior
15400 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
15401 % U+2082 SUBSCRIPT TWO; twoinferior
15402 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
15403 % U+2083 SUBSCRIPT THREE; threeinferior
15404 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
15405 % U+2084 SUBSCRIPT FOUR; fourinferior
15406 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
15407 % U+2085 SUBSCRIPT FIVE; fiveinferior
15408 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
15409 % U+2086 SUBSCRIPT SIX; sixinferior
15410 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086

15411 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15412 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15413 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15414 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15415 % U+2089 SUBSCRIPT NINE; nineinferior
 15416 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15417 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15418 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15419 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15420 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15421 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15422 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15423 % U+20A4 LIRA SIGN; afii08941, *lira
 15424 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15425 % U+20A6 NAIRA SIGN
 15426 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15427 % U+20A7 PESETA SIGN; peseta
 15428 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15429 % U+20A9 WON SIGN; won
 15430 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15431 % U+20AB DONG SIGN; dong
 15432 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15433 % U+20AC EURO SIGN; *Euro, euro
 15434 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15435 % U+20B1 PESO SIGN
 15436 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15437 % U+20B2 GUARANI SIGN
 15438 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15439 % U+2103 DEGREE CELSIUS; centigrade
 15440 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15441 % U+2116 NUMERO SIGN; *afii61352, numero
 15442 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15443 % U+2117 SOUND RECORDING COPYRIGHT
 15444 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15445 % U+211E PRESCRIPTION TAKE; prescription
 15446 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15447 % U+2120 SERVICE MARK
 15448 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15449 % U+2122 TRADE MARK SIGN; trademark
 15450 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15451 % U+2126 OHM SIGN; Ohm, Omega
 15452 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15453 % U+2127 INVERTED OHM SIGN
 15454 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15455 % U+212B ANGSTROM SIGN; angstrom
 15456 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15457 % U+212E ESTIMATED SYMBOL; estimated
 15458 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15459 % U+2135 ALEF SYMBOL; aleph
 15460 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15461 % U+2190 LEFTWARDS ARROW; arrowleft

15462 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15463 % U+2191 UPWARDS ARROW; arrowup
 15464 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15465 % U+2192 RIGHTWARDS ARROW; arrowright
 15466 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15467 % U+2193 DOWNWARDS ARROW; arrowdown
 15468 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15469 % U+2212 MINUS SIGN; minus
 15470 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15471 % U+221A SQUARE ROOT; radical
 15472 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15473 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15474 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15475 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15476 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15477 % U+2422 BLANK SYMBOL
 15478 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 15479 % U+2423 OPEN BOX; blank
 15480 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15481 % U+2460 CIRCLED DIGIT ONE; onecircle
 15482 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15483 % U+2461 CIRCLED DIGIT TWO; twocircle
 15484 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15485 % U+2462 CIRCLED DIGIT THREE; threecircle
 15486 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15487 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15488 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15489 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15490 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15491 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15492 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15493 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 15494 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15495 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15496 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15497 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15498 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15499 % U+2469 CIRCLED NUMBER TEN; tencircle
 15500 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15501 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15502 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15503 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15504 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15505 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15506 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15507 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15508 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15509 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15510 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E

15511 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
15512 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
15513 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
15514 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
15515 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
15516 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
15517 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
15518 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
15519 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
15520 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
15521 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
15522 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
15523 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
15524 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
15525 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
15526 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
15527 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
15528 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
15529 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
15530 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
15531 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
15532 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
15533 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
15534 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15535 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15536 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15537 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15538 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15539 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15540 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15541 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15542 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15543 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15544 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15545 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
15546 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15547 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15548 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15549 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15550 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15551 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15552 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15553 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15554 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15555 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15556 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15557 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15558 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15559 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15560 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
15561 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15562 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15563 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15564 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15565 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15566 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15567 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle

15568 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15569 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15570 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15571 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15572 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15573 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15574 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15575 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15576 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15577 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15578 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15579 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15580 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15581 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15582 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15583 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15584 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15585 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15586 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15587 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15588 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15589 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15590 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
15591 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
15592 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
15593 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
15594 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
15595 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
15596 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
15597 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
15598 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
15599 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
15600 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
15601 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
15602 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
15603 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
15604 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
15605 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
15606 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
15607 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
15608 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
15609 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
15610 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
15611 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
15612 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
15613 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
15614 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
15615 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
15616 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
15617 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
15618 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
15619 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
15620 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
15621 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
15622 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
15623 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
15624 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9

15625 % U+24EA CIRCLED DIGIT ZERO
 15626 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15627 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15628 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15629 % U+25EF LARGE CIRCLE; largecircle
 15630 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15631 % U+266A EIGHTH NOTE; musicalnote
 15632 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15633 % U+26AD MARRIAGE SYMBOL
 15634 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15635 % U+26AE DIVORCE SYMBOL
 15636 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15637 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15638 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15639 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15640 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

15641 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15642 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15643 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15644 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15645 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15646 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 15647 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 15648 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 15649 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 15650 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 15651 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 15652 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 15653 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15654 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15655 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15656 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15657 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15658 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}

15659 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

15660 <*puvnenc>

15661 \DeclareTextCommand{\abreve}{PU}{\81\003}
15662 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15663 \DeclareTextCommand{\dj}{PU}{\81\021}
15664 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15665 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15666 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15667 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15668 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15669 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15670 \DeclareTextCommand{\DJ}{PU}{\81\020}
15671 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15672 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15673 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15674 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15675 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15676 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15677 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15678 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15679 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15680 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15681 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15682 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15683 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
15684 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15685 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15686 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15687 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15688 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15689 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15690 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15691 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15692 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15693 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15694 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15695 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15696 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15697 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15698 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15699 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15700 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15701 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15702 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15703 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15704 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15705 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15706 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15707 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15708 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15709 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15710 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15711 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15712 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15713 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15714 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15715 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
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15794 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15795 </puvnenc>

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50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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15796 <*puarenc>
15797 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
15798 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15799 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15800 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15801 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15802 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15803 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15804 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15805 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15806 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15807 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
15808 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
15809 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15810 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15811 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15812 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15813 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15814 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN
15815 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15816 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
15817 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD

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15818 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
15819 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
15820 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
15821 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
15822 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
    TER GHAIN
15823 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
15824 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
15825 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
15826 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
15827 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
15828 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
    TER MEEM
15829 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON
15830 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
15831 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
15832 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
    TER ALEF MAKSURA
15833 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15834 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15835 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15836 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15837 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15838 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15839 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15840 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15841 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi
15842 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15843 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
    TER TCHEH
15844 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15845 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
    TER KAF
15846 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15847 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
    TER YEH

15848 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15849 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
15850 </puarenc>

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51 End of file hycheck.tex

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15851 < *check>
15852 \typeout{}
15853 \begin{document}
15854 \end{document}
15855 </check>

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