

Hypertext marks in L^AT_EX

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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 EuroT_EX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hyccheck.tex

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

```

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

\checklatex Optional argument: release date of  $\LaTeX$ .
4 \newcommand*{\checklatex}[1][]{\%
5 \typeout{}}\%
6 \typeout{* Format: 'LaTeX2e' #1}\%
7 \typeout{\space\space Loaded: '\fmtname' \fmtversion}\%
8 }\%
```

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

```

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

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

```

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

`\HyC@checkPackage`

```

18 \def\HyC@checkPackage{\%
19 \typeout{}}\%
20 \begingroup
21 \edef\x{\endgroup
22 \noexpand\RequirePackage{\HyC@package}\%
23 \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi\%
24 }\%
25 \x
26 \typeout{}}\%
27 \typeout{\%
28 * Package '\HyC@package'\%
29 \ifx\HyC@date\@empty
30 \else
31 \space\HyC@date
32 \fi
33 }\%
34 \@ifundefined{ver@\HyC@package.sty}{\%
35 }\typeout{\%
36 \space\space Loaded: '\HyC@package' \%
37 \csname ver@\HyC@package.sty\endcsname
38 }\%
39 }\%
40 }\%
41 }
```

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

```

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

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

```

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

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

```

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

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

```

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

`\HyC@noValue`

```

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

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

```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

216 \x\)%
217 \x\[%
218 \x\l%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```

231 \Hy@SetCatcodes

```

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

```

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

```

4.2 Compatibility with format dumps

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

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

```

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

```

`\Hy@AtBeginDocument` For the case that package 'hyperref' is loaded using `\AtBeginDocument`, we have to wrap the calls of `\AtBeginDocument`/`\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package 'kvoptions' has to perform its option cleanup. Therefore we use a hook.

```

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

```

`\Hy@AtEndOfPackage`

```

250 \def\Hy@AtEndOfPackage{%

```

```

251 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
252 }

```

\Hy@AtBeginDocumentHook

```

253 \def\Hy@AtBeginDocumentHook{}

```

\Hy@AtEndOfPackageHook

```

254 \def\Hy@AtEndOfPackageHook{}

```

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

```

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

```

4.3 Switches

```

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

```

```

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

```

Defaults for the switches are now set.

```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

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

```

5.1 Macros for recursions

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

```

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

357 \let\Hy@ReturnEnd\@empty
358 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
359 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

`\Hy@safe@activetrue` Babel's switch setting commands cannot be used directly, because they can be undefined if
`\Hy@safe@activesfalse` babel is not loaded.

```

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

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

```
362 \begingroup\expandafter\expandafter\expandafter\endgroup
363 \expandafter\ifx\cscname dimexpr\endcscname\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 $\backslash string$ 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 $\backslash enc@update$ for optimizing reasons.

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

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

```
421 \@inmathwarn\pdfstringdef
```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected ($\backslash edef$), so that the assignments of $\backslash @changed@cmd$ don't take place. To patch this behaviour I only found $\backslash @inmathwarn$ as a usable hook. While an $\backslash edef$ a warning message by $\backslash @inmathwarn$ or $\backslash TextSymbolUnavailable$ cannot be give out, so $\backslash @inmathwarn$ should be disabled. And with the help of it the assignments in $\backslash @changed@cmd$ can easily be caught (see below).

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

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

```
423 \let\add@accent\HyPsd@add@accent
```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here.

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

```

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

```

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

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

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

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

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

```

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

```

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

```

438 \def\TeX{\TeX}%
439 \def\LaTeX{\LaTeX}%
440 \def\LaTeXe{\LaTeX2e}%
441 \def\TeXe{\TeX}%
442 \def\SLiTeX{\SLiTeX}%
443 \def\MF{Metafont}%
444 \def\MP{Metapost}%

```

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

```

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

```

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

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

```

Disable \cyr, used in russianb.ldf.

```

502 \let\cyr\relax

```

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

```

503 \let\es@roman\@Roman

```

Package german.

```

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

```

```

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

```

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```

\if@mid@expandable{not fully expandable code}{fully expandable code}

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

```

AMS classes.

```

513 \HyPsd@AMSclassfix

```

Redefinition of `\hspace` `\hspace` don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

```

514 \let\hspace\HyPsd@hspace

```

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

```

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

```

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

```

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

```

Miscellaneous commands.

```

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

```

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

```

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

```

Patch for cjk bookmarks.

```

529 \HyPsd@CJKhook

```

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

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

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

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

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

Package xspace.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

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

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

\protected@edef: The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

\csname: First the string is expanded within a `\csname` and `\endcsname`. Then the command name is converted to characters with catcode 12 by `\string` and the first escape character removed by `\@gobble`. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by \TeX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. \TeX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

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

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

```

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

```

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

```

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

```

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

```

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

```

6.2.3 Postprocessing

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

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

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

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

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

```
569 \HyPsd@ProtectSpaces#1%
570 \let\HyPsd@String\@empty
571 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
572 \global\let#1\HyPsd@String
```

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

Support for package xspace. \xspace looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package xspace there are tokens with catcode 11 and 12, \HyPsd@empty and \HyPsd@SPACEOPTI. With package xspace marker for the italic correction \ and \xspace come with. In the package xspace case the two markers are replaced by commands and an \edef performs the \xspace processing.

In the opposite of the original \xspace \HyPsd@xspace uses an argument instead of a \futurelet, so we have to provide such an argument, if \HyPsd@xspace comes last. Because \HyPsd@Subst with several equal tokens (--) needs a safe last token, in both cases the string gets an additional \HyPsd@empty.

```

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

```

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

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

```

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

```

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

```

625      \let\HyPsd@empty\@empty

```

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

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

```

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

```

```

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

```

Optimizing spaces. Spaces are often used, but they have a very long form \040. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the .out file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

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

```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```

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

```

Try conversion back to PDFDocEncoding.

```

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

```

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

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

`\Hy@pdfstringdef`

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

6.3 Encodings

6.3.1 XeTeX

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

```

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

```

6.3.2 Workaround for package linguex

```

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

```

6.3.3 PD1 encoding

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

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

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

```

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

```

6.3.4 PU encoding

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

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

```

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

```

6.4 Additional user commands

6.4.1 \texorpdfstring

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

```

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

```

6.4.2 Hooks for \pdfstringdef

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

```

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

```

```

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

```

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

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

```

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

```

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

```

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

```

`\HyPsd@DisableCommands`

```

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

```

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

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

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

```

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

```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little. In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```

816 \begingroup

```

```

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

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

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

```

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

```

```

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

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

```

```

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

```

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

```

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

```

```

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

```

```

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

```

```

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

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

```

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

```

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

```

6.5.3 CJK patch

```

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

```

\HyPsd@CJKhook

```

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

```

6.5.4 CJK bookmarks

\HyPsd@CJKhook Some internal commands of package cjk are redefined to avoid error messages. For a rudimental support of CJK bookmarks the active characters are redefined so that they print themselves.

After preprocessing of Big5 encoded data the following string for a double-byte character is emitted:

```
^^7f<arg1>^^7f<arg2>^^7f
```

<arg1> is the first byte in the range (always > 0x80); <arg2> is the second byte in decimal notation (≥ 0x40).

```

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

```

```

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

```

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

```

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

```

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

```

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

```

```

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

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

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

```

\HyPsd@CJK@Unicode

```

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

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

```

```

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

```

```

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

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

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

```

```

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

```

```

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

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

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

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

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

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

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

```

\HyPsd@add@accent

```

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

```

6.5.7 Unexpandable spaces

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

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

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

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

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

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

6.5.8 Marker for commands

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

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

6.5.9 \hspace fix

`\HyPsd@hspace`

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

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

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

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

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

6.5.10 Fix for AMS classes

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

```

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

```

6.5.11 Reference commands

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

\HyPsd@@autorefname

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

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand

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

```

```

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

```

6.5.13 \ifnextchar

`\HyPsd@ifnextchar` In `\pdfstringdef` `\ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

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

```

6.5.14 \@protected@testoptifnextchar

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

```

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

```

```

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

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```

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

```

6.6.2 Protecting spaces

```

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

```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```

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

```

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

```

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

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

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

```

```

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

```

6.6.3 Remove grouping braces

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

```

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

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text #1#2. By a comparison with the original form in #3 we can decide whether #1 is a single token or a group. To avoid the case that #2 is a group, the string is extended by a | before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\Hy@ReturnAfterFi`.

```

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

```

```

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

```

\HyPsd@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.

```

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

```

6.6.4 Catcode check

Check catcodes.

\HyPsd@CheckCatcodes Because \ifcat expands its arguments, this is prevented by \noexpand. In case of command tokens and active characters \ifcat now sees a \relax. After protecting spaces and removing braces #1 should be a single token, no group of several tokens, nor an empty group. (So the \expandafter\relax between \ifcat and \noexpand is only for safety and it should be possible to remove it.)

\protect and \relax should be removed silently. But it is too dangerous and breaks some code giving them the meaning of \@empty. So commands with the meaning of \protect are removed here. (\protect should have the meaning of \@typeset@protect that is equal to \relax).

```

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

```

```

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

```

```

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

```

Remove counts, dimens, skips.

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

```

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

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

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

```

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

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

```

Catcode warnings.

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

```

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

```

```

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

```

\HyPsd@RemoveSpaceWarning

```

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

```

\HyPsd@ReplaceSpaceWarning

```

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

```

6.6.5 Check for wrong glyphs

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

```

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

```

```

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

```

Spaces.

\HyPsd@spaceopti In the string the spaces are represented by \HyPsd@spaceopti tokens. Within an \edef it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next \HyPsd@spaceopti by an protected space \040.

```

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

```

6.6.6 Replacing tokens

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

```

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

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

```

```

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

```

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

```

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

```

`\HyPsd@EscapeTeX`

```

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

```

6.6.7 Support for package `xspace`

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

```

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

```

```

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

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, \8 is replaced by \00, and \9 is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

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

```

\HyPsd@ConvertToUnicode

```

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

```

\HyPsd@DoConvert

```

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

```

\HyPsd@DoEscape

```

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

```

```

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

```

`\HyPsd@GetTwoBytes`

```

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

```

`\HyPsd@GetOneByte`

```

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

```

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

```

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

```

`\HyPsd@Char`

```

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

```

```

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

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

`\numexpr 123/4\relax` is replaced by
`\number\dimexpr.25\dimexpr 123sp\relax\relax`

```

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

```

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

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

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

```

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

```

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

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

```

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

```

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

UTF-8: 11110uuu 10uuzzzz 10yyyyyy 10xxxxxx

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

7 Support of other packages

7.1 Class memoir

```

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

```

7.2 Package subfigure

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

```

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

```

```

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

```

7.3 Package xr and xr-hyper

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

```

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

```

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

```

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

```

```

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

```

Providing dummy definitions.

```

2271 \let\literalps@out\@gobble
2272 \newcommand\pdfbookmark[3]{}
2273 \def\Acrobatmenu#1#2{\leavevmode#2}
2274 \def\Hy@writebookmark#1#2#3#4#5{}%

```

8 Help macros for links

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

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

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

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

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

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

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

```

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

```

9 Options

9.1 Help macros

\Hy@boolkey

```

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

```

\Hy@WarnOptionValue

```

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

```

2363 }

\Hy@DisableOption

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

\Hy@WarnOptionDisabled

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

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

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

\Hy@DefNameKey #1: option name

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

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

```

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

```

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

```

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

```

\Hy@UseNameKey

```

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

```

9.2 Defining the options

```

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

```

```

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

```

If we are going to PDF via HyperTeX \special commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing \special. If we use this option, the \special is raised up by the right amount, to fool the dvi processor.

```

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

```

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

```

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

```

```

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

```

```

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

```

```

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

```

Determines whether an automatic anchor is put on each page

```

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

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

```

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

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

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

```

```

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

2626 \newif\ifHy@setpdfversion
2627 \define@key{Hyp}{pdfversion}{%
2628   \ifundefined{Hy@pdfversion@#1}{%
2629     \PackageWarning{hyperref}{%
2630       Unsupported PDF version '#1'\MessageBreak
2631       Valid values: 1.2 until 1.9%
2632     }%
2633   }{%
2634     \Hy@setpdfversiontrue
2635     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2636   }%
2637 }
2638 \@namedef{Hy@pdfversion@1.2}{2}%
2639 \@namedef{Hy@pdfversion@1.3}{3}%
2640 \@namedef{Hy@pdfversion@1.4}{4}%
2641 \@namedef{Hy@pdfversion@1.5}{5}%
2642 \@namedef{Hy@pdfversion@1.6}{6}%
2643 \@namedef{Hy@pdfversion@1.7}{7}%
2644 \@namedef{Hy@pdfversion@1.8}{8}%
2645 \@namedef{Hy@pdfversion@1.9}{9}%
2646 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2647 \define@key{Hyp}{hyperref}[true]{}
2648 \define@key{Hyp}{tex4ht}[true]{}%
2649 \Hy@texhttrue
2650 \setkeys{Hyp}{colorlinks=true}%
2651 \def\BeforeTeXIVht{\usepackage{color}}%
2652 \def\Hy@driver{htex4ht}%
2653 \def\MaybeStopEarly{%
2654   \typeout{Hyperref stopped early}%
2655   \Hy@AtBeginDocument{%
2656     \PDF@FinishDoc
2657     \gdef\PDF@FinishDoc{}%
2658   }%
2659   \endinput
2660 }%
2661 }
2662 \define@key{Hyp}{pdftex}[true]{}

```

```

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

```

```

2720 \fi
2721 \fi
2722 }
2723 \define@key{Hyp}{vtxpdfmark}[true]{%
2724 \begingroup\expandafter\expandafter\expandafter\endgroup
2725 \expandafter\ifx\csname OpMode\endcsname\relax
2726 \latexerror{Non-VTeX processor}{}%
2727 \let\Hy@MaybeStopNow\endinput
2728 \endinput
2729 \else
2730 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2731 \def\Hy@driver{hvtexmrk}%
2732 \else
2733 \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2734 \let\Hy@MaybeStopNow\endinput
2735 \endinput
2736 \fi
2737 \fi
2738 }
2739 \define@key{Hyp}{dviwindo}[true]{%
2740 \def\Hy@driver{hdviwind}%
2741 \setkeys{Hyp}{colorlinks}%
2742 \ifpdf
2743 \else
2744 \ifxetex
2745 \else
2746 \PassOptionsToPackage{dviwindo}{color}%
2747 \fi
2748 \fi
2749 }
2750 \define@key{Hyp}{dvipsone}[true]{%
2751 \def\Hy@driver{hdvipson}%
2752 }
2753 \define@key{Hyp}{textures}[true]{%
2754 \def\Hy@driver{htexture}%
2755 }
2756 \define@key{Hyp}{latex2html}[true]{%
2757 \Hy@AtBeginDocument{\@latex2htmlX}%
2758 }

```

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

```

2759 \define@key{Hyp}{ps2pdf}[true]{%
2760 \def\Hy@driver{hdvips}%
2761 \providecommand*\pdfborder{0 0 1}%
2762 }

```

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.

```

2763 \define@key{Hyp}{hyperfigures}[true]{%
2764 \Hy@boolkey{hyperfigures}{figures}{#1}%
2765 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2766 \define@key{Hyp}{hyperfootnotes}[true]{%
2767 \Hy@boolkey{hyperfootnotes}{#1}%
2768 }

```

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

```

2769 \def\back@none{none}
2770 \def\back@section{section}
2771 \def\back@page{page}
2772 \def\back@slide{slide}
2773 \define@key{Hyp}{backref}[section]{%
2774   \lowercase{\def\Hy@tempa{#1}}}%
2775   \ifx\Hy@tempa\@empty
2776     \let\Hy@tempa\back@section
2777   \fi
2778   \ifx\Hy@tempa\Hy@false
2779     \let\Hy@tempa\back@none
2780   \fi
2781   \ifx\Hy@tempa\back@slide
2782     \let\Hy@tempa\back@section
2783   \fi
2784   \ifx\Hy@tempa\back@page
2785     \PassOptionsToPackage{hyperpageref}{backref}%
2786     \Hy@backreftrue
2787   \else
2788     \ifx\Hy@tempa\back@section
2789       \PassOptionsToPackage{hyperref}{backref}%
2790       \Hy@backreftrue
2791     \else
2792       \ifx\Hy@tempa\back@none
2793         \Hy@backreffalse
2794       \else
2795         \Hy@WarnOptionValue{#1}{backref}{%
2796           'section', 'slide', 'page', 'none',\MessageBreak
2797           or 'false'}%
2798       \fi
2799     \fi
2800   \fi
2801 }
2802 \define@key{Hyp}{pagebackref}[true]{%
2803   \edef\Hy@tempa{#1}%
2804   \lowercase\expandafter{%
2805     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2806   }%
2807   \ifx\Hy@tempa\@empty
2808     \let\Hy@tempa\Hy@true
2809   \fi
2810   \ifx\Hy@tempa\Hy@true
2811     \PassOptionsToPackage{hyperpageref}{backref}%
2812     \Hy@backreftrue
2813   \else
2814     \ifx\Hy@tempa\Hy@false
2815       \Hy@backreffalse
2816     \else
2817       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2818     \fi
2819   \fi
2820 }

```

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

```

2821 \define@key{Hyp}{hyperindex}[true]{%
2822   \Hy@boolkey{hyperindex}{#1}%

```

2823 }

Configuration of encap char.

2824 \define@key{Hyp}{encap}{\|}{%}

2825 \def\HyInd@EncapChar{#1}%

2826 }

12 Language options

The \autoref feature depends on the language.

2827 \def\HyLang@afrikaans{%

2828 \def\equationautorefname{Vergelyking}%

2829 \def\footnoteautorefname{Voetnota}%

2830 \def\itemautorefname{Item}%

2831 \def\figureautorefname{Figuur}%

2832 \def\tableautorefname{Tabel}%

2833 \def\partautorefname{Deel}%

2834 \def\appendixautorefname{Bylae}%

2835 \def\chapterautorefname{Hoofstuk}%

2836 \def\sectionautorefname{Afdeling}%

2837 \def\subsectionautorefname{Subafdeling}%

2838 \def\subsubsectionautorefname{Subsubafdeling}%

2839 \def\paragraphautorefname{Paragraaf}%

2840 \def\subparagraphautorefname{Subparagraaf}%

2841 \def\FancyVerbLineautorefname{Lyn}%

2842 \def\theoremautorefname{Teorema}%

2843 \def\pageautorefname{Bladsy}%

2844 }

2845 \def\HyLang@english{%

2846 \def\equationautorefname{Equation}%

2847 \def\footnoteautorefname{footnote}%

2848 \def\itemautorefname{item}%

2849 \def\figureautorefname{Figure}%

2850 \def\tableautorefname{Table}%

2851 \def\partautorefname{Part}%

2852 \def\appendixautorefname{Appendix}%

2853 \def\chapterautorefname{chapter}%

2854 \def\sectionautorefname{section}%

2855 \def\subsectionautorefname{subsection}%

2856 \def\subsubsectionautorefname{subsubsection}%

2857 \def\paragraphautorefname{paragraph}%

2858 \def\subparagraphautorefname{subparagraph}%

2859 \def\FancyVerbLineautorefname{line}%

2860 \def\theoremautorefname{Theorem}%

2861 \def\pageautorefname{page}%

2862 }

2863 \def\HyLang@french{%

2864 \def\equationautorefname{'Equation}%

2865 \def\footnoteautorefname{note}%

2866 \def\itemautorefname{item}%

2867 \def\figureautorefname{Figure}%

2868 \def\tableautorefname{Tableau}%

2869 \def\partautorefname{Partie}%

2870 \def\appendixautorefname{Appendice}%

2871 \def\chapterautorefname{chapitre}%

2872 \def\sectionautorefname{section}%

2873 \def\subsectionautorefname{sous-section}%

```

2874 \def\subsubsectionautorefname{sous-sous-section}%
2875 \def\paragraphautorefname{paragraphe}%
2876 \def\subparagraphautorefname{sous-paragraphe}%
2877 \def\FancyVerbLineautorefname{ligne}%
2878 \def\theoremautorefname{Th\'eor\'eme}%
2879 \def\pageautorefname{page}%
2880 }
2881 \def\HyLang@german{%
2882 \def\equationautorefname{Gleichung}%
2883 \def\footnoteautorefname{Fu\ss note}%
2884 \def\itemautorefname{Punkt}%
2885 \def\figureautorefname{Abbildung}%
2886 \def\tableautorefname{Tabelle}%
2887 \def\partautorefname{Teil}%
2888 \def\appendixautorefname{Anhang}%
2889 \def\chapterautorefname{Kapitel}%
2890 \def\sectionautorefname{Abschnitt}%
2891 \def\subsectionautorefname{Unterabschnitt}%
2892 \def\subsubsectionautorefname{Unterunterabschnitt}%
2893 \def\paragraphautorefname{Absatz}%
2894 \def\subparagraphautorefname{Unterabsatz}%
2895 \def\FancyVerbLineautorefname{Zeile}%
2896 \def\theoremautorefname{Theorem}%
2897 \def\pageautorefname{Seite}%
2898 }
2899 \def\HyLang@italian{%
2900 \def\equationautorefname{Equazione}%
2901 \def\footnoteautorefname{nota}%
2902 \def\itemautorefname{punto}%
2903 \def\figureautorefname{Figura}%
2904 \def\tableautorefname{Tabella}%
2905 \def\partautorefname{Parte}%
2906 \def\appendixautorefname{Appendice}%
2907 \def\chapterautorefname{Capitolo}%
2908 \def\sectionautorefname{sezione}%
2909 \def\subsectionautorefname{sottosezione}%
2910 \def\subsubsectionautorefname{sottosottosezione}%
2911 \def\paragraphautorefname{paragrafo}%
2912 \def\subparagraphautorefname{sottoparagrafo}%
2913 \def\FancyVerbLineautorefname{linea}%
2914 \def\theoremautorefname{Teorema}%
2915 \def\pageautorefname{Pag.\@}%
2916 }
2917 \def\HyLang@magyar{%
2918 \def\equationautorefname{Egyenlet}%
2919 \def\footnoteautorefname{l\'abjegyzet}%
2920 \def\itemautorefname{Elem}%
2921 \def\figureautorefname{'Abra}%
2922 \def\tableautorefname{T\'abl\'azat}%
2923 \def\partautorefname{R\'esz}%
2924 \def\appendixautorefname{F\'uggel\'ek}%
2925 \def\chapterautorefname{fejezet}%
2926 \def\sectionautorefname{szakasz}%
2927 \def\subsectionautorefname{alszakasz}%
2928 \def\subsubsectionautorefname{alalszakasz}%
2929 \def\paragraphautorefname{bekezd\'es}%
2930 \def\subparagraphautorefname{albekezd\'es}%

```


2965 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
 2966 % \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.

2967 \def\itemautorefname{\cyr\cyrp.}%
 2968 % \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.

2969 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
 2970 \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.

2971 \def\partautorefname{\cyr\cyrch.}%
 2972 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
 2973 \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.

2974 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
 2975 % \def\appendixautorefname{%
 2976 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
 2977 % }%

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.

2978 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
 2979 \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.

2980 \def\paragraphautorefname{\cyr\cyrp.}%
 2981 \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.

2982 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
 2983 % \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.

2984 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

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

2985 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
 2986 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

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

2987 % \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 ...

```
2988 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

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

```
2990 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cym\cyr.}%
```

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

```
2991 \def\pageautorefname{\cyr\cyr.}%
```

```
2992 }
```

```
2993 \def\HyLang@spanish{%
```

```
2994 \def\equationautorefname{Ecuaci'on}%
```

```
2995 \def\footnoteautorefname{Nota a pie de p'agina}%
```

```
2996 \def\itemautorefname{Elemento}%
```

```
2997 \def\figureautorefname{Figura}%
```

```
2998 \def\tableautorefname{Tabla}%
```

```
2999 \def\partautorefname{Parte}%
```

```
3000 \def\appendixautorefname{Ap'endice}%
```

```
3001 \def\chapterautorefname{Cap'itulo}%
```

```
3002 \def\sectionautorefname{Secci'on}%
```

```
3003 \def\subsectionautorefname{Subsecci'on}%
```

```
3004 \def\subsubsectionautorefname{Subsubsecci'on}%
```

```
3005 \def\paragraphautorefname{P'arrafo}%
```

```
3006 \def\subparagraphautorefname{Subp'arrafo}%
```

```
3007 \def\FancyVerbLineautorefname{L'inea}%
```

```
3008 \def\theoremautorefname{Teorema}%
```

```
3009 \def\pageautorefname{P'agina}%
```

```
3010 }
```

```
3011 \def\HyLang@vietnamese{%
```

```
3012 \def\equationautorefname{Ph\uhorn{ }ohorn{ }ng tr'inh}%
```

```
3013 \def\footnoteautorefname{Ch'u th'ich}%
```

```
3014 \def\itemautorefname{m\du{c}%
```

```
3015 \def\figureautorefname{H'inh}%
```

```
3016 \def\tableautorefname{B'h{a}ng}%
```

```
3017 \def\partautorefname{Ph'\acircumflex{n}%
```

```
3018 \def\appendixautorefname{Ph\du{ }l\du{c}%
```

```
3019 \def\chapterautorefname{ch\uhorn{ }ohorn{ }ng}%
```

```
3020 \def\sectionautorefname{m\du{c}%
```

```
3021 \def\subsectionautorefname{m\du{c}%
```

```
3022 \def\subsubsectionautorefname{m\du{c}%
```

```
3023 \def\paragraphautorefname{\dj{ }o\da{n}%
```

```
3024 \def\subparagraphautorefname{\dj{ }o\da{n}%
```

```
3025 \def\FancyVerbLineautorefname{d'ong}%
```

```
3026 \def\theoremautorefname{DJ\di{ }nh l'y}%
```

```
3027 \def\pageautorefname{Trang}%
```

```
3028 }
```

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

```
3029 \def\HyLang@addto#1#2{%
```

```
3030 #2%
```

```
3031 \@temptokena{#2}%
```

```
3032 \ifx#1\relax
```

```
3033 \let#1\@empty
```

```
3034 \fi
```

```
3035 \ifx#1\@undefined
```

```

3036 \edef#1{\the\@temptokena}%
3037 \else
3038 \toks@\expandafter{#1}%
3039 \edef#1{\the\toks@\the\@temptokena}%
3040 \fi
3041 \@temptokena{}\toks@\@temptokena
3042 }

3043 \def\HyLang@DeclareLang#1#2#3{%
3044 \ifpackagewith{babel}{#1}{%
3045 \expandafter\HyLang@addto
3046 \csname extras#1\expandafter\endcsname
3047 \csname HyLang@#2\endcsname
3048 #3%
3049 \@namedef{HyLang@#1@done}{}%
3050 }{}%
3051 \begingroup
3052 \edef\x##1#2{%
3053 \noexpand\ifx##2\relax
3054 \errmessage{No definitions for language #2' found!}%
3055 \noexpand\fi
3056 \endgroup
3057 \noexpand\define@key{Hyp}{#1}[]{}%
3058 \noexpand\@ifundefined{HyLang@#1@done}{%
3059 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3060 #3%
3061 \noexpand\@namedef{HyLang@#1@done}{}%
3062 }{}%
3063 }%
3064 }%
3065 \expandafter\x\csname extras#1\expandafter\endcsname
3066 \csname HyLang@#2\endcsname
3067 }

3068 \HyLang@DeclareLang{english}{english}{}
3069 \HyLang@DeclareLang{UKenglish}{english}{}
3070 \HyLang@DeclareLang{british}{english}{}
3071 \HyLang@DeclareLang{USenglish}{english}{}
3072 \HyLang@DeclareLang{american}{english}{}
3073 \HyLang@DeclareLang{german}{german}{}
3074 \HyLang@DeclareLang{austrian}{german}{}
3075 \HyLang@DeclareLang{ngerman}{german}{}
3076 \HyLang@DeclareLang{naustrian}{german}{}
3077 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3078 \HyLang@DeclareLang{brazil}{portuges}{}
3079 \HyLang@DeclareLang{brazilian}{portuges}{}
3080 \HyLang@DeclareLang{portuguese}{portuges}{}
3081 \HyLang@DeclareLang{spanish}{spanish}{}
3082 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3083 \HyLang@DeclareLang{french}{french}{}
3084 \HyLang@DeclareLang{frenchb}{french}{}
3085 \HyLang@DeclareLang{français}{french}{}
3086 \HyLang@DeclareLang{acadian}{french}{}
3087 \HyLang@DeclareLang{canadien}{french}{}
3088 \HyLang@DeclareLang{italian}{italian}{}
3089 \HyLang@DeclareLang{magyar}{magyar}{}
3090 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3091 \define@key{Hyp}{vietnamese}[]{}%
3092 \HyLang@addto\extravietnamese\HyLang@vietnamese
3093 \Hy@AtEndOfPackage{%
3094   \ifundefined{T@PU}{}{}%
3095   \input{puvnenc.def}%
3096 }%
3097 }%
3098 }
3099 \define@key{Hyp}{vietnam}[]{}%
3100 \HyLang@addto\extravietnam\HyLang@vietnamese
3101 \Hy@AtEndOfPackage{%
3102   \ifundefined{T@PU}{}{}%
3103   \input{puvnenc.def}%
3104 }%
3105 }%
3106 }

```

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

```

3107 \define@key{Hyp}{arabic}[]{}%
3108 \Hy@AtEndOfPackage{%
3109   \ifundefined{T@PU}{}{}%
3110   \input{puarenc.def}%
3111 }%
3112 }%
3113 }

```

13 Options to change appearance of links

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

```

3114 \define@key{Hyp}{colorlinks}[true]{}%
3115 \Hy@boolkey{colorlinks}{#1}%
3116 }
3117 \define@key{Hyp}{ocgcolorlinks}[true]{}%
3118 \Hy@boolkey{ocgcolorlinks}{#1}%
3119 }
3120 \Hy@AtBeginDocument{%
3121   \begingroup
3122   \ifundefined{OBJ@OCG@view}{}%
3123   \ifHy@ocgcolorlinks
3124     \Hy@Warning{%
3125       Driver does not support ‘ocgcolorlinks’,\MessageBreak
3126       using ‘colorlinks’ instead%
3127     }%
3128   \fi
3129 }{}%
3130 \endgroup
3131 }
3132 \define@key{Hyp}{frenchlinks}[true]{}%
3133 \Hy@boolkey{frenchlinks}{#1}%
3134 }

```

14 Bookmarking

```

3135 \begingroup\expandafter\expandafter\expandafter\endgroup
3136 \expandafter\ifx\curname chapter\endcurname\relax

```

```

3137 \def\toclevel@part{0}%
3138 \else
3139 \def\toclevel@part{-1}%
3140 \fi
3141 \def\toclevel@chapter{0}
3142 \def\toclevel@section{1}
3143 \def\toclevel@subsection{2}
3144 \def\toclevel@subsubsection{3}
3145 \def\toclevel@paragraph{4}
3146 \def\toclevel@subparagraph{5}
3147 \def\toclevel@figure{0}
3148 \def\toclevel@table{0}
3149 \@ifpackageloaded{listings}{%
3150 \providecommand*\theHlstlisting{\thelstlisting}%
3151 \providecommand*\toclevel@lstlisting{0}%
3152 }{}
3153 \@ifpackageloaded{listing}{%
3154 \providecommand*\theHlisting{\thelisting}%
3155 \providecommand*\toclevel@listing{0}%
3156 }{}

3157 \define@key{Hyp}{bookmarks}[true]{%
3158 \Hy@boolkey{bookmarks}{#1}%
3159 }

3160 \define@key{Hyp}{bookmarksopen}[true]{%
3161 \Hy@boolkey{bookmarksopen}{#1}%
3162 }

```

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.

```

3163 \let\Hy@bookmarksdepth\c@tocdepth
3164 \define@key{Hyp}{bookmarksdepth}[]{%
3165 \begingroup
3166 \edef\x{#1}%
3167 \ifx\x\empty
3168 \global\let\Hy@bookmarksdepth\c@tocdepth
3169 \else
3170 \@ifundefined{toclevel@\x}{%
3171 \@onelevel@sanitize\x
3172 \edef\y{\expandafter\@car\x\@nil}%
3173 \ifcase 0\expandafter\ifx\y-1\fi
3174 \expandafter\ifnum\expandafter'\y>47 %
3175 \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3176 \Hy@Warning{Unknown document division name (\x)}%
3177 \else
3178 \setbox\z@=\hbox{%
3179 \count@=\x
3180 \xdef\Hy@bookmarksdepth{\the\count@}%
3181 }%

```

```

3182     \fi
3183   }{%
3184     \setbox\z@=\hbox{%
3185       \count@=\csname toplevel@\x\endcsname
3186       \xdef\Hy@bookmarksdepth{\the\count@}%
3187     }%
3188   }%
3189   \fi
3190 \endgroup
3191 }

```

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

```

3192 \define@key{Hyp}{bookmarksopenlevel}{%
3193   \def\@bookmarksopenlevel{#1}%
3194 }
3195 \def\@bookmarksopenlevel{\maxdimen}
3196 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3197 \define@key{Hyp}{bookmarkstype}{%
3198   \def\Hy@bookmarkstype{#1}%
3199 }
3200 \def\Hy@bookmarkstype{toc}

```

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

```

3201 \define@key{Hyp}{bookmarksnumbered}[true]{%
3202   \Hy@boolkey{bookmarksnumbered}{#1}%
3203 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3204 \define@key{Hyp}{CJKbookmarks}[true]{%
3205   \Hy@boolkey{CJKbookmarks}{#1}%
3206 }
3207 \def\Hy@temp#1{%
3208   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3209 }
3210 \def\Hy@@temp#1#2#3{%
3211   \define@key{Hyp}{#2color}{%
3212     \HyColor@HyperrefColor{##1}#1%
3213   }%
3214   \def#1{#3}%
3215 }
3216 \Hy@temp{link}{red}
3217 \Hy@temp{anchor}{black}
3218 \Hy@temp{cite}{green}
3219 \Hy@temp{file}{cyan}
3220 \Hy@temp{url}{magenta}
3221 \Hy@temp{menu}{red}
3222 \Hy@temp{run}{\@filecolor}
3223 \define@key{Hyp}{pagecolor}{%
3224   \Hy@WarningPageColor
3225 }
3226 \def\Hy@WarningPageColor{%
3227   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3228   \global\let\Hy@WarningPageColor\relax
3229 }
3230 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3231 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3232 \let\@baseurl\@empty

```

```

3233 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3234 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3235 \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.

```

3236 \let\@pdfpagetransition\relax
3237 \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.

```

3238 \let\@pdfpageduration\relax
3239 \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.

```

3240 \newif\ifHy@useHidKey
3241 \Hy@useHidKeyfalse
3242 \define@key{Hyp}{pdfpagehidden}[true]{%
3243   \Hy@boolkey{pdfpagehidden}{#1}%
3244   \ifHy@pdfpagehidden
3245     \global\Hy@useHidKeytrue
3246   \fi
3247 }

```

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).

```

3248 \def\Hy@ColorList{cite,file,link,menu,run,url}
3249 \@for\Hy@temp:=\Hy@ColorList\do{%
3250   \edef\Hy@temp{%
3251     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3252       \noexpand\Hy@Color@HyperrefBorderColor
3253       {##1}%
3254       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3255       {hyperref}%
3256       {\Hy@temp bordercolor}%
3257     }%
3258   }%
3259   \Hy@temp
3260 }
3261 \define@key{Hyp}{pagebordercolor}{%
3262   \Hy@WarningPageBorderColor
3263 }
3264 \def\Hy@WarningPageBorderColor{%
3265   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%

```

```

3266 \global\let\Hy@WarningPageBorderColor\relax
3267 }

3268 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3269 \Hy@DefNameKey{pdfhighlight}{%
3270   \do{/I}{Invert}%
3271   \do{/N}{None}%
3272   \do{/O}{Outline}%
3273   \do{/P}{Push}%
3274 }
3275 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3276 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3277 \def\Hy@setpdfborder{%
3278   \ifx\@pdfborder\@empty
3279     \else
3280       /Border[\@pdfborder]%
3281     \fi
3282   \ifx\@pdfborderstyle\@empty
3283     \else
3284       /BS<<\@pdfborderstyle>>%
3285     \fi
3286 }
3287 \Hy@DefNameKey{pdfpagemode}{%
3288   \do{UseNone}{}%
3289   \do{UseOutlines}{}%
3290   \do{UseThumbs}{}%
3291   \do{FullScreen}{}%
3292   \do{UseOC}{PDF 1.5}%
3293   \do{UseAttachments}{PDF 1.6}%
3294 }
3295 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3296   \do{UseNone}{}%
3297   \do{UseOutlines}{}%
3298   \do{UseThumbs}{}%
3299   \do{FullScreen}{}%
3300   \do{UseOC}{PDF 1.5}%
3301   \do{UseAttachments}{PDF 1.6}%
3302 }
3303 \Hy@DefNameKey{pdfdirection}{%
3304   \do{L2R}{Left to right}%
3305   \do{R2L}{Right to left}%
3306 }
3307 \Hy@DefNameKey{pdfviewarea}{%
3308   \do{MediaBox}{}%
3309   \do{CropBox}{}%
3310   \do{BleedBox}{}%
3311   \do{TrimBox}{}%
3312   \do{ArtBox}{}%
3313 }
3314 \Hy@DefNameKey{pdfviewclip}{%
3315   \do{MediaBox}{}%
3316   \do{CropBox}{}%
3317   \do{BleedBox}{}%
3318   \do{TrimBox}{}%
3319   \do{ArtBox}{}%
3320 }
3321 \Hy@DefNameKey{pdfprintarea}{%
3322   \do{MediaBox}{}%

```

```

3323 \do{CropBox}{}%
3324 \do{BleedBox}{}%
3325 \do{TrimBox}{}%
3326 \do{ArtBox}{}%
3327 }
3328 \Hy@DefNameKey{pdfprintclip}{%
3329 \do{MediaBox}{}%
3330 \do{CropBox}{}%
3331 \do{BleedBox}{}%
3332 \do{TrimBox}{}%
3333 \do{ArtBox}{}%
3334 }
3335 \Hy@DefNameKey{pdfprintscaling}{%
3336 \do{AppDefault}{}%
3337 \do{None}{}%
3338 }
3339 \Hy@DefNameKey{pdfduplex}{%
3340 \do{Simplex}{}%
3341 \do{DuplexFlipShortEdge}{}%
3342 \do{DuplexFlipLongEdge}{}%
3343 }
3344 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3345 \do{true}{}%
3346 \do{false}{}%
3347 }
3348 \define@key{Hyp}{pdfprintpagerange}{%
3349 \def\@pdfprintpagerange{#1}%
3350 }
3351 \Hy@DefNameKey{pdfnumcopies}{%
3352 \do{2}{two copies}%
3353 \do{3}{three copies}%
3354 \do{4}{four copies}%
3355 \do{5}{five copies}%
3356 }
3357 \define@key{Hyp}{pdfusetitle}[true]{%
3358 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3359 }
3360 \def\HyXeTeX@CheckUnicode{%
3361 \ifxetex
3362 \ifHy@unicode
3363 \else
3364 \Hy@WarningNoLine{%
3365 XeTeX driver only supports unicode.\MessageBreak
3366 Enabling option 'unicode'%
3367 }%
3368 \setkeys{Hyp}{unicode}%
3369 \fi
3370 \else
3371 \let\HyXeTeX@CheckUnicode\relax
3372 \fi
3373 }
3374 \def\HyPsd@PrerenderUnicode#1{%
3375 \begingroup
3376 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3377 \else
3378 \sbox0{%
3379 \let\GenericInfo\@gobbletwo

```

```

3380      \let\GenericWarning\@gobbletwo
3381      \let\GenericError\@gobblefour
3382      \PrerenderUnicode{#1}%
3383    }%
3384    \fi
3385  \endgroup
3386 }
3387 \define@key{Hyp}{pdftitle}{%
3388   \HyXeTeX@CheckUnicode
3389   \HyPsd@XeTeXBigCharstrue
3390   \HyPsd@PrerenderUnicode{#1}%
3391   \pdfstringdef\@pdftitle{#1}%
3392 }
3393 \define@key{Hyp}{pdfauthor}{%
3394   \HyXeTeX@CheckUnicode
3395   \HyPsd@XeTeXBigCharstrue
3396   \HyPsd@PrerenderUnicode{#1}%
3397   \pdfstringdef\@pdfauthor{#1}%
3398 }
3399 \define@key{Hyp}{pdfproducer}{%
3400   \HyXeTeX@CheckUnicode
3401   \HyPsd@XeTeXBigCharstrue
3402   \HyPsd@PrerenderUnicode{#1}%
3403   \pdfstringdef\@pdfproducer{#1}%
3404 }
3405 \define@key{Hyp}{pdfcreator}{%
3406   \HyXeTeX@CheckUnicode
3407   \HyPsd@XeTeXBigCharstrue
3408   \HyPsd@PrerenderUnicode{#1}%
3409   \pdfstringdef\@pdfcreator{#1}%
3410 }
3411 \define@key{Hyp}{pdfcreationdate}{%
3412   \begingroup
3413     \Hy@unicodedefalse
3414     \pdfstringdef\@pdfcreationdate{#1}%
3415   \endgroup
3416 }
3417 \define@key{Hyp}{pdfmoddate}{%
3418   \begingroup
3419     \Hy@unicodedefalse
3420     \pdfstringdef\@pdfmoddate{#1}%
3421   \endgroup
3422 }
3423 \define@key{Hyp}{pdfsubject}{%
3424   \HyXeTeX@CheckUnicode
3425   \HyPsd@XeTeXBigCharstrue
3426   \HyPsd@PrerenderUnicode{#1}%
3427   \pdfstringdef\@pdfsubject{#1}%
3428 }
3429 \define@key{Hyp}{pdfkeywords}{%
3430   \HyXeTeX@CheckUnicode
3431   \HyPsd@XeTeXBigCharstrue
3432   \HyPsd@PrerenderUnicode{#1}%
3433   \pdfstringdef\@pdfkeywords{#1}%
3434 }
3435 \define@key{Hyp}{pdftrapped}{%
3436   \lowercase{\edef\Hy@temp{#1}}%

```

```

3437 \ifx\Hy@temp\HyInfo@trapped@true
3438 \def\@pdftrapped{True}%
3439 \else
3440 \ifx\Hy@temp\HyInfo@trapped@false
3441 \def\@pdftrapped{False}%
3442 \else
3443 \ifx\Hy@temp\HyInfo@trapped@unknown
3444 \def\@pdftrapped{Unknown}%
3445 \else
3446 \ifx\Hy@temp\@empty
3447 \else
3448 \Hy@Warning{%
3449     Unsupported value '#1'\MessageBreak
3450     for option 'pdftrapped'%
3451 }%
3452 \fi
3453 \def\@pdftrapped{}}%
3454 \fi
3455 \fi
3456 \fi
3457 }
3458 \def\HyInfo@trapped@true{true}
3459 \def\HyInfo@trapped@false{false}
3460 \def\HyInfo@trapped@unknown{unknown}
3461 \def\HyInfo@TrappedUnsupported{%
3462 \ifx\@pdftrapped\@empty
3463 \else
3464 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3465 \gdef\HyInfo@TrappedUnsupported{}}%
3466 \fi
3467 }
3468 \define@key{Hyp}{pdfinfo}{%
3469 \kvsetkeys{pdfinfo}{#1}%
3470 }
3471 \def\Hy@temp#1{%
3472 \lowercase{\Hy@temp@A{#1}}{#1}%
3473 }
3474 \def\Hy@temp@A#1#2{%
3475 \define@key{pdfinfo}{#2}{%
3476 \hypersetup{pdf#1={##1}}}%
3477 }%
3478 }
3479 \Hy@temp{Title}
3480 \Hy@temp{Author}
3481 \Hy@temp{Keywords}
3482 \Hy@temp{Subject}
3483 \Hy@temp{Creator}
3484 \Hy@temp{Producer}
3485 \Hy@temp{CreationDate}
3486 \Hy@temp{ModDate}
3487 \Hy@temp{Trapped}
3488 \newif\ifHyInfo@AddonUnsupported
3489 \kv@set@family@handler{pdfinfo}{%
3490 \HyInfo@AddonHandler{#1}{#2}%
3491 }
3492 \let\HyInfo@do\relax
3493 \def\HyInfo@AddonHandler#1#2{%

```

```

3494 \ifx\kv@value\relax
3495   \Hy@Warning{%
3496     Option 'pdfinfo': ignoring key '\kv@key' without value%
3497   }%
3498 \else
3499   \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3500   \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3501   \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3502     \ifHyInfo@AddonUnsupported
3503       \Hy@Warning{%
3504         This driver does not support additional\MessageBreak
3505         information entries, therefore\MessageBreak
3506         '\kv@key' is ignored%
3507       }%
3508     \else
3509       \define@key{pdfinfo}{\HyInfo@Key}{%
3510         \HyXeTeX@CheckUnicode
3511         \HyPsd@XeTeXBigCharstrue
3512         \HyPsd@PrerenderUnicode{##1}%
3513         \pdfstringdef\HyInfo@Value{##1}%
3514         \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3515         \HyInfo@Value
3516       }%
3517       \edef\HyInfo@AddonList{%
3518         \HyInfo@AddonList
3519         \HyInfo@do{\HyInfo@Key}%
3520       }%
3521       \kv@parse@normalized{%
3522         \HyInfo@Key={#2}%
3523       }{%
3524         \kv@processor@default{pdfinfo}%
3525       }%
3526     \fi
3527 \else
3528   \kv@parse@normalized{%
3529     \HyInfo@Key={#2}%
3530   }{%
3531     \kv@processor@default{pdfinfo}%
3532   }%
3533 \fi
3534 \fi
3535 }
3536 \def\HyInfo@GenerateAddons{%
3537   \ifHyInfo@AddonUnsupported
3538     \def\HyInfo@Addons{}%
3539   \else
3540     \begingroup
3541     \toks@{}%
3542     \def\HyInfo@do##1{%
3543       \EdefEscapeName\HyInfo@Key{##1}%
3544       \edef\x{%
3545         \toks@{%
3546           \the\toks@
3547           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3548         }%
3549       }%
3550       \x

```

```

3551 }%
3552 \HyInfo@AddonList
3553 \edef\x{\endgroup
3554 \def\noexpand\HyInfo@Addons{\the\toks@}%
3555 }%
3556 \x
3557 \fi
3558 }
3559 \def\HyInfo@AddonList{}

3560 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3561 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3562 \let\setpdfinkmargin\@gobble
3563 \def\calculate@pdfview#1 #2\{%
3564 \def\@pdfview{#1}%
3565 \ifx\#2\%
3566 \def\@pdfviewparams{-32768}%
3567 \else
3568 \def\@pdfviewparams{#2}%
3569 \fi
3570 }
3571 \begingroup\expandafter\expandafter\expandafter\endgroup
3572 \expandafter\ifx\csname numexpr\endcsname\relax
3573 \def\Hy@number#1{%
3574 \expandafter\@firstofone\expandafter{\number#1}%
3575 }%
3576 \else
3577 \def\Hy@number#1{%
3578 \the\numexpr#1\relax
3579 }%
3580 \fi
3581 \define@key{Hyp}{pdfstartpage}{%
3582 \ifx\#1\%
3583 \def\@pdfstartpage{}%
3584 \else
3585 \edef\@pdfstartpage{\Hy@number{#1}}%
3586 \fi
3587 }%
3588 \define@key{Hyp}{pdfstartview}{%
3589 \ifx\#1\%
3590 \def\@pdfstartview{}%
3591 \else
3592 \hypercalcbpdef\@pdfstartview{/#1}%
3593 \fi
3594 }
3595 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3596 \define@key{Hyp}{pdftoolbar}[true]{%
3597 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3598 }
3599 \define@key{Hyp}{pdfmenubar}[true]{%
3600 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3601 }
3602 \define@key{Hyp}{pdfwindowui}[true]{%
3603 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3604 }
3605 \define@key{Hyp}{pdffitwindow}[true]{%
3606 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3607 }

```

```

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

```

Default values:

```

3649 \def\@linkbordercolor{1 0 0}
3650 \def\@urlbordercolor{0 1 1}
3651 \def\@menubordercolor{1 0 0}
3652 \def\@filebordercolor{0 .5 .5}
3653 \def\@runbordercolor{0 .7 .7}
3654 \def\@citebordercolor{0 1 0}
3655 \def\@pdfhighlight{/I}
3656 \def\@pdftitle{}
3657 \def\@pdfauthor{}
3658 \let\@pdfproducer\relax
3659 \def\@pdfcreator{LaTeX with hyperref package}
3660 \def\@pdfcreationdate{}
3661 \def\@pdfmoddate{}
3662 \def\@pdfsubject{}
3663 \def\@pdfkeywords{}

```

```

3664 \def\@pdftrapped{}
3665 \def\@pdfpagescrop{}
3666 \def\@pdfstartview{ /Fit }
3667 \def\@pdfstartpage{1}
3668 \def\@pdfprintpagerange{}
3669 \def\@pdflang{}
3670 \let\PDF@SetupDoc\@empty
3671 \let\PDF@FinishDoc\@empty
3672 \let\phantomsection\@empty
3673 \let\special@paper\@empty
3674 \def\HyperDestNameFilter#1{#1}
3675 \Hy@AtBeginDocument{%
3676   \begingroup
3677     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3678     \dimen@=\x\relax
3679     \ifdim\dimen@>\z@
3680     \else
3681       \dimen@=11in\relax
3682       \Hy@WarningNoLine{%
3683         Height of page (\expandafter\string\x) %
3684         is invalid (\the\x),\MessageBreak
3685         using 11in%
3686       }%
3687     \fi
3688     \dimen@=0.99626401\dimen@
3689     \xdef\Hy@pageheight{\strip@pt\dimen@}%
3690   \endgroup
3691 }
3692 \def\HyInd@EncapChar{\|}
3693 \def\hypersetup{\setkeys{Hyp}}

```

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.

```

3694 \let\hyper@normalise\ExecuteOptions
3695 \let\ExecuteOptions\hypersetup
3696 \Hy@RestoreCatcodes
3697 \InputIfFileExists{hyperref.cfg}{-}{}
3698 \Hy@SetCatcodes
3699 \let\ExecuteOptions\hyper@normalise
3700 \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.

```

3701 \RequirePackage{kvoptions}[2009/07/21]
3702 \SetupKeyvalOptions{family=Hyp}
3703 \DeclareLocalOptions{%
3704   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3705 }

```

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

```

3706 \@ifpackageloaded{tex4ht}{%
3707   \@ifpackagewith{hyperref}{tex4ht}{-}{}
3708   \PassOptionsToPackage{tex4ht}{hyperref}%
3709 }%
3710 {}

```

```

3711 \let\ReadBookmarks\relax
3712 \ProcessKeyvalOptions{Hyp}

    After processing options.

3713 \Hy@AtBeginDocument{%
3714   \ifHy@draft
3715     \let\hyper@@anchor\@gobble
3716     \gdef\hyper@link#1#2#3{#3}%
3717     \let\hyper@anchorstart\@gobble
3718     \let\hyper@anchorend\@empty
3719     \let\hyper@linkstart\@gobbletwo
3720     \let\hyper@linkend\@empty
3721     \def\hyper@linkurl#1#2{#1}%
3722     \def\hyper@linkfile#1#2#3{#1}%
3723     \def\hyper@link@{#1}#2#3{#1}%
3724     \def\Acrobatmenu#1#2{\leavevmode#2}%
3725     \let\PDF@SetupDoc\@empty
3726     \let\PDF@FinishDoc\@empty
3727     \let\@fifthoffive\@secondoftwo
3728     \let\@secondoffive\@secondoftwo
3729     \let\ReadBookmarks\relax
3730     \let\WriteBookmarks\relax
3731     \Hy@WarningNoLine{ draft mode on}%
3732   \fi
3733   \Hy@DisableOption{draft}%
3734   \Hy@DisableOption{nolinks}%
3735   \Hy@DisableOption{final}%
3736 }

```

15.1 PDF/A

```

3737 \Hy@DisableOption{pdfa}

3738 \ifHy@pdfa
3739   \setkeys{Hyp}{pdfversion=1.4}%
3740   \def\Hy@Acrobatmenu#1#2{%
3741     \leavevmode
3742     \begingroup
3743       \edef\x{#1}%
3744       \@onelevel@sanitize\x
3745       \ifx\x\Hy@NextPage
3746         \let\y=Y%
3747       \else
3748         \ifx\x\Hy@PrevPage
3749           \let\y=Y%
3750         \else
3751           \ifx\x\Hy@FirstPage
3752             \let\y=Y%
3753           \else
3754             \ifx\x\Hy@LastPage
3755               \let\y=Y%
3756             \else
3757               \let\y=N%
3758             \fi
3759           \fi
3760         \fi
3761       \fi
3762     \expandafter\endgroup

```

```

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

```

3783 \Hy@nextfalse
3784 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3785 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3786 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3787 \ifHy@next
3788 \let\texttilde\~%
3789 \fi

3790 \ifHy@figures
3791 \Hy@Info{Hyper figures ON}%
3792 \else
3793 \Hy@Info{Hyper figures OFF}%
3794 \fi

3795 \ifHy@nesting
3796 \Hy@Info{Link nesting ON}%
3797 \else
3798 \Hy@Info{Link nesting OFF}%
3799 \fi

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

3805 \ifHy@plainpages
3806 \Hy@Info{Plain pages ON}%
3807 \else
3808 \Hy@Info{Plain pages OFF}%
3809 \fi

3810 \ifHy@backref
3811 \Hy@Info{Backreferencing ON}%
3812 \else
3813 \Hy@Info{Backreferencing OFF}%
3814 \fi

```

```

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

```

15.2.1 Driver loading

```

3848 \Hy@AtEndOfPackage{%
3849   \@ifpackageloaded{tex4ht}{%
3850     \def\Hy@driver{htex4ht}%
3851     \Hy@texhttrue
3852   }{}%

```

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.

```

3853   \ifx\Hy@driver\@empty
3854   \else
3855     \def\Hy@temp{hpdftex}%
3856     \ifpdf
3857       \ifx\Hy@driver\Hy@temp
3858       \else
3859         \Hy@WarningNoLine{%
3860           Wrong driver ‘\Hy@driver.def’;\MessageBreak
3861           pdfTeX is running in PDF mode.\MessageBreak
3862           Forcing driver ‘\Hy@temp.def’%
3863         }%
3864         \let\Hy@driver\Hy@temp
3865       \fi
3866     \else

```

```

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

```

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

```

3916 \ifx\Hy@driver\@empty
3917 \providecommand*{\Hy@defaultdriver}{hypertex}%
3918 \ifpdf
3919 \def\Hy@driver{hpdfTeX}%
3920 \else
3921 \ifxetex
3922 \def\Hy@driver{hxtex}%

```

```

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

```

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.

```

3962 \newif\ifHy@DvipdfmxOutlineOpen
3963 \ifxetex
3964 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3965 \else
3966 \Hy@DvipdfmxOutlineOpentrue
3967 \fi
3968 \fi
3969 \begingroup\expandafter\expandafter\expandafter\endgroup
3970 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3971 \else
3972 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3973 \Hy@DvipdfmxOutlineOpentrue
3974 \fi
3975 \fi
3976 \Hy@DisableOption{tex4ht}

```

```

3977 \Hy@DisableOption{pdftex}
3978 \Hy@DisableOption{nativepdf}
3979 \Hy@DisableOption{dvipdfm}
3980 \Hy@DisableOption{dvipdfmx}
3981 \Hy@DisableOption{dvipdfmx-outline-open}
3982 \Hy@DisableOption{pdfmark}
3983 \Hy@DisableOption{dvips}
3984 \Hy@DisableOption{hypertex}
3985 \Hy@DisableOption{vtex}
3986 \Hy@DisableOption{vtexpdfmark}
3987 \Hy@DisableOption{dviwindo}
3988 \Hy@DisableOption{dvipsone}
3989 \Hy@DisableOption{textures}
3990 \Hy@DisableOption{latex2html}
3991 \Hy@DisableOption{ps2pdf}
3992 \Hy@DisableOption{xetex}
3993 \Hy@AtEndOfPackage{%
3994   \Hy@DisableOption{pdfversion}%
3995 }

```

15.2.2 Bookmarks

```

3996 \def\WriteBookmarks{0}
3997 \def\@bookmarkopenstatus#1{%
3998   \ifHy@bookmarksopen

```

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

```

3999   \ifnum#1<\expandafter\@firstofone\expandafter
4000     {\number\@bookmarksopenlevel} % explicit space
4001   \else
4002     -%
4003   \fi
4004 \else
4005   -%
4006 \fi
4007 }
4008 \ifHy@bookmarks
4009   \Hy@Info{Bookmarks ON}%
4010   \ifx\@pdfpagemode\@empty
4011     \def\@pdfpagemode{UseOutlines}%
4012   \fi
4013 \else
4014   \def\@bookmarkopenstatus#1{%
4015     \Hy@Info{Bookmarks OFF}%
4016     \Hy@AtEndOfPackage{%
4017       \global\let\ReadBookmarks\relax
4018       \global\let\WriteBookmarks\relax
4019     }%
4020     \ifx\@pdfpagemode\@empty
4021       \def\@pdfpagemode{UseNone}%
4022     \fi
4023   \fi
4024 \Hy@DisableOption{bookmarks}

```

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

```

4025 \def\Hy@CatcodeWrapper#1{%
4026   \def\Hy@endWrap{}%
4027   \def\TMP@EnsureCode##1##2{%
4028     \edef\Hy@endWrap{%

```

```

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

```

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

```

4064 \Hy@AtBeginDocument{%
4065 \ifHy@ocgcolorlinks
4066 \setkeys{Hyp}{colorlinks}%
4067 \ifHy@pdfa
4068 \Hy@Warning{%
4069 PDF/A: Optional Content Groups are prohibited,\MessageBreak
4070 using 'colorlinks' instead of 'ocgcolorlinks'%
4071 }%
4072 \Hy@ocgcolorlinksfalse
4073 \fi
4074 \fi
4075 \ifHy@ocgcolorlinks
4076 \else
4077 \Hy@DisableOption{ocgcolorlinks}%
4078 \fi
4079 \ifHy@colorlinks
4080 \def\pdfborder{0 0 0}%
4081 \let\pdfborderstyle\empty
4082 \ifHy@typexml
4083 \else

```

```

4084 \Hy@CatcodeWrapper{%
4085 \RequirePackage{color}%
4086 }%
4087 \fi
4088 \def\Hy@colorlink#1{%
4089 \begingroup
4090 \HyColor@UseColor#1%
4091 }%
4092 \def\Hy@endcolorlink{\endgroup}%
4093 \Hy@Info{Link coloring ON}%
4094 \else
4095 \ifHy@frenchlinks
4096 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4097 \def\Hy@endcolorlink{\endgroup}%
4098 \Hy@Info{French linking ON}%
4099 \else
for grouping consistency:
4100 \def\Hy@colorlink#1{\begingroup}%
4101 \def\Hy@endcolorlink{\endgroup}%
4102 \Hy@Info{Link coloring OFF}%
4103 \fi
4104 \fi
4105 \Hy@DisableOption{colorlinks}%
4106 \Hy@DisableOption{frenchlinks}%
4107 \ifHy@texht
4108 \long\def\@firstoffive#1#2#3#4#5{#1}%
4109 \long\def\@secondoffive#1#2#3#4#5{#2}%
4110 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4111 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4112 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4113 \providecommand*\@safe@activetrue{}%
4114 \providecommand*\@safe@activesfalse{}%
4115 \def\T@ref#1{%
4116 \Hy@safe@activetrue
4117 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4118 \Hy@safe@activesfalse
4119 }%
4120 \def\T@pageref#1{%
4121 \Hy@safe@activetrue
4122 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4123 \Hy@safe@activesfalse
4124 }%
4125 \else
4126 \ifHy@typexml
4127 \else
4128 \Hy@CatcodeWrapper{%
4129 \RequirePackage{nameref}%
4130 }%
4131 \fi
4132 \fi
4133 \DeclareRobustCommand\ref{%
4134 \@ifstar\@refstar\T@ref
4135 }%
4136 \DeclareRobustCommand\pageref{%
4137 \@ifstar\@pagerefstar\T@pageref
4138 }%
4139 % \@ifclassloaded{memoir}{%

```

```

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

```

4170 \begingroup
4171 \endlinechar=-1 %
4172 \catcode'\^^A=14 %
4173 \catcode'\^^M\active
4174 \catcode'\%\active
4175 \catcode'\#\active
4176 \catcode'\_\active
4177 \catcode'\$\active
4178 \catcode'\&\active
4179 \gdef\hyper@normalise{^^A
4180 \begingroup
4181 \catcode'\^^M\active
4182 \def^^M{ }^^A
4183 \catcode'\%\active
4184 \let%\@percentchar
4185 \let%\@percentchar
4186 \catcode'\#\active

```

```

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

4240 \def\hyperlink#1#2{%
4241 \hyper@@link{}{#1}{#2}%
4242 }

4243 \def\Hy@VerboseLinkStart#1#2{%

```

```

4244 \ifHy@verbose
4245   \begingroup
4246     \Hy@safe@activetrue
4247     \xdef\Hy@VerboseGlobalTemp{(#1) ‘#2’}%
4248     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4249     \xdef\Hy@VerboseGlobalTemp{%
4250       \Hy@VerboseGlobalTemp, %
4251       line \the\inputlineno
4252     }%
4253   \endgroup
4254   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4255   \@onelevel@sanitize\Hy@VerboseLinkInfo
4256 \fi
4257 }

4258 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4259 \def\Hy@VerboseLinkStop{%
4260   \ifHy@verbose
4261     \begingroup
4262       \edef\x{\endgroup
4263         \write\m@ne{%
4264           Package ‘hyperref’ Info: %
4265           End of reference \Hy@VerboseLinkInfo.%
4266         }%
4267       }%
4268     \x
4269   \fi
4270 }

4271 \def\Hy@VerboseAnchor#1{%
4272   \ifHy@verbose
4273     \begingroup
4274       \Hy@safe@activetrue
4275       \Hy@Info{Anchor ‘\HyperDestNameFilter{#1}’}%
4276     \endgroup
4277   \fi
4278 }

4279 \def\Hy@AllowHyphens{%
4280   \relax
4281   \ifhmode
4282     \penalty\@M
4283     \hskip\z@skip
4284   \fi
4285 }

4286 \DeclareRobustCommand*{\href}{%
4287   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href}%
4288 }
4289 \def\Hy@href#1{%
4290   \hyper@normalise\href@
4291 }
4292 \begingroup
4293   \catcode'\$=6 %
4294   \catcode'\#=12 %
4295   \gdef\href@#1{\expandafter\href@split$1##\}%
4296   \gdef\href@split$1#$2#$3\{\%
4297     \hyper@@link{$1}{$2}%
4298   }%
4299 \endgroup

```

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

```

4300 \RequirePackage{url}
4301 \let\HyOrg@url\url
4302 \def\Hurl{\begingroup \Url}
4303 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4304 \def\nolinkurl@#1{\Hurl{#1}}
4305 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4306 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4307 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4308 \providecommand\hyper@image[2]{#2}

4309 \def\hypertarget#1#2{%
4310   \ifHy@nesting
4311     \hyper@@anchor{#1}{#2}%
4312   \else
4313     \hyper@@anchor{#1}{\relax}#2%
4314   \fi
4315 }

```

\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.

```

4316 \DeclareRobustCommand*{\hyperref}{%
4317   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4318 }
4319 \def\Hy@babelnormalise#1[#2]{%
4320   \begingroup
4321     \Hy@safe@activetrue
4322     \edef\Hy@tempa{%
4323       \endgroup
4324       \noexpand#1[#2]}%
4325   }%
4326   \Hy@tempa
4327 }
4328 \def\@hyperref{\hyper@normalise\@hyperref}
4329 \def\@hyperref#1#2#3{%
4330   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4331   \expandafter\tryhyper@link\ref@one\{#1}%
4332 }
4333 \def\tryhyper@link#1\#2{%
4334   \hyper@@link{#2}{#1}%
4335 }

4336 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
4337 \def\@hyperdef#1#2#3{%, category, name, text
4338   \ifx\#1\\%
4339     \def\Hy@AnchorName{#2}%
4340   \else
4341     \def\Hy@AnchorName{#1.#2}%
4342   \fi
4343   \ifHy@nesting
4344     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4345   \else
4346     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4347   \fi

```

4348 }

We also have a need to give a L^AT_EX *label* to a hyper reference, to ease the pain of referring to it later.

```

4349 \def\label@hyperref[#1]{%
4350   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4351 }%
4352 \def\label@@hyperref#1#2#3{%
4353   \ifx#1\relax
4354     \protect\G@refundefinedtrue
4355     \@latex@warning{%
4356       Hyper reference ‘#2’ on page \thepage \space undefined%
4357     }%
4358     \hyper@@link{}{??}{#3}%
4359   \else
4360     \hyper@@link{\expandafter\@fifthoffive#1}%
4361     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4362   \fi
4363 }
4364 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4365                               % anchor text
4366   \@bsphack
4367   \ifx\#2\%
4368     \def\Hy@AnchorName{#3}%
4369   \else
4370     \def\Hy@AnchorName{#2.#3}%
4371   \fi
4372   \if@filesw
4373     \protected@write\@auxout{}{%
4374       \string\newlabel{#1}{\{}{}\}\{\Hy@AnchorName\}\}%
4375     }%
4376   \fi
4377   \@esphack
4378   \ifHy@nesting
4379     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4380   \else
4381     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4382   \fi
4383 }
```

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.

```

4384 \def\hyper@@link{\let\Hy@reserved@a\relax
4385   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4386 }
4387 \def\hyper@link@[#1]#2#3#4{%
4388   \begingroup
4389   \protected@edef\Hy@tempa{#2}%
4390   \Hy@safe@activestrue
4391   \edef\x{#3}%
4392   \ifx\Hy@tempa\@empty
4393     \toks0{\hyper@link{#1}}%

```

```

4394 \else
4395 \toks0{\expandafter\hyper@readexternallink#2\{\{#1\}}%
4396 \fi
4397 \toks2{%
4398 \Hy@safe@activesfalse
4399 #4%
4400 }%
4401 \edef\Hy@tempa{\the\toks2}%
4402 \edef\x{\endgroup
4403 \ifx\Hy@tempa\@empty
4404 \noexpand\Hy@Warning{Suppressing empty link}%
4405 \else
4406 \the\toks0 {\x}{\the\toks2}%
4407 \fi
4408 }%
4409 \x
4410 }

```

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.

```

4411 \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.

```

4412 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4413 }

```

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

```

4414 \def\@pdftempwordfile{file}%
4415 \def\@pdftempwordrun{run}%
4416 \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:

```

4417 \ifx\{#6\}%
4418 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4419 \else
4420 \ifx\{#4\}%
4421 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4422 \else

```

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

```

4423 \def\@pdftempa{#4}%

```

```

4424 \ifx\@pdftempa\@pdftempwordfile
4425 \expandafter\@hyper@linkfile#7\{\#3}\{\#2}%
4426 \else

```

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

```

4427 \ifx\@pdftempa\@pdftempwordrun
4428 \ifHy@pdfa
4429 \PackageError{hyperref}{%
4430 PDF/A: Launch action is prohibited%
4431 }\@ehc
4432 \begingroup
4433 \leavevmode
4434 #2%
4435 \endgroup
4436 \else
4437 \expandafter\@hyper@launch#7\{\#3}\{\#2}%
4438 \fi
4439 \else

```

otherwise its a URL

```

4440 \hyper@linkurl{\#3}\{\#7\ifx\#2\\\else\hyper@hash#2\fi}%
4441 \fi
4442 \fi
4443 \fi
4444 \fi
4445 }

```

By default, turn run: into file:

```

4446 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4447 \hyper@linkurl{\#2}\{\#1}%
4448 \Hy@linkfileprefix
4449 #1%
4450 \ifx\#3\\\%
4451 \else
4452 \hyper@hash
4453 #3%
4454 \fi
4455 }%
4456 }

```

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

```

4457 \def\@hyper@linkfile file:#1\#2#3{%
4458 %file url,link string, name
4459 \filename@parse{\#1}%
4460 \ifx\filename@ext\relax
4461 \edef\filename@ext{\XR@ext}%
4462 \fi
4463 \def\use@file{\filename@area\filename@base.\filename@ext}%
4464 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
4465 \hyper@linkfile{\#2}\{\use@file}\{\#3}%
4466 }\%
4467 \ifx\@baseurl\@empty
4468 \hyper@linkurl{\#2}\{\%
4469 \Hy@linkfileprefix\use@file\ifx\#3\\\else\hyper@hash#3\fi
4470 }\%
4471 \else
4472 \hyper@linkurl{\#2}\{\use@file\ifx\#3\\\else\hyper@hash#3\fi}%
4473 \fi

```

```

4474 }%
4475 }

4476 \def\Hy@ifStringEndsWith#1#2{%
4477 \begingroup
4478 \edef\x{#1}%
4479 \@onelevel@sanitize\x
4480 \edef\x{. \x}%
4481 \edef\y{#2}%
4482 \@onelevel@sanitize\y
4483 \edef\y{. \y}%
4484 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4485 \endgroup
4486 \ifx\relax##2\relax
4487 \expandafter\ltx@secondoftwo
4488 \else
4489 \expandafter\ltx@firstoftwo
4490 \fi
4491 }%
4492 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4493 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

4494 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4495 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4496 \ifx\#1\%
4497 #2\Hy@Warning{Ignoring empty anchor}%
4498 \else
4499 \def\anchor@spot{#2#3}%
4500 \let\put@me@back\@empty
4501 \ifx\relax#2\relax
4502 \else
4503 \ifHy@nesting
4504 \else
4505 \ifcat a\noexpand#2\relax
4506 \else
4507 \ifcat 0\noexpand#2 \relax
4508 \else
4509 % \typeout{Anchor start is not alphanumeric %
4510 % on input line\the\inputlineno%
4511 % }%
4512 \let\anchor@spot\@empty
4513 \def\put@me@back{#2#3}%
4514 \fi
4515 \fi
4516 \fi
4517 \fi
4518 \ifHy@activeanchor
4519 \anchor@spot
4520 \else
4521 \hyper@anchor{#1}%
4522 \fi

```

```

4523 \expandafter\put@me@back
4524 \fi
4525 \let\anchor@spot\@empty
4526 }

```

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.

```

4527 \let\htmladdimg\hyperimage
4528 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4529 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4530 \def\htmlref#1#2{% anchor text, label
4531 \label@hyperref[{#2}]{#1}%
4532 }

```

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.

```

4533 \def\@latextohtmlX{%
4534 \let\hhyperref\hyperref
4535 \def\hyperref##1##2##3##4{% anchor text for HTML
4536 % text to print before label in print
4537 % label
4538 % post-label text in print
4539 ##2\ref{##4}##3%
4540 }%
4541 }

```

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.

```

4542 \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

```

```

4543 \def\HyField@NewFlag#1#2{%
4544   \lowercase{\HyField@NewOption{#2}}}%
4545   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4546 }

```

\HyField@NewFlagOnly

```

4547 \def\HyField@NewFlagOnly#1#2{%
4548   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4549 }

```

\HyField@NewOption #1: option name

```

4550 \def\HyField@NewOption#1{%
4551   \expandafter\newif\csname ifFld@#1\endcsname
4552   \define@key{Field}{#1}[true]{%
4553     \lowercase{\Field@boolkey{##1}}{#1}%
4554   }%
4555 }

```

\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

```

4556 \def\HyField@NewBitsetFlag#1#2#3#4{%
4557   \begingroup
4558   \count@=#4\relax
4559   \advance\count@\m@ne
4560   \def\x##1{%
4561     \endgroup
4562     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4563     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4564       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4565         (\number#4) #2%
4566       }%
4567     \else
4568       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4569         \csname HyField@#3@##1\endcsname
4570         /#2%
4571       }%
4572     \fi
4573   }%
4574   \expandafter\x\expandafter{\the\count@}%
4575 }

```

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

```

4576 \def\HyField@UseFlag#1#2{%
4577   \lowercase{\HyField@@UseFlag{#2}}{#1}%
4578 }

```

\HyField@@UseFlag

```

4579 \def\HyField@@UseFlag#1#2{%
4580   \bitsetSetValue{HyField@#2}{%
4581     \csname HyField@#2@#1\endcsname
4582   }{%
4583     \csname ifFld@#1\endcsname 1\else 0\fi
4584   }%
4585 }

```

```

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

\HyField@@SetFlag
4589 \def\HyField@@SetFlag#1#2{%
4590 \bitsetSetValue{HyField@#2}{%
4591 \csname HyField@#2@#1\endcsname
4592 }{1}%
4593 }

\HyField@PrintFlags
4594 \def\HyField@PrintFlags#1#2{%
4595 \ifHy@verbose
4596 \begingroup
4597 \let\Hy@temp\@empty
4598 \let\MessageBreak\relax
4599 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4600 \bitsetGetSetBitList{HyField@#1}\do{%
4601 \edef\Hy@temp{%
4602 \Hy@temp
4603 \csname HyField@#1@\x\endcsname\MessageBreak
4604 }%
4605 }%
4606 \edef\x{\endgroup
4607 \noexpand\Hy@Info{%
4608 Field flags: %
4609 \expandafter\ifx\@car#1\@nil S\else/\fi
4610 #1 %
4611 \bitsetGetDec{HyField@#1} %
4612 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4613 \Hy@temp
4614 for #2%
4615 }%
4616 }\x
4617 \fi
4618 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4619 \HyField@NewFlag{Ff}{ReadOnly}{1}
4620 \HyField@NewFlag{Ff}{Required}{2}
4621 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4622 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4623 \HyField@NewFlag{Ff}{Radio}{16}
4624 \HyField@NewFlag{Ff}{Pushbutton}{17}
4625 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4626 \HyField@NewFlag{Ff}{Multiline}{13}
4627 \HyField@NewFlag{Ff}{Password}{14}
4628 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4629 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4

```

4630 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
 4631 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
 4632 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

“Table 8.79 field flags specific to choice fields”

4633 \HyField@NewFlag{Ff}{Combo}{18}
 4634 \HyField@NewFlag{Ff}{Edit}{19}
 4635 \HyField@NewFlag{Ff}{Sort}{20}
 4636 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
 4637 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
 4638 \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.

```
4639 \newif\ifFld@popdown
4640 \define@key{Field}{popdown}[true]{%
4641   \lowercase{\Field@boolkey{#1}}{popdown}%
4642 }
```

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.

```
4643 \HyField@NewFlag{F}{Invisible}{1}
4644 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4645 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4646 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4647 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4648 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4649 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4650 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4651 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4652 \ifHy@pdfa
4653   \def\HyField@PDFAFFlagWarning#1#2{%
4654     \Hy@Warning{%
4655       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4656       be set to ‘#2’%
4657     }%
4658   }%
4659   \Fld@invisiblefalse
4660   \def\Fld@invisibletrue{%
4661     \HyField@PDFAFFlagWarning{invisible}{false}%
4662   }%
4663   \Fld@hiddenfalse
4664   \def\Fld@hiddentrue{%
4665     \HyField@PDFAFFlagWarning{hidden}{false}%
4666   }%
4667   \Fld@printtrue
4668   \def\Fld@printfalse{%
4669     \HyField@PDFAFFlagWarning{print}{true}%
4670   }%
4671   \Fld@nozoomtrue
4672   \def\Fld@nozoomfalse{%
4673     \HyField@PDFAFFlagWarning{nozoom}{true}%
4674   }%
4675   \Fld@norotatetrue
```

```

4676 \def\Fld@norotatefalse{%
4677   \HyField@PDFAFldWarning{norotate}{true}%
4678 }%
4679 \Fld@noviewfalse
4680 \def\Fld@noviewtrue{%
4681   \HyField@PDFAFldWarning{noview}{false}%
4682 }%
4683 \fi

```

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

```

4684 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4685 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4686 \HyField@NewFlag{Submit}{GetMethod}{4}
4687 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4688 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4689 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4690 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4691 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4692 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4693 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4694 \HyField@NewFlag{Submit}{ExclFKey}{12}
4695 \HyField@NewFlag{Submit}{EmbedForm}{14}

4696 \define@key{Field}{export}{%
4697   \lowercase{\def\Hy@temp{#1}}%
4698   \@ifundefined{Fld@export@Hy@temp}{%
4699     \@onelevel@sanitize\Hy@temp
4700     \PackageError{hyperref}{%
4701       Unknown export format ‘\Hy@temp’.\MessageBreak
4702       Known formats are ‘FDF’, ‘HTML’, ‘XFDF’, and ‘PDF’%
4703     }\@ehc
4704   }{%
4705     \let\Fld@export\Hy@temp
4706   }%
4707 }
4708 \def\Fld@export{fdf}
4709 \@namedef{Fld@export@fdf}{0}%
4710 \@namedef{Fld@export@html}{1}%
4711 \@namedef{Fld@export@xdf}{2}%
4712 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4713 \def\HyField@FlagsSubmit{%
4714   \bitsetReset{HyField@Submit}%
4715   \ifcase\@nameuse{Fld@export@Fld@export} %
4716     % FDF
4717     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4718     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4719     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4720     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4721     \HyField@UseFlag{Submit}{CanonicalFormat}%
4722     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4723     \HyField@UseFlag{Submit}{ExclFKey}%
4724     \HyField@UseFlag{Submit}{EmbedForm}%
4725   \or % HTML
4726     \HyField@SetFlag{Submit}{ExportFormat}%

```

```

4727 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4728 \HyField@UseFlag{Submit}{GetMethod}%
4729 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4730 \HyField@UseFlag{Submit}{CanonicalFormat}%
4731 \or % XFDF
4732 \HyField@SetFlag{Submit}{XFDF}%
4733 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4734 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4735 \HyField@UseFlag{Submit}{CanonicalFormat}%
4736 \or % PDF
4737 \HyField@SetFlag{Submit}{SubmitPDF}%
4738 \HyField@UseFlag{Submit}{GetMethod}%
4739 \fi
4740 \HyField@PrintFlags{Submit}{submit button field}%
4741 \bitsetIsEmpty{HyField@Submit}{%
4742 \def\Fld@submitflags{%
4743 }{%
4744 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4745 }%
4746 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4747 \def\HyField@FlagsAnnot#1{%
4748 \bitsetReset{HyField@F}%
4749 \HyField@UseFlag{F}{Invisible}%
4750 \HyField@UseFlag{F}{Hidden}%
4751 \HyField@UseFlag{F}{Print}%
4752 \HyField@UseFlag{F}{NoZoom}%
4753 \HyField@UseFlag{F}{NoRotate}%
4754 \HyField@UseFlag{F}{NoView}%
4755 \HyField@UseFlag{F}{Locked}%
4756 \HyField@UseFlag{F}{ToggleNoView}%
4757 \HyField@UseFlag{F}{LockedContents}%
4758 \HyField@PrintFlags{F}{#1}%
4759 \bitsetIsEmpty{HyField@F}{%
4760 \def\Fld@annotflags{%
4761 }{%
4762 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4763 }%
4764 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4765 \def\HyField@FlagsPushButton{%
4766 \HyField@FlagsAnnot{push button field}%
4767 \bitsetReset{HyField@Ff}%
4768 \HyField@UseFlag{Ff}{ReadOnly}%
4769 \HyField@UseFlag{Ff}{Required}%
4770 \HyField@UseFlag{Ff}{NoExport}%
4771 \HyField@SetFlag{Ff}{PushButton}%
4772 \HyField@PrintFlags{Ff}{push button field}%
4773 \bitsetIsEmpty{HyField@Ff}{%
4774 \def\Fld@flags{%

```

```

4775 }{%
4776     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4777 }%
4778 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4779 \def\HyField@FlagsCheckBox{%
4780     \HyField@FlagsAnnot{check box field}%
4781     \bitsetReset{HyField@Ff}%
4782     \HyField@UseFlag{Ff}{ReadOnly}%
4783     \HyField@UseFlag{Ff}{Required}%
4784     \HyField@UseFlag{Ff}{NoExport}%
4785     \HyField@PrintFlags{Ff}{check box field}%
4786     \bitsetIsEmpty{HyField@Ff}{%
4787         \def\Fld@flags{%
4788             }{%
4789                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4790             }%
4791         }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4792 \def\HyField@FlagsRadioButton{%
4793     \HyField@FlagsAnnot{radio button field}%
4794     \bitsetReset{HyField@Ff}%
4795     \HyField@UseFlag{Ff}{ReadOnly}%
4796     \HyField@UseFlag{Ff}{Required}%
4797     \HyField@UseFlag{Ff}{NoExport}%
4798     \HyField@UseFlag{Ff}{NoToggleToOff}%
4799     \HyField@SetFlag{Ff}{Radio}%
4800     \HyField@UseFlag{Ff}{RadiosInUnison}%
4801     \HyField@PrintFlags{Ff}{radio button field}%
4802     \bitsetIsEmpty{HyField@Ff}{%
4803         \def\Fld@flags{%
4804             }{%
4805                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4806             }%
4807         }

```

19.1.7 Text fields

\HyField@FlagsText

```

4808 \def\HyField@FlagsText{%
4809     \HyField@FlagsAnnot{text field}%
4810     \bitsetReset{HyField@Ff}%
4811     \HyField@UseFlag{Ff}{ReadOnly}%
4812     \HyField@UseFlag{Ff}{Required}%
4813     \HyField@UseFlag{Ff}{NoExport}%
4814     \HyField@UseFlag{Ff}{Multiline}%
4815     \HyField@UseFlag{Ff}{Password}%
4816     \HyField@UseFlag{Ff}{FileSelect}%
4817     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4818     \HyField@UseFlag{Ff}{DoNotScroll}%

```

```

4819 \ifFld@comb
4820 \ifcase0\ifFld@multiline
4821     \else\ifFld@password
4822     \else\ifFld@fileselect
4823     \else 1\fi\fi\fi\relax
4824     \PackageError{hyperref}{%
4825         Field option 'comb' cannot used together with\MessageBreak
4826         'multiline', 'password', or 'fileselect'%
4827     }\@ehc
4828 \else
4829     \HyField@UseFlag{Ff}{Comb}%
4830 \fi
4831 \fi
4832 \HyField@UseFlag{Ff}{RichText}%
4833 \HyField@PrintFlags{Ff}{text field}%
4834 \bitsetIsEmpty{HyField@Ff}{%
4835     \def\Fld@flags{}%
4836 }{%
4837     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4838 }%
4839 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4840 \def\HyField@FlagsChoice{%
4841     \HyField@FlagsAnnot{choice field}%
4842     \bitsetReset{HyField@Ff}%
4843     \HyField@UseFlag{Ff}{ReadOnly}%
4844     \HyField@UseFlag{Ff}{Required}%
4845     \HyField@UseFlag{Ff}{NoExport}%
4846     \HyField@UseFlag{Ff}{Combo}%
4847     \ifFld@combo
4848         \HyField@UseFlag{Ff}{Edit}%
4849     \fi
4850     \HyField@UseFlag{Ff}{Sort}%
4851     \HyField@UseFlag{Ff}{MultiSelect}%
4852     \ifFld@combo
4853         \ifFld@edit
4854             \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4855         \fi
4856     \fi
4857     \HyField@UseFlag{Ff}{CommitOnSelChange}%
4858     \HyField@PrintFlags{Ff}{choice field}%
4859     \bitsetIsEmpty{HyField@Ff}{%
4860         \def\Fld@flags{}%
4861     }{%
4862         \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4863     }%
4864 }

```

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.

```

4865 \def\HyField@PDFChoices#1{%
4866   \begingroup
4867   \gdef\Fld@choices{%
4868     \def\HyTmp@optlist{%
4869       \let\HyTmp@optitem\relax
4870       \count@=0 %
4871       \kv@parse{#1}{%
4872         \Hy@pdfstringdef\kv@key\kv@key
4873         \ifx\kv@value\relax
4874           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4875             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4876           \else
4877             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4878           \fi
4879         \else
4880           \Hy@pdfstringdef\kv@value\kv@value
4881           \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4882         \fi
4883       \edef\HyTmp@optlist{%
4884         \HyTmp@optlist
4885         \HyTmp@optitem{\the\count@}{\kv@key}0%
4886       }%
4887       \advance\count@ by 1 %
4888       \@gobbletwo
4889     }%
4890     \xdef\Fld@choices{/Opt[\Fld@choices]}%
4891     \ifFld@multiselect
4892       \HyField@@PDFChoices{DV}\Fld@default
4893       \HyField@@PDFChoices{V}\Fld@value
4894     \else
4895       \ifx\Fld@default\relax
4896       \else
4897         \pdfstringdef\Hy@gtemp\Fld@default
4898         \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4899       \fi
4900       \ifx\Fld@value\relax
4901       \else
4902         \pdfstringdef\Hy@gtemp\Fld@value
4903         \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4904       \fi
4905     \fi
4906   \endgroup
4907 }

```

\HyField@@PDFChoices

```

4908 \def\HyField@@PDFChoices#1#2{%
4909   \ifx#2\relax
4910   \else
4911     \count@=0 %
4912     \def\HyTmp@optitem##1##2##3{%
4913       \def\HyTmp@key{##2}%
4914       \ifx\HyTmp@key\Hy@gtemp
4915         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4916           \HyTmp@optlist
4917           \HyTmp@optitem{##1}{##2}1%
4918         }%
4919       \let\HyTmp@found=Y%

```

```

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

```

19.3 Forms

\HyField@SetKeys

```

4969 \def\HyField@SetKeys{%
4970 \setkeys{Field}%
4971 }

```

```

4972 \newif\ifFld@checked
4973 \newif\ifFld@disabled
4974 \Fld@checkedfalse
4975 \Fld@disabledfalse
4976 \newcount\Fld@menulength
4977 \newdimen\Fld@Width
4978 \newdimen\Fld@charsize
4979 \Fld@charsize=10\p@
4980 \def\Fld@maxlen{0}
4981 \def\Fld@align{0}
4982 \def\Fld@color{0 0 0 rg}
4983 \def\Fld@bcolor{1 1 1}
4984 \def\Fld@bordercolor{1 0 0}
4985 \def\Fld@bordersep{1\p@}
4986 \def\Fld@borderwidth{1}
4987 \def\Fld@borderstyle{S}
4988 \def\Fld@cbsymbol{4}
4989 \def\Fld@radiosymbol{H}
4990 \def\Fld@rotation{0}
4991 \def\Fld@Form{\@ifnextchar[{\@Form}{\@Form[]}}
4992 \def\endForm{\@endForm}
4993 \newif\ifForm@html
4994 \Form@htmlfalse
4995 \def\Fld@Form@boolkey#1#2{%
4996   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4997 }
4998 \define@key{Form}{action}{%
4999   \hyper@normalise\Hy@DefFormAction{#1}%
5000 }
5001 \def\Hy@DefFormAction{\def\Fld@Form@action}
5002 \def\enc@html{html}
5003 \define@key{Form}{encoding}{%
5004   \def\Hy@tempa{#1}%
5005   \ifx\Hy@tempa\enc@html
5006     \Form@htmltrue
5007     \def\Fld@export{html}%
5008   \else
5009     \Hy@Warning{%
5010       Form 'encoding' key with \MessageBreak
5011       unknown value '#1'%
5012     }%
5013     \Form@htmlfalse
5014   \fi
5015 }
5016 \define@key{Form}{method}{%
5017   \lowercase{\def\Hy@temp{#1}}%
5018   \@ifundefined{Form@method@\Hy@temp}{%
5019     \@onelevel@sanitize\Hy@temp
5020     \PackageError{hyperref}{%
5021       Unknown method '\Hy@temp'\MessageBreak
5022       Known values are 'post' and 'get'%
5023     }\@ehc
5024   }{%
5025     \let\Fld@Form@method\Hy@temp
5026     \ifcase\@nameuse{Form@method@\Hy@temp} %
5027       \Fld@getmethodfalse
5028     \else

```

```

5029     \Fld@getmethodtrue
5030     \fi
5031   }%
5032 }
5033 \def\Fld@method{}
5034 \@namedef{Form@method@post}{0}
5035 \@namedef{Form@method@get}{1}
5036 \def\Fld@boolkey#1#2{%
5037   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5038 }
5039 \newtoks\Fld@toks
5040 \Fld@toks={ }%
5041 \def\Fld@addtoks#1#2{%
5042   \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5043   \@processme
5044 }
5045 \def\Fld@checkequals#1=#2=#3\{\{%
5046   \def\@currDisplay{#1}%
5047   \ifx\#2\%
5048     \def\@currValue{#1}%
5049   \else
5050     \def\@currValue{#2}%
5051   \fi
5052 }
5053 \define@key{Field}{loc}{%
5054   \def\Fld@loc{#1}%
5055 }
5056 \define@key{Field}{checked}[true]{%
5057   \lowercase{\Fld@boolkey{#1}}{checked}%
5058 }
5059 \define@key{Field}{disabled}[true]{%
5060   \lowercase{\Fld@boolkey{#1}}{disabled}%
5061 }
5062 \define@key{Field}{accesskey}{%
5063   \Fld@addtoks{accesskey}{#1}%
5064 }
5065 \define@key{Field}{tabkey}{%
5066   \Fld@addtoks{tabkey}{#1}%
5067 }
5068 \define@key{Field}{name}{%
5069   \def\Fld@name{#1}%
5070 }
5071 \define@key{Field}{width}{%
5072   \def\Fld@width{#1}%
5073   \Fld@Width#1\setbox0=\hbox{m}%
5074 }
5075 \define@key{Field}{maxlen}{%
5076   \def\Fld@maxlen{#1}%
5077 }
5078 \define@key{Field}{menulength}{%
5079   \Fld@menulength=#1\relax
5080 }
5081 \define@key{Field}{height}{%
5082   \def\Fld@height{#1}%
5083 }
5084 \define@key{Field}{charsize}{%
5085   \Fld@charsize#1%

```

```

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

5138 \define@key{Field}{rotation}{%
5139   \def\Fld@rotation{#1}%
5140 }

5141 \define@key{Field}{backgroundcolor}{%
5142   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%

```

```

5143 }
5144 \define@key{Field}{bordercolor}{%
5145   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5146 }
5147 \define@key{Field}{color}{%
5148   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5149 }

5150 \def\Fld@onclick@code{}
5151 \def\Fld@format@code{}
5152 \def\Fld@validate@code{}
5153 \def\Fld@calculate@code{}
5154 \def\Fld@keystroke@code{}
5155 \def\Fld@onfocus@code{}
5156 \def\Fld@onblur@code{}
5157 \def\Fld@onmousedown@code{}
5158 \def\Fld@onmouseup@code{}
5159 \def\Fld@onenter@code{}
5160 \def\Fld@onexit@code{}
5161 \def\Hy@temp#1{%
5162   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5163 }
5164 \def\Hy@@temp#1#2{%
5165   \ifHy@pdfa
5166     \define@key{Field}{#2}{%
5167       \PackageError{hyperref}{%
5168         PDF/A: Additional action ‘#2’ is prohibited%
5169       }\@ehc
5170     }%
5171   \else
5172     \define@key{Field}{#2}{%
5173       \def#1{##1}%
5174     }%
5175   \fi
5176 }
5177 \Hy@temp{keystroke}
5178 \Hy@temp{format}
5179 \Hy@temp{validate}
5180 \Hy@temp{calculate}
5181 \Hy@temp{onfocus}
5182 \Hy@temp{onblur}
5183 \Hy@temp{onenter}
5184 \Hy@temp{onexit}
5185 \def\Hy@temp#1{%
5186   \define@key{Field}{#1}{%
5187     \Field@addtoks{#1}{##1}%
5188   }%
5189 }
5190 \Hy@temp{onselect}
5191 \Hy@temp{onchange}
5192 \Hy@temp{ondblclick}
5193 \Hy@temp{onmousedown}
5194 \Hy@temp{onmouseup}
5195 \Hy@temp{onmouseover}
5196 \Hy@temp{onmousemove}
5197 \Hy@temp{onmouseout}
5198 \Hy@temp{onkeypress}
5199 \Hy@temp{onkeydown}

```

```

5200 \Hy@temp{onkeyup}
5201 \ifHy@pdfa
5202   \define@key{Field}{onclick}{%
5203     \PackageError{hyperref}{%
5204       PDF/A: Action 'onclick' is prohibited%
5205     }\@ehc
5206   }%
5207 \else
5208   \define@key{Field}{onclick}{%
5209     \def\Fld@onclick@code{#1}%
5210     \Field@addtoks{onclick}{#1}%
5211   }%
5212 \fi

5213 \DeclareRobustCommand\TextField{%
5214   \@ifnextchar[{\@TextField}{\@TextField[]}%
5215 }
5216 \DeclareRobustCommand\ChoiceMenu{%
5217   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5218 }
5219 \DeclareRobustCommand\CheckBox{%
5220   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5221 }
5222 \DeclareRobustCommand\PushButton{%
5223   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5224 }
5225 \DeclareRobustCommand\Gauge{%
5226   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5227 }
5228 \DeclareRobustCommand\Submit{%
5229   \@ifnextchar[{\@Submit}{\@Submit[]}%
5230 }
5231 \DeclareRobustCommand\Reset{%
5232   \@ifnextchar[{\@Reset}{\@Reset[]}%
5233 }
5234 \def\LayoutTextField#1#2{% label, field
5235   #1 #2%
5236 }
5237 \def\LayoutChoiceField#1#2{% label, field
5238   #1 #2%
5239 }
5240 \def\LayoutCheckField#1#2{% label, field
5241   #1 #2%
5242 }
5243 \def\LayoutPushButtonField#1{% button
5244   #1%
5245 }
5246 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5247 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5248 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5249 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5250 \def\MakeButtonField#1{%
5251   \sbox0{%
5252     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5253   }%
5254   \@tempdima\ht0 %
5255   \advance\@tempdima by \Fld@borderwidth bp %
5256   \advance\@tempdima by \Fld@borderwidth bp %

```

```

5257 \ht0\@tempdima
5258 \@tempdima\dp0 %
5259 \advance\@tempdima by \Fld@borderwidth bp %
5260 \advance\@tempdima by \Fld@borderwidth bp %
5261 \dp0\@tempdima
5262 \box0\relax
5263 }
5264 \def\DefaultHeightofSubmit{14pt}
5265 \def\DefaultWidthofSubmit{2cm}
5266 \def\DefaultHeightofReset{14pt}
5267 \def\DefaultWidthofReset{2cm}
5268 \def\DefaultHeightofCheckBox{\baselineskip}
5269 \def\DefaultWidthofCheckBox{\baselineskip}
5270 \def\DefaultHeightofChoiceMenu{\baselineskip}
5271 \def\DefaultWidthofChoiceMenu{\baselineskip}
5272 \def\DefaultHeightofText{\baselineskip}
5273 \def\DefaultHeightofTextMultiline{4\baselineskip}
5274 \def\DefaultWidthofText{3cm}
5275 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5276 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5277 \def\DefaultOptionsofPushButton{print}
5278 \def\DefaultOptionsofCheckBox{print}
5279 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5280 \def\DefaultOptionsofListBox{print}
5281 \def\DefaultOptionsofComboBox{print,edit,sort}
5282 \def\DefaultOptionsofPopdownBox{print}
5283 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5284 \ifHy@figures
5285 \Hy@Info{Hyper figures ON}%
5286 \else
5287 \Hy@Info{Hyper figures OFF}%
5288 \fi
5289 \ifHy@nesting
5290 \Hy@Info{Link nesting ON}%
5291 \else
5292 \Hy@Info{Link nesting OFF}%
5293 \fi
5294 \ifHy@hyperindex
5295 \Hy@Info{Hyper index ON}%
5296 \else
5297 \Hy@Info{Hyper index OFF}%
5298 \fi
5299 \ifHy@backref
5300 \Hy@Info{backreferencing ON}%
5301 \else
5302 \Hy@Info{backreferencing OFF}%
5303 \fi
5304 \ifHy@colorlinks
5305 \Hy@Info{Link coloring ON}%
5306 \else
5307 \Hy@Info{Link coloring OFF}%
5308 \fi

```

```

5309 \ifHy@ocgcolorlinks
5310 \Hy@Info{Link coloring with OCG ON}%
5311 \else
5312 \Hy@Info{Link coloring with OCG OFF}%
5313 \fi
5314 \ifHy@pdfa
5315 \Hy@Info{PDF/A mode ON}%
5316 \else
5317 \Hy@Info{PDF/A mode OFF}%
5318 \fi

```

21 Low-level utility macros

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

```

5319 \edef\hyper@hash{\string#}
5320 \edef\hyper@tilde{\string~}
5321 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5322 \def\@currentHref{Doc-Start}
5323 \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.

```

5324 \Hy@AtBeginDocument{%
5325 \Hy@pdfstringtrue
5326 \PDF@SetupDoc
5327 \let\PDF@SetupDoc\@empty
5328 \Hy@DisableOption{pdfpagescrop}%
5329 \Hy@DisableOption{pdfpagemode}%
5330 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5331 \Hy@DisableOption{pdfdirection}%
5332 \Hy@DisableOption{pdfviewarea}%
5333 \Hy@DisableOption{pdfviewclip}%
5334 \Hy@DisableOption{pdfprintarea}%
5335 \Hy@DisableOption{pdfprintclip}%
5336 \Hy@DisableOption{pdfprintscaling}%
5337 \Hy@DisableOption{pdfduplex}%
5338 \Hy@DisableOption{pdfpicktraybypdfsize}%
5339 \Hy@DisableOption{pdfprintpagerange}%
5340 \Hy@DisableOption{pdfnumcopies}%
5341 \Hy@DisableOption{pdfstartview}%
5342 \Hy@DisableOption{pdfstartpage}%
5343 \Hy@DisableOption{pdftoolbar}%
5344 \Hy@DisableOption{pdfmenubar}%
5345 \Hy@DisableOption{pdfwindowui}%
5346 \Hy@DisableOption{pdfwindow}%
5347 \Hy@DisableOption{pdfcenterwindow}%
5348 \Hy@DisableOption{pdfdisplaydoctitle}%
5349 \Hy@DisableOption{pdfpagelayout}%
5350 \Hy@DisableOption{pdflang}%
5351 \Hy@DisableOption{baseurl}%
5352 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5353 \Hy@pdfstringfalse
5354 }

```

Ignore star from referencing macros:

```

5355 \LetLtxMacro\NoHy@OrgRef\ref

```

```

5356 \DeclareRobustCommand*{\ref}{%
5357   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5358 }
5359 \LetLtxMacro\NoHy@OrgPageRef\pageref
5360 \DeclareRobustCommand*{\pageref}{%
5361   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5362 }

```

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 hyperref functions doing anything. This is used, for instance, in the Elsevier classes, to stop hyperref playing havoc in the front matter.

```

5363 \def\NoHyper{%
5364   \def\hyper@link@{##1}##2##3##4{##4}%
5365   \def\hyper@@anchor##1{%
5366     \global\let\hyper@livelink\hyper@link
5367     \gdef\hyper@link##1##2##3{##3}%
5368     \def\hyper@anchor##1{%
5369       \def\hyper@anchorstart##1{%
5370         \let\hyper@anchorend\@empty
5371         \def\hyper@linkstart##1##2{%
5372           \let\hyper@linkend\@empty
5373           \def\hyper@linkurl##1##2{##1}%
5374           \def\hyper@linkfile##1##2##3{##1}%
5375           \def\hyper@link@{##1}##2##3}%
5376           \let\Hy@backout\@gobble
5377       }
5378       \def\stop@hyper{%
5379         \def\hyper@link@{##1}##2##3##4{##4}%
5380         \let\Hy@backout\@gobble
5381         \def\hyper@@anchor##1{%
5382           \def\hyper@link##1##2##3{##3}%
5383           \def\hyper@anchor##1{%
5384             \def\hyper@anchorstart##1{%
5385               \let\hyper@anchorend\@empty
5386               \def\hyper@linkstart##1##2{%
5387                 \let\hyper@linkend\@empty
5388                 \def\hyper@linkurl##1##2{##1}%
5389                 \def\hyper@linkfile##1##2##3{##1}%
5390                 \def\hyper@link@{##1}##2##3}%
5391             }
5392             \def\endNoHyper{%
5393               \global\let\hyper@link\hyper@livelink
5394             }
5395           }

```

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:

```

5396 <*nohyperref>
5397 \RequirePackage{letltxmacro}[2008/06/13]
5398 \let\hyper@@anchor\@gobble
5399 \def\hyper@link#1#2#3{#3}%
5400 \let\hyper@anchorstart\@gobble
5401 \let\hyper@anchorend\@empty
5402 \let\hyper@linkstart\@gobbletwo
5403 \let\hyper@linkend\@empty
5404 \def\hyper@linkurl#1#2{#1}%
5405 \def\hyper@linkfile#1#2#3{#1}%
5406 \def\hyper@link@{#1}#2#3{#3}%
5407 \let\PDF@SetupDoc\@empty
5408 \let\PDF@FinishDoc\@empty
5409 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5410 \def\Acrobatmenu#1#2{\leavevmode#2}
5411 \let\pdfstringdefDisableCommands\@gobbletwo
5412 \let\texorpdfstring\@firstoftwo
5413 \let\pdfbookmark\@undefined
5414 \newcommand\pdfbookmark[3]{}{}
5415 \let\phantomsection\@empty
5416 \let\hypersetup\@gobble
5417 \let\hyperbaseurl\@gobble
5418 \let\href\@gobble
5419 \let\hyperdef\@gobbletwo
5420 \let\hyperlink\@gobble
5421 \let\hypertarget\@gobble
5422 \def\hyperref{%
5423   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5424 }
5425 \long\def\@gobbleopt[#1]{}
5426 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5427 \LetLtxMacro\NoHy@OrgRef\ref
5428 \DeclareRobustCommand*\ref{%
5429   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5430 }
5431 \LetLtxMacro\NoHy@OrgPageRef\pageref
5432 \DeclareRobustCommand*\pageref{%
5433   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5434 }
5435 </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}`

```

5436 <*package>
5437 \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.

```

5438 \if@filesw
5439 \ifHy@typexml
5440 \immediate\closeout\@mainaux
5441 \immediate\openout\@mainaux\jobname.aux\relax
5442 \immediate\write\@auxout{<relaxxml>\relax}%
5443 \fi
5444 \immediate\write\@auxout{%
5445 \string\providecommand\string\HyperFirstAtBeginDocument{%
5446 \string\AtBeginDocument}^^J%
5447 \string\HyperFirstAtBeginDocument{%
5448 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5449 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5450 \string\gdef\string\contentsline%
5451 \string#1\string#2\string#3\string#4{%
5452 \string\oldcontentsline%
5453 {\string#1}{\string#2}{\string#3}}^^J%
5454 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5455 \string\gdef\string\newlabel\string#1\string#2{%
5456 \string\newlabelxx{\string#1}\string#2}^^J%
5457 \string\gdef\string\newlabelxx%
5458 \string#1\string#2\string#3\string#4\string#5\string#6{%
5459 \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.

```

5460 \string\AtEndDocument{%
5461 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5462 \string\let\string\contentsline\string\oldcontentsline^^J%
5463 \string\let\string\newlabel\string\oldnewlabel^^J%
5464 \string\fi%
5465 }^^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.

```

5466 \string\fi%
5467 }^^J%
5468 \string\global\string\let\string\hyper@last\relax^^J%
5469 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5470 }%
5471 \fi
5472 \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.

```

5473 \ifx\hyper@last\@undefined
5474 \def\@starttoc#1{%
5475 \begingroup
5476 \makeatletter
5477 \IfFileExists{\jobname.#1}{%
5478 \Hy@WarningNoLine{%
5479 old #1 file detected, not used; run LaTeX again%
5480 }%

```

```

5481     }{}%
5482     \if@filesw
5483         \expandafter\newwrite\csname tf@#1\endcsname
5484         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5485         \fi
5486         \@nobreakfalse
5487     \endgroup
5488 }%
5489 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5490 \fi
5491 }

```

25 Title strings

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

```

5492 \ifHy@usetitle
5493   \let\HyOrg@title\title
5494   \let\HyOrg@author\author
5495   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5496   \def\Hy@scanopttitle[#1]{%
5497     \gdef\Hy@title{#1}%
5498     \HyOrg@title{#1}%
5499   }%
5500   \def\Hy@scantitle#1{%
5501     \gdef\Hy@title{#1}%
5502     \HyOrg@title{#1}%
5503   }%
5504   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5505   \def\Hy@scanoptauthor[#1]{%
5506     \gdef\Hy@author{#1}%
5507     \HyOrg@author{#1}%
5508   }%
5509   \def\Hy@scanauthor#1{%
5510     \gdef\Hy@author{#1}%
5511     \HyOrg@author{#1}%
5512   }%

```

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.

```

5513 \begingroup
5514 \def\process@me#1\@nil#2{%
5515   \expandafter\let\expandafter\x\csname @#2\endcsname
5516   \edef\y{\expandafter\strip@prefix\meaning\x}%
5517   \def\c##1#1##2\@nil{%
5518     \ifx\##1\%
5519       \else
5520         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5521           \expandafter{x}%
5522       \fi
5523     }%
5524   \expandafter\c\y\relax#1\@nil
5525   }%
5526   \expandafter\process@me\string\@latex@\@nil{title}%
5527   \expandafter\process@me\string\@latex@\@nil{author}%
5528 \endgroup

```

```

5529 \fi
5530 \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.

```

5531 \def\Hy@UseMaketitleString#1{%
5532   \ltx@ifundefined{Hy@#1}{-}{%
5533     \begingroup
5534     \let\Hy@saved@hook\pdfstringdefPreHook
5535     \pdfstringdefDisableCommands{%
5536       \expandafter\let\expandafter\\csname Hy@newline@#1\endcsname
5537       \let\newline\\%
5538     }%
5539     \expandafter\ifx\csname @pdf#1\endcsname\@empty
5540     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5541       \csname Hy@#1\endcsname\@empty
5542     }%
5543     \fi
5544     \global\let\pdfstringdefPreHook\Hy@saved@hook
5545   \endgroup
5546 }%
5547 }
5548 \def\Hy@newline@title#1{ #1}
5549 \def\Hy@newline@author#1{, #1}
5550 \def\Hy@UseMaketitleInfos{%
5551   \Hy@UseMaketitleString{title}%
5552   \Hy@UseMaketitleString{author}%
5553 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5554 \RequirePackage{atbegshi}[2007/09/09]
5555 \def\Hy@EveryPageHook{}
5556 \def\Hy@EveryPageBoxHook{}
5557 \def\Hy@FirstPageHook{}
5558 \AtBeginShipout{%
5559   \Hy@EveryPageHook
5560   \ifx\Hy@EveryPageBoxHook\@empty
5561   \else
5562     \setbox\AtBeginShipoutBox=\vbox{%
5563       \offinterlineskip
5564       \Hy@EveryPageBoxHook
5565       \box\AtBeginShipoutBox
5566     }%

```

```

5567 \fi
5568 }
5569 \AtBeginShipoutFirst{%
5570 \Hy@FirstPageHook
5571 }
5572 \g@addto@macro\Hy@FirstPageHook{%
5573 \PDF@FinishDoc
5574 \gdef\PDF@FinishDoc{}}%
5575 }

```

27.1 PDF /PageLabels

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

```

5576 \ifHy@pagelabels
5577 \begingroup\expandafter\expandafter\expandafter\endgroup
5578 \expandafter\ifx\csname thepage\endcsname\relax
5579 \Hy@pagelabelsfalse
5580 \Hy@WarningNoLine{%
5581 Option 'pdfpagelabels' is turned off\MessageBreak
5582 because \string\thepage\space is undefined%
5583 }%
5584 \csname fi\endcsname
5585 \csname iffalse\expandafter\endcsname
5586 \fi

```

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

```

5587 \def\thispdfpagelabel#1{%
5588 \gdef\HyPL@thisLabel{#1}%
5589 }%
5590 \global\let\HyPL@thisLabel\relax

```

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

```

5591 \def\HyPL@Labels{}%

```

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

```

5592 \newcount\Hy@abspage
5593 \Hy@abspage=0 %

```

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

```

5594 \def\HyPL@LastType{init}%
5595 \def\HyPL@LastNumber{0}%
5596 \def\HyPL@LastPrefix{}%

```

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

```

5597 \def\HyPL@arabic{D}%
5598 \def\HyPL@Roman{R}%
5599 \def\HyPL@roman{r}%
5600 \def\HyPL@Alph{A}%
5601 \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.

```

5602 \def\HyPL@EveryPage{%
5603 \begingroup
5604 \ifx\HyPL@thisLabel\relax
5605 \let\HyPL@page\thepage

```

```

5606 \else
5607 \let\HyPL@page\HyPL@thisLabel
5608 \global\let\HyPL@thisLabel\relax
5609 \fi
5610 \let\HyPL@Type\relax
5611 \ifnum\the\c@page>0 %
5612 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5613 \fi
5614 \let\Hy@temp Y%
5615 \ifx\HyPL@Type\HyPL@LastType
5616 \else
5617 \let\Hy@temp N%
5618 \fi
5619 \ifx\HyPL@Type\relax
5620 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5621 \else
5622 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5623 \fi
5624 \ifx\HyPL@Prefix\HyPL@LastPrefix
5625 \else
5626 \let\Hy@temp N%
5627 \fi
5628 \if Y\Hy@temp
5629 \advance\c@page by -1 %
5630 \ifnum\HyPL@LastNumber=\the\c@page\relax
5631 \else
5632 \let\Hy@temp N%
5633 \fi
5634 \Hy@StepCount\c@page
5635 \fi
5636 \if N\Hy@temp
5637 \ifx\HyPL@Type\relax
5638 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5639 \else
5640 \HyPL@StorePageLabel{%
5641 \ifx\HyPL@Prefix\@empty
5642 \else
5643 /P(\HyPL@Prefix)%
5644 \fi
5645 /S/\csname HyPL\HyPL@Type\endcsname
5646 \ifnum\the\c@page=1 %
5647 \else
5648 \space/St \the\c@page
5649 \fi
5650 }%
5651 \fi
5652 \fi
5653 \xdef\HyPL@LastNumber{\the\c@page}%
5654 \global\let\HyPL@LastType\HyPL@Type
5655 \global\let\HyPL@LastPrefix\HyPL@Prefix
5656 \endgroup
5657 \Hy@GlobalStepCount\Hy@abspage
5658 }%

```

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

```

5659 \def\HyPL@CheckThePage#1\@nil{%
5660 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil

```

5661 }%

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

```

5662 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5663   \def\Hy@tempa{#4}%
5664   \def\Hy@tempb{\csname\endcsname\c@page}%
5665   \ifx\Hy@tempa\Hy@tempb
5666     \expandafter\ifx\csname HyPL#3\endcsname\relax
5667     \else
5668       \def\HyPL@Type{#3}%
5669       \def\HyPL@Prefix{#2}%
5670     \fi
5671   \else
5672     \begingroup
5673     \let\Hy@next\endgroup
5674     \let\HyPL@found\@undefined
5675     \def\arabic{\HyPL@Format{arabic}}%
5676     \def\Roman{\HyPL@Format{Roman}}%
5677     \def\roman{\HyPL@Format{roman}}%
5678     \def\Alph{\HyPL@Format{Alph}}%
5679     \def\alph{\HyPL@Format{alph}}%
5680     \protected@edef\Hy@temp{#1}%
5681     \ifx\HyPL@found\relax
5682       \toks@{\expandafter{\Hy@temp}}%
5683       \edef\Hy@next{\endgroup
5684         \noexpand\HyPL@@@CheckThePage\the\toks@
5685         \noexpand\HyPL@found\relax\noexpand\@nil
5686       }%
5687     \fi
5688     \Hy@next
5689   \fi
5690 }%
```

`\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`.

```

5691 \def\HyPL@Format#1#2{%
5692   \ifx\HyPL@found\@undefined
5693     \expandafter\ifx\csname c@#2\endcsname\c@page
5694       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5695     \else
5696       \expandafter\noexpand\csname#1\endcsname{#2}%
5697     \fi
5698   \else
5699     \expandafter\noexpand\csname#1\endcsname{#2}%
5700   \fi
5701 }%
```

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

```

5702 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5703   \def\Hy@tempa{#3}%
5704   \def\Hy@tempb{\HyPL@found\relax}%

```

```

5705 \ifx\Hy@tempa\Hy@tempb
5706 \def\HyPL@Type{@#2}%
5707 \def\HyPL@Prefix{#1}%
5708 \fi
5709 }%

```

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

```

5710 \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`.

```

5711 \def\HyPL@Useless{0<</S/D>>}%
5712 \@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.

```

5713 \def\HyPL@SetPageLabels{%
5714 \onelevel@sanitize\HyPL@Labels
5715 \ifx\HyPL@Labels@empty
5716 \else
5717 \ifx\HyPL@Labels\HyPL@Useless
5718 \else
5719 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5720 \fi
5721 \fi
5722 }%

```

```

5723 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5724 \fi

```

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

```

5725 \Hy@DisableOption{pdfpagelabels}
5726 </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`

```

5727 <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.

```

5728 <*vTeX>
5729 \providecommand*{\XR@ext}{pdf}
5730 \edef\Hy@VTeXversion{%
5731 \ifx\VTeXversion@undefined
5732 \z@
5733 \else
5734 \ifx\VTeXversion\relax
5735 \z@
5736 \else
5737 \VTeXversion

```

```

5738   \fi
5739   \fi
5740 }
5741 \begingroup
5742 \ifnum\Hy@VTeXversion<660 %
5743   \gdef\Hy@PutCatalog#1{%
5744     \Hy@WarningNoLine{%
5745       VTeX 6.59g or above required for pdfpagelabels%
5746     }%
5747   }%
5748 \else
5749   \gdef\Hy@PutCatalog#1{%
5750     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5751   }%
5752   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5753     \ifx\#2\%
5754       \else
5755         \immediate\special{!pdfpagelabels #2}%
5756       \fi
5757     }%
5758   \fi
5759 \endgroup
5760 \</vtex>

5761 \<*pdftex | vtex>

```

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

```

5762 \ifHy@pagelabels
5763   \def\HyPL@StorePageLabel#1{%
5764     \toks@\expandafter{\HyPL@Labels}%
5765     \xdef\HyPL@Labels{%
5766       \the\toks@
5767       \the\Hy@abspage<<#1>>%
5768     }%
5769   }%

```

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.

```

5770 \RequirePackage{atveryend}[2009/12/07]%
5771 \AtVeryEndDocument{%
5772   \HyPL@SetPageLabels
5773 }%

5774 \fi
5775 \</pdftex | vtex>

```

27.1.2 xetex

```

5776 \<*xetex>
5777 \HyPsd@LoadUnicode
5778 \Hy@unicodetrue
5779 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5780 \else
5781   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5782 \fi
5783 \HyPsd@LoadStringEncoding
5784 \define@key{Hyp}{unicode}[true]{%

```

```

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

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5813 <*pdfmarkbase>
5814 \beginngroup
5815 \@ifundefined{headerps@out}{-}{%
5816 \toks@\expandafter{\Hy@FirstPageHook}%
5817 \xdef\Hy@FirstPageHook{%
5818 \noexpand\headerps@out{%
5819 systemdict /pdfmark known%
5820 {%
5821 userdict /?pdfmark systemdict /exec get put%
5822 }{%
5823 userdict /?pdfmark systemdict /pop get put %
5824 userdict /pdfmark systemdict /cleartomark get put%
5825 }%
5826 ifelse%
5827 }%
5828 \the\toks@
5829 }%
5830 }%
5831 \endgroup
5832 </pdfmarkbase>

\Hy@PutCatalog

5833 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5834 <*pdfmarkbase>
5835 \def\Hy@PutCatalog#1{%
5836 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5837 }
5838 </pdfmarkbase>

```

```
5839 <*pdfmarkbase | dvipdfm | xetex>
5840 \ifHy@pagelabels
```

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

```
5841 \def\HyPL@StorePageLabel#1{%
5842   \if@filesw
5843     \begingroup
5844     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5845     \immediate\write\@mainaux{%
5846       \string\HyPL@Entry{\Hy@tempa}%
5847     }%
5848   \endgroup
5849   \fi
5850 }%
```

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.

```
5851 \Hy@AtBeginDocument{%
5852   \if@filesw
5853     \immediate\write\@mainaux{%
5854       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5855     }%
5856   \fi
5857   \ifx\HyPL@Labels\@empty
5858     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5859   \else
5860     \HyPL@SetPageLabels
5861   \fi
5862   \let\HyPL@Entry\@gobble
5863 }%
```

`\HyPL@Entry`

```
5864 \def\HyPL@Entry#1{%
5865   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5866     \HyPL@Labels
5867     #1%
5868   }%
5869 }%

5870 \fi
5871 </pdfmarkbase | dvipdfm | xetex>
5872 <*package>
5873 \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

```

5874 \def\Hy@CounterExists#1{%
5875   \begingroup\expandafter\expandafter\expandafter\endgroup
5876   \expandafter\ifx\csname c@#1\endcsname\relax
5877     \expandafter\@gobble
5878   \else
5879     \begingroup\expandafter\expandafter\expandafter\endgroup
5880     \expandafter\ifx\csname the#1\endcsname\relax
5881       \expandafter\expandafter\expandafter\@gobble
5882     \else
5883       \expandafter\expandafter\expandafter\@firstofone
5884     \fi
5885   \fi
5886 }
5887 \Hy@CounterExists{section}{%
5888   \newcommand\theHequation{\theHsection.\arabic{equation}}%
5889 }
5890 \Hy@CounterExists{part}{%
5891   \newcommand\theHpart{\arabic{part}}%
5892 }
5893 \ltx@ifundefined{thechapter}{%
5894   \newcommand\theHsection   {\arabic{section}}%
5895   \newcommand\theHfigure    {\arabic{figure}}%
5896   \newcommand\theHtable     {\arabic{table}}%
5897 }{%
5898   \newcommand\theHchapter   {\arabic{chapter}}%
5899   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}%
5900   \newcommand\theHtable     {\theHchapter.\arabic{table}}%
5901   \newcommand\theHsection   {\theHchapter.\arabic{section}}%
5902 }
5903 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5904 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5905 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5906 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5907 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
5908 \newcommand\theHthm         {\theHsection.\arabic{thm}}

5909 \let\H@item\item
5910 \newcounter{Item}
5911 \def\theHItem{\arabic{Item}}
5912 \def\item{%
5913   \@hyper@itemfalse
5914   \if@nmbbrlist\@hyper@itemtrue\fi
5915   \H@item
5916 }

5917 \newcommand\theHenumi      {\theHItem}
5918 \newcommand\theHenumii     {\theHItem}
5919 \newcommand\theHenumiii    {\theHItem}

```

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.

```

5920 \newcommand\theHenumiv {\theHItem}
5921 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5922 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5923 \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.

```

5924 \let\H@refstepcounter\refstepcounter
5925 \edef\name@of@eq{equation}%
5926 \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.

```

5927 \newif\if@hyper@item
5928 \newif\if@skiphyperref
5929 \@hyper@itemfalse
5930 \@skiphyperreffalse
5931 \def\refstepcounter#1{%
5932   \ifHy@pdfstring
5933   \else
5934     \H@refstepcounter{#1}%
5935     \edef\This@name{#1}%
5936     \ifx\This@name\name@of@slide
5937     \else
5938       \if@skiphyperref
5939       \else
5940         \if@hyper@item
5941         \stepcounter{Item}%
5942         \hyper@refstepcounter{Item}%
5943         \@hyper@itemfalse
5944         \else
5945         \hyper@refstepcounter{#1}%
5946         \fi
5947       \fi
5948     \fi
5949   \fi
5950 }

```

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

```

5951 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5952 \def\hyper@refstepcounter#1{%
5953   \edef\This@name{#1}%
5954   \ifx\This@name\name@of@eq
5955     \@ifundefined{theHequation}{%
5956       \make@stripped@name{\theequation}%
5957       \let\theHequation\newname
5958     }{}%
5959   \fi
5960   \@ifundefined{theH#1}{%
5961     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5962   }{}%
5963   \hyper@makecurrent{#1}%
5964   \ifmeasuring@

```

```

5965 \else
5966   \Hy@raisedlink{%
5967     \hyper@anchorstart{\@currentHref}\hyper@anchorend
5968   }%
5969 \fi
5970 }

```

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`.

```

5971 \begingroup\expandafter\expandafter\expandafter\endgroup
5972 \expandafter\ifx\csname chapter\endcsname\relax
5973   \def\Hy@chapterstring{section}%
5974 \else
5975   \def\Hy@chapterstring{chapter}%
5976 \fi
5977 \def\Hy@appendixstring{appendix}
5978 \def\Hy@chapapp{\Hy@chapterstring}
5979 \let\HyOrg@appendix\appendix
5980 \def\appendix{%
5981   \ltx@ifundefined{chapter}%
5982     {\gdef\theHsection{\Alph{section}}}%
5983     {\gdef\theHchapter{\Alph{chapter}}}%
5984   \xdef\Hy@chapapp{\Hy@appendixstring}%
5985   \HyOrg@appendix
5986 }

```

`\Hy@Test@alph`

```

5987 \def\Hy@Test@alph#1{%
5988   \ifcase#1\or
5989     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
5990     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
5991     u\or v\or w\or x\or y\or z%
5992   \else
5993     \@ctrerr
5994   \fi
5995 }

```

`\Hy@Test@Alph`

```

5996 \def\Hy@Test@Alph#1{%
5997   \ifcase#1\or
5998     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
5999     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6000     U\or V\or W\or X\or Y\or Z%
6001   \else
6002     \@ctrerr
6003   \fi
6004 }

```

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

```

6005 \def\hyper@makecurrent#1{%
6006   \begingroup

```

```

6007 \edef\Hy@param{#1}%
6008 \ifx\Hy@param\Hy@chapterstring
6009 \let\Hy@param\Hy@chapapp
6010 \fi
6011 \ifHy@hypertextnames
6012 \let\@number\@firstofone
6013 \def\@fnsymbol##1{fnsymbol\number##1}%
6014 \ifx\@alph\Hy@Test@alph
6015 \else
6016 \def\@alph{alph\number}%
6017 \fi
6018 \ifx\@Alph\Hy@Test@Alph
6019 \else
6020 \def\@Alph{Alph\number}%
6021 \fi
6022 \ifHy@naturalnames
6023 \let\textlatin\@firstofone
6024 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6025 \else
6026 \xdef\HyperGlobalCurrentHref{%
6027 \csname
6028 the%
6029 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6030 #1%
6031 \endcsname
6032 }%
6033 \fi
6034 \xdef\HyperGlobalCurrentHref{%
6035 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6036 }%
6037 \else
6038 \Hy@GlobalStepCount\Hy@linkcounter
6039 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6040 \fi
6041 \endgroup
6042 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6043 \ifHy@localanchorname
6044 \let\@currentHref\HyperLocalCurrentHref
6045 \else
6046 \global\let\@currentHref\HyperGlobalCurrentHref
6047 \fi
6048 }

```

\Hy@MakeCurrentHref

```

6049 \def\Hy@MakeCurrentHref#1{%
6050 \edef\HyperLocalCurrentHref{#1}%
6051 \@onelevel@sanitize\HyperLocalCurrentHref
6052 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6053 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6054 \ifHy@localanchorname
6055 \let\@currentHref\HyperLocalCurrentHref
6056 \else
6057 \global\let\@currentHref\HyperGlobalCurrentHref
6058 \fi
6059 }

```

\Hy@MakeCurrentHrefAuto

```

6060 \def\Hy@MakeCurrentHrefAuto#1{%
6061   \Hy@GlobalStepCount\Hy@linkcounter
6062   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6063 }

```

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

```

6064 \def\@currentHlabel{\@currentHref}

6065 \@ifpackageloaded{fancyvrb}{%
6066   \@ifpackagelater{fancyvrb}{1998/05/20}{%
6067     \def\FV@StepLineNo{%
6068       \FV@SetLineNo
6069       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6070       \FV@StepLineNo
6071     }%
6072   }%
6073 }{}

```

29 Package lastpage support

Package lastpage directly writes the \newlabel command to the aux file. Because package hyperref requires additional arguments, the internal command \lastpage@putlabel is redefined. The patch is deferred by \AtBeginDocument, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options hypertexnames and plainpages) is used to get the page anchor name as in \Hy@EveryPageAnchor (see sec. 38). The link will not work if option pageanchor is set to false.

\lastpage@putlabel

```

6074 \Hy@AtBeginDocument{%
6075   \@ifclassloaded{revtex4}{%
6076     \@namedef{ver@lastpage.sty}{1994/06/25}%
6077   }{}%
6078   \@ifpackageloaded{lastpage}{%
6079     \ifHy@pageanchor
6080     \else
6081       \Hy@WarningNoLine{%
6082         The \string\pageref{LastPage} link doesn't work\MessageBreak
6083         with disabled option 'pageanchor'%
6084       }%
6085     \fi
6086     \def\lastpage@putlabel{%
6087       \addtocounter{page}{-1}%
6088       \if@filesn
6089         \begingroup
6090         \let\@number\@firstofone
6091         \ifHy@pageanchor
6092           \ifHy@hypertexnames
6093             \ifHy@plainpages
6094               \def\Hy@temp{\arabic{page}}%
6095             \else
6096               \Hy@unicodefalse
6097               \pdfstringdef\Hy@temp{\thepage}%
6098             \fi
6099           \else
6100             \def\Hy@temp{\the\Hy@pagecounter}%

```

```

6101         \fi
6102     \fi
6103     \immediate\write\@auxout{%
6104         \string\newlabel
6105         {LastPage}{\thepage}{\thepage}%
6106         \ifHy@pageanchor page.\Hy@temp\fi}}%
6107     }%
6108 \endgroup
6109 \fi
6110 \addtocounter{page}{1}%
6111 }%
6112 \@ifclassloaded{revtex4}{%
6113     \begingroup
6114     \toks@{\expandafter{\lastpage@putlabel}%
6115     \edef\x{\endgroup
6116         \def\noexpand\lastpage@putlabel{%
6117             \noexpand\stepcounter{page}%
6118             \the\toks@
6119             \noexpand\addtocounter{page}\noexpand\m@ne
6120         }%
6121     }%
6122     \x
6123     }{}%
6124 }{}%
6125 }
6126 \</package>
6127 \<*check>
6128 \checkpackage{lastpage}[1994/06/25]
6129 \checkcommand\def\lastpage@putlabel{%
6130     \addtocounter{page}{-1}%
6131     \immediate\write\@auxout{%
6132         \string\newlabel{LastPage}{\thepage}{\thepage}%
6133     }%
6134     \addtocounter{page}{1}%
6135 }
6136 \</check>
6137 \<*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.

```

6138 \def\hypergetref#1{\getrefbykeydefault{#1}{\thepage}}
6139 \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:

```

6140 \@ifpackageloaded{titlesec}{%
6141     \def\ttl@Hy@steplink#1{%
6142         \Hy@MakeCurrentHrefAuto{#1*}%
6143         \edef\ttl@Hy@saveanchor{%

```

```

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

```

Package titletoc support:

```

6173 \@ifpackageloaded{titletoc}{%
6174 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6175 }{}

```

32 Package varioref support

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

```

6176 \def\Hy@varioref@undefined{???}{??}{-}{-}
6177 \@ifpackageloaded{varioref}{%
6178 \def\vref@pagenum#1#2{%
6179 \@ifundefined{r@#2}{%
6180 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6181 }{}%
6182 \edef#1{\getpagerefnumber{#2}}%
6183 }%
6184 }{}

```

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

```

6185 \ifpackageloaded{longtable}{%
6186   \begingroup
6187   \def\y{\LT@array}%
6188   \@ifundefined{scr@LT@array}{%
6189     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
6190   }\def\y{\scr@LT@array}%
6191   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6192     \expandafter\endgroup
6193     \expandafter\def\y[##1]##2{%
6194       \H@refstepcounter{#1}%
6195       \hyper@makecurrent{table}%
6196       \let\Hy@LT@currentHref\@currentHref
6197       #2\@sharp###4%
6198     }%
6199   }%
6200   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6201 \begingroup
6202 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6203   \endgroup
6204   \def\LT@start{%
6205     #1%
6206     \ifvoid\LT@foot#2\fi
6207     \let\@currentHref\Hy@LT@currentHref
6208     \Hy@raisedlink{%
6209       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6210     }%
6211     #3%
6212   }%
6213 }%
6214 \expandafter\x\LT@start\@nil
6215 }{}

```

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.

```

6216 \let\new@refstepcounter\refstepcounter
6217 \let\H@equation\equation
6218 \let\H@endequation\endequation
6219 \@ifpackageloaded{amsmath}{%
6220   \long\def\Hy@temp{%
6221     \incr@eqnum
6222     \mathdisplay@push
6223     \st@rredfalse \global\@eqnswtrue
6224     \mathdisplay{equation}%
6225   }%
6226   \ifx\Hy@temp\equation
6227     \expandafter\ifx\cename if@fleqn\expandafter\endcsname

```

```

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

```

My goodness, why can't \LaTeX 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.

```

6252 \newif\if@eqnstar
6253 \@eqnstarfalse
6254 \let\H@eqnarray\eqnarray
6255 \let\H@endeqnarray\endeqnarray
6256 \def\eqnarray{%
6257 \let\Hy@reserved@a\relax
6258 \def\@currentHref{}%
6259 \H@eqnarray
6260 \if@eqnstar
6261 \else
6262 \ifx\\\@currentHref\\%
6263 \else
6264 \@ifundefined{theHequation}{%
6265 \make@stripped@name{\theequation}%
6266 \let\theHequation\newname
6267 }{%
6268 \hyper@makecurrent{equation}%
6269 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6270 \fi
6271 \fi
6272 }
6273 \def\endeqnarray{%
6274 \H@endeqnarray
6275 }

```

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.

```

6276 \@namedef{eqnarray*}{%

```

```

6277 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6278 }
6279 \@namedef{endeqnarray*}{%
6280 \nonumber\endeqnarray\@eqnstarfalse
6281 }

```

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

```

6282 \ltx@ifundefined{subeqnarray}{%}{%
6283 \let\H@subeqnarray\subeqnarray
6284 \let\H@endsubeqnarray\endsubeqnarray
6285 \def\subeqnarray{%
6286 \let\Hy@reserved@a\relax
6287 \H@subeqnarray
6288 \@ifundefined{theHequation}{%
6289 \make@stripped@name{\theequation}%
6290 \let\theHequation\newname
6291 }{}%
6292 \hyper@makecurrent{equation}%
6293 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6294 }%
6295 \def\endsubeqnarray{%
6296 \H@endsubeqnarray
6297 }%
6298 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6299 }

```

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

```

6300 \def\make@stripped@name#1{%
6301 \begingroup
6302 \escapechar\m@ne
6303 \global\let\newname\@empty
6304 \protected@edef\Hy@tempa{#1}%
6305 \edef\@tempb{%
6306 \noexpand\@tfor\noexpand\Hy@tempa:=%
6307 \expandafter\strip@prefix\meaning\Hy@tempa
6308 }%
6309 \@tempb\do{%
6310 \if\Hy@tempa\else
6311 \if\Hy@tempa\else
6312 \xdef\newname{\newname\Hy@tempa}%
6313 \fi
6314 \fi
6315 }%
6316 \endgroup
6317 }

```

Support for amsmath's subequations:

```

6318 \begingroup\expandafter\expandafter\expandafter\endgroup
6319 \expandafter\ifx\csname subequations\endcsname\relax
6320 \else
6321 \let\HyOrg@subequations\subequations
6322 \def\subequations{%
6323 \stepcounter{equation}%
6324 \protected@edef\theHparentequation{%
6325 \@ifundefined{theHequation}\theequation\theHequation
6326 }%
6327 \addtocounter{equation}{-1}%
6328 \HyOrg@subequations

```

```

6329 \def\theHequation{\theHparentequation\alph{equation}}%
6330 \ignorespaces
6331 }%
6332 \fi

Support for package amsthm (Daniel Müllner):

6333 \ifpackageloaded{amsthm}{%
6334 \def\@thm#1#2#3{%
6335 \ifhmode
6336 \unskip\unskip\par
6337 \fi
6338 \normalfont
6339 \trivlist
6340 \let\thmheadnl\relax
6341 \let\thm@swap\@gobble
6342 \thm@notefont{\fontseries\mddefault\upshape}%
6343 \thm@headpunct{.}% add period after heading
6344 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6345 \thm@space@setup
6346 #1% style overrides
6347 \@topsep \thm@preskip % used by thm head
6348 \@topsepadd \thm@postskip % used by \@endparentv
6349 \def\dth@counter{#2}%
6350 \ifx\@empty\dth@counter
6351 \def\@tempa{%
6352 \@oparg{\@begintheorem{#3}{}}{}%
6353 }%
6354 \else
6355 \H@refstepcounter{#2}%
6356 \hyper@makecurrent{#2}%
6357 \let\Hy@dth@currentHref\@currentHref
6358 \def\@tempa{%
6359 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6360 }%
6361 \fi
6362 \@tempa
6363 }%
6364 \dth@everypar={%
6365 \@minipagefalse
6366 \global\@newlistfalse
6367 \@noparitemfalse
6368 \if@inlabel
6369 \global\@inlabelfalse
6370 \begingroup
6371 \setbox\z@\lastbox
6372 \ifvoid\z@
6373 \kern-\itemindent
6374 \fi
6375 \endgroup
6376 \ifx\@empty\dth@counter
6377 \else
6378 \Hy@raisedlink{%
6379 \hyper@anchorstart{%
6380 \ifundefined{Hy@dth@currentHref}%
6381 \@currentHref\Hy@dth@currentHref
6382 }\hyper@anchorend
6383 }%
6384 \fi

```

```

6385 \unhbox\@labels
6386 \fi
6387 \if@nobreak
6388 \@nobreakfalse \clubpenalty\@M
6389 \else
6390 \clubpenalty\@clubpenalty \everypar{}\%
6391 \fi
6392 }%
6393 }{}

```

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.

```

6394 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6395 \ifHy@hyperfootnotes
6396 \newcounter{Hfootnote}%
6397 \let\H@@footnotetext\@footnotetext
6398 \let\H@@footnotemark\@footnotemark
6399 \def\@xfootnotenext[#1]{%
6400 \begingroup
6401 \cename c@\@mpfn\endcename #1\relax
6402 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6403 \endgroup
6404 \ifx\@footnotetext\@mpfootnotetext
6405 \expandafter\H@@mpfootnotetext
6406 \else
6407 \expandafter\H@@footnotetext
6408 \fi
6409 }%
6410 \def\@xfootnotemark[#1]{%
6411 \begingroup
6412 \c@footnote #1\relax
6413 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
6414 \endgroup
6415 \H@@footnotemark
6416 }%
6417 \let\H@@mpfootnotetext\@mpfootnotetext
6418 \long\def\@mpfootnotetext#1{%
6419 \H@@mpfootnotetext{%
6420 \ifHy@nesting
6421 \expandafter\hyper@@anchor\expandafter{%
6422 \Hy@footnote@currentHref
6423 }{#1}%
6424 \else
6425 \Hy@raisedlink{%
6426 \expandafter\hyper@@anchor\expandafter{%
6427 \Hy@footnote@currentHref
6428 }{\relax}%
6429 }#1%
6430 \fi
6431 }%
6432 }%

```

```

6433 \long\def\@footnotetext#1{%
6434   \H@@footnotetext{%
6435     \ifHy@nesting
6436       \expandafter\hyper@@anchor\expandafter{%
6437         \Hy@footnote@currentHref
6438       }{#1}%
6439     \else
6440       \Hy@raisedlink{%
6441         \expandafter\hyper@@anchor\expandafter{%
6442           \Hy@footnote@currentHref
6443         }\relax}%
6444       }%
6445       \let\@currentHref\Hy@footnote@currentHref
6446       \let\@currentlabelname\@empty
6447       #1%
6448     \fi
6449   }%
6450 }%

```

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.

```

6451 \def\@footnotemark{%
6452   \leavevmode
6453   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6454   \stepcounter{Hfootnote}%
6455   \global\let\Hy@saved@currentHref\@currentHref
6456   \hyper@makecurrent{Hfootnote}%
6457   \global\let\Hy@footnote@currentHref\@currentHref
6458   \global\let\@currentHref\Hy@saved@currentHref
6459   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6460   \@makefnmark
6461   \hyper@linkend
6462   \ifhmode\spacefactor\x@sf\fi
6463   \relax
6464 }%

```

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

```

6465 \@ifpackageloaded{longtable}{%
6466   \CheckCommand*\LT@p@ftntext}[1]{%
6467     \edef\@tempa{%
6468       \the\LT@p@ftn
6469       \noexpand\footnotetext[\the\c@footnote]%
6470     }%
6471     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6472   }%
6473   \long\def\LT@p@ftntext#1{%
6474     \edef\@tempa{%
6475       \the\LT@p@ftn
6476       \begingroup
6477       \noexpand\c@footnote=\the\c@footnote\relax
6478       \noexpand\protected@xdef
6479       \noexpand\@thefnmark{\noexpand\thempfn}%
6480       \noexpand\protected@xdef\noexpand\@thefnmark{%

```

```

6481         \noexpand\thempfn
6482     }%
6483     \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6484     \expandafter{%
6485         \Hy@footnote@currentHref
6486     }%
6487 }%
6488 \global\LT@p@ftn\expandafter{%
6489     \@tempa{#1}%
6490 }%
6491 }%
6492 }%
6493 \long\def\Hy@LT@footnotetext#1#2{%
6494     \H@@footnotetext{%
6495         \ifHy@nesting
6496             \hyper@@anchor{#1}{#2}%
6497         \else
6498             \Hy@raisedlink{%
6499                 \hyper@@anchor{#1}{\relax}%
6500             }%
6501             \def\@currentHref{#1}%
6502             \let\@currentlabelname\@empty
6503             #2%
6504         \fi
6505     }%
6506 }%
6507 }{}%

```

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

```

6508 \ifpackageloaded{fancyvrb}{%
6509     \def\V@@footnotetext{%
6510         \insert\footins\bgroup
6511         \csname reset@font\endcsname
6512         \footnotesize
6513         \interlinepenalty\interfootnotelinepenalty
6514         \splittopskip\footnotesep
6515         \splitmaxdepth\dp\strutbox
6516         \floatingpenalty \@MM
6517         \hsize\columnwidth
6518         \@parboxrestore
6519         \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6520         \@makefnmark{}%
6521         \rule{\z@}{\footnotesep}%
6522         \bgroup
6523         \aftergroup\V@@@footnotetext
6524         \Hy@raisedlink{%
6525             \expandafter\hyper@@anchor\expandafter{%
6526                 \Hy@footnote@currentHref
6527             }\relax}%
6528     }%
6529     \let\@currentHref\Hy@footnote@currentHref
6530     \let\@currentlabelname\@empty
6531     \ignorespaces
6532 }%
6533 }{}%

```

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

```

6534 \def\Hy@temp#1{%
6535   \begingroup
6536   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6537   \endgroup
6538   \@footnotemark
6539 }%
6540 \ifx\Hy@temp\footref
6541   \def\footref#1{%
6542     \begingroup
6543     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6544     \endgroup
6545     \H@@@footnotemark
6546   }%
6547 \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.

```

6548 \let\HyOrg@maketitle\maketitle
6549 \def\maketitle{%
6550   \let\Hy@saved@footnotemark\@footnotemark
6551   \let\Hy@saved@footnotetext\@footnotetext
6552   \let\@footnotemark\H@@@footnotemark
6553   \let\@footnotetext\H@@@footnotetext
6554   \@ifnextchar[\Hy@maketitle@optarg{% ]
6555     \HyOrg@maketitle
6556     \Hy@maketitle@end
6557   }%
6558 }%
6559 \def\Hy@maketitle@optarg[#1]{%
6560   \HyOrg@maketitle[{#1}]%
6561   \Hy@maketitle@end
6562 }%
6563 \def\Hy@maketitle@end{%
6564   \ifx\@footnotemark\H@@@footnotemark
6565     \let\@footnotemark\Hy@saved@footnotemark
6566   \fi
6567   \ifx\@footnotetext\H@@@footnotetext
6568     \let\@footnotetext\Hy@saved@footnotetext
6569   \fi
6570 }%

```

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

```

6571 \def\realfootnote{%
6572   \@ifnextchar[\@xfootnote{%
6573     \stepcounter{\@mpfn}%
6574     \protected@xdef\@thefnmark{\thempfn}%
6575     \H@@@footnotemark\H@@@footnotetext
6576   }%
6577 }%

6578 \fi
6579 \Hy@DisableOption{hyperfootnotes}

6580 \</package>
6581 \<*check>
6582 \checklatex
6583 \checkcommand\def\@xfootnotenext[#1]{%
6584   \begingroup

```

```

6585 \csname c@\@mpfn\endcsname #1\relax
6586 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6587 \endgroup
6588 \@footnotetext
6589 }
6590 \checkcommand\def\@xfootnotemark[#1]{%
6591 \begingroup
6592 \c@footnote #1\relax
6593 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
6594 \endgroup
6595 \@footnotemark
6596 }
6597 \checkcommand\def\@footnotemark{%
6598 \leavevmode
6599 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6600 \@makefnmark
6601 \ifhmode\spacefactor\@x@sf\fi
6602 \relax
6603 }
6604 \end{check}
6605 \end{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.

```

6606 \def\caption{%
6607 \ifx\@capttype\@undefined
6608 \latex@error{\noexpand\caption outside float}\@ehd
6609 \expandafter\@gobble
6610 \else
6611 \H@refstepcounter\@capttype
6612 \let\Hy@tempa\@caption
6613 \ifundefined{float@caption}{%
6614 }{%
6615 \expandafter\ifx\csname @float@c@\@capttype\endcsname
6616 \float@caption
6617 \let\Hy@tempa\Hy@float@caption
6618 \fi
6619 }%
6620 \expandafter\@firstofone
6621 \fi
6622 {\@dblarg{\Hy@tempa\@capttype}}%
6623 }
6624 \long\def\@caption#1[#2]#3{%
6625 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6626 \csname iftrue\endcsname
6627 \global\let\@currentHref\hc@currentHref
6628 \else
6629 \hyper@makecurrent{\@capttype}%
6630 \fi
6631 \ifundefined{NR@getttitle}{%
6632 \def\@currentlabelname{#2}%
6633 }{%
6634 \NR@getttitle{#2}%
6635 }%

```

```

6636 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6637   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6638 }%
6639 \begingroup
6640   \@parboxrestore
6641   \if@minipage
6642     \setminipage
6643   \fi
6644   \normalsize
6645   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6646     \csname iftrue\endcsname
6647     \global\@capstartfalse
6648     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6649   \else
6650     \makecaption{\csname fnum@#1\endcsname}{%
6651       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6652   \ifHy@nesting
6653     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6654   \else
6655     \Hy@raisedlink{%
6656       \expandafter\hyper@@anchor\expandafter{%
6657         \@currentHref
6658       }\relax}%
6659   }%
6660   #3%
6661 \fi
6662 }%
6663 \fi
6664 \par
6665 \endgroup
6666 }

```

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.

```

6667 \let\Hy@float@caption\@caption
6668 \ifpackageloaded{float}{%
6669   \def\Hy@float@caption{%
6670     \ifx\Hy@float@currentHref\@undefined
6671       \hyper@makecurrent{\@capttype}%
6672       \global\let\Hy@float@currentHref\@currentHref
6673     \else
6674       \let\@currentHref\Hy@float@currentHref
6675     \fi
6676     \float@caption
6677   }%
6678   \let\HyOrg@float@makebox\float@makebox
6679   \renewcommand{\float@makebox}[1]{%
6680     \HyOrg@float@makebox{%
6681       #1\relax
6682     \ifx\Hy@float@currentHref\@undefined
6683     \else
6684       \expandafter\hyper@@anchor\expandafter{%
6685         \Hy@float@currentHref
6686       }\relax}%
6687     \global\let\Hy@float@currentHref\@undefined
6688   \fi

```

```

6689 }%
6690 }%
6691 {}

6692 </package>
6693 <*check>
6694 \checklatex[1999/06/01 - 2000/06/01]
6695 \checkcommand\def\caption{%
6696   \ifx\@capytype\@undefined
6697     \@latex@error{\noexpand\caption outside float}\@ehd
6698     \expandafter\@gobble
6699   \else
6700     \refstepcounter\@capytype
6701     \expandafter\@firstofone
6702   \fi
6703   {\@dblarg{\@caption\@capytype}}}%
6704 }
6705 \checkcommand\long\def\@caption#1[#2]#3{%
6706   \par
6707   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6708     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
6709   }%
6710   \begingroup
6711     \@parboxrestore
6712     \if@minipage
6713       \setminipage
6714     \fi
6715     \normalsize
6716     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6717   \endgroup
6718 }
6719 </check>
6720 <*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.

```

6721 \def\hyper@natlinkstart#1{%
6722   \Hy@backout{#1}%
6723   \hyper@linkstart{cite}{cite.#1}%
6724   \def\hyper@nat@current{#1}%
6725 }
6726 \def\hyper@natlinkend{%
6727   \hyper@linkend
6728 }
6729 \def\hyper@natlinkbreak#1#2{%
6730   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6731 }
6732 \def\hyper@natanchorstart#1{%

```

```

6733 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6734 }
6735 \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.

```

6736 \ltx@ifundefined{NAT@parse}{%
6737   \providecommand*\@extra@binfo{}%
6738   \providecommand*\@extra@b@citeb{}%
6739   \def\bibcite#1#2{%
6740     \@newl@bel{b}{#1}\@extra@binfo}{%
6741       \hyper@link[cite]{#1}\@extra@b@citeb}{#2}%
6742   }%
6743 }%
6744 \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.”.

```

6745 \let\Hy@bibcite\bibcite
6746 \begingroup
6747   \ifundefined{bbl@cite@choice}{}{%
6748     \g@addto@macro\bbl@cite@choice{%
6749       \let\Hy@bibcite\Hy@bibcite
6750     }%
6751   }%
6752 \endgroup

```

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

```

6753 \providecommand*\@BIBLABEL{\@biblabel}%
6754 \def\@lbibitem[#1]#2{%
6755   \@skiphyperreftrue
6756   \H@item[%
6757     \ifx\Hy@raisedlink\@empty
6758       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6759       \@BIBLABEL{#1}%
6760       \hyper@anchorend
6761     \else
6762       \Hy@raisedlink{%
6763         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6764       }%
6765       \@BIBLABEL{#1}%
6766     \fi
6767     \hfill
6768   ]%
6769   \@skiphyperreffalse
6770   \if@filesw
6771     \begingroup
6772       \let\protect\noexpand
6773       \immediate\write\@auxout{%
6774         \string\bibcite{#2}{#1}%
6775       }%
6776     \endgroup
6777   \fi
6778   \ignorespaces
6779 }%

```

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

```

6780 \def\@bibitem#1{%
6781   \@skiphyperreftrue\H@item\@skiphyperreffalse
6782   \Hy@raisedlink{%
6783     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6784   }%
6785   \if@filesw
6786     \begingroup
6787     \let\protect\noexpand
6788     \immediate\write\@auxout{%
6789       \string\bibcite{#1}{\the\value{\@listctr}}}%
6790     }%
6791   \endgroup
6792   \fi
6793   \ignorespaces
6794 }%
6795 }{}

6796 \</package>
6797 \<*check>
6798 \checklatex
6799 \checkcommand\def\@lbibitem[#1]#2{%
6800   \item[\@biblabel{#1}\hfill]%
6801   \if@filesw
6802     {%
6803       \let\protect\noexpand
6804       \immediate\write\@auxout{%
6805         \string\bibcite{#2}{#1}%
6806       }%
6807     }%
6808   \fi
6809   \ignorespaces
6810 }
6811 \checkcommand\def\@bibitem#1{%
6812   \item
6813   \if@filesw
6814     \immediate\write\@auxout{%
6815       \string\bibcite{#1}{\the\value{\@listctr}}}%
6816     }%
6817   \fi
6818   \ignorespaces
6819 }
6820 \</check>
6821 \<*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.

```

6822 \@ifclassloaded{revtex}{%
6823   \Hy@Info{*** compatibility with revtex **** }%
6824   \def\revtex@checking#1#2{%
6825     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6826     \expandafter\def\csname b@#1\endcsname{#2}%
6827     \@SetMaxRnhelLabel{#1}%
6828     \expandafter\let\csname b@#1\endcsname\T@temp
6829   }%

```

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

```

6830 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
6831 \providecommand*{\@extra@b@citeb}{}%
6832 \def\CITEX[#1]#2{%
6833   \let\@citea\@empty
6834   \leavevmode
6835   \unskip
6836   $^{}%
6837   \scriptstyle
6838   \@CITE{%
6839     \@for\@citeb:=#2\do{%
6840       \@citea
6841       \def\@citea{,\penalty\@m\ }%
6842       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6843       \if@filesw
6844         \immediate\write\@auxout{\string\citation{\@citeb}}%
6845       \fi
6846       \ifundefined{b@\@citeb\extra@b@citeb}{%
6847         \mbox{\reset@font\bfseries ?}%
6848         \G@refundefinedtrue
6849         \@latex@warning{%
6850           Citation '\@citeb' on page \thepage \space undefined%
6851         }%
6852       }{%
6853         {\csname b@\@citeb\extra@b@citeb\endcsname}%
6854       }%
6855     }%
6856   }{#1}%
6857 }$%
6858 }%

```

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.

```

6859 \def\@citex[#1]#2{%
6860   \let\@citea\@empty
6861   \@cite{%
6862     \@for\@citeb:=#2\do{%
6863       \@citea
6864       \def\@citea{,\penalty\@m\ }%
6865       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6866       \if@filesw
6867         \immediate\write\@auxout{\string\citation{\@citeb}}%
6868       \fi
6869       \ifundefined{b@\@citeb\extra@b@citeb}{%
6870         \mbox{\reset@font\bfseries ?}%
6871         \G@refundefinedtrue
6872         \@latex@warning{%
6873           Citation '\@citeb' on page \thepage \space undefined%
6874         }%
6875       }{%
6876         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6877       }%
6878     }%
6879   }{#1}%
6880 }%
6881 }{}

```

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.

```
6882 \ifpackageloaded{harvard}{%
6883   \Hy@AtBeginDocument{%
6884     \Hy@Info{*** compatibility with harvard **** }%
6885     \Hy@raiselinksfalse
6886     \def\harvardcite#1#2#3#4{%
6887       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
6888       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
6889       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
6890       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6891     }%
6892     \def\HAR@citetoaux#1{%
6893       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6894       \ifHy@backref
6895         \ifx\@empty\@currentlabel
6896         \else
6897           \@bsphack
6898           \if@filesw
6899             \protected@write\@auxout{}{%
6900               \string\@writefile{brf}{%
6901                 \string\backcite{#1}{%
6902                   {\thepage}{\@currentlabel}{\@currentHref}%
6903                 }%
6904               }%
6905             }%
6906           \fi
6907           \@esphack
6908         \fi
6909       \fi
6910     }%
6911     \def\harvarditem{%
6912       \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6913     }%
6914     \def\@harvarditem[#1]#2#3#4#5\par{%
6915       \item[]%
6916       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6917       \if@filesw
6918         \begingroup
6919         \def\protect##1{\string ##1\space}%
6920         \ifthenelse{\equal{#1}{\null}}{%
6921           {\def\next{{#4}{#2}{#3}}}%
6922           {\def\next{{#4}{#2}{#1}{#3}}}%
6923           \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6924         \endgroup
6925       \fi
6926       \protect\hspace*{-\labelwidth}%
6927       \protect\hspace*{-\labelsep}%
6928       \ignorespaces
6929       #5%
6930       \ifHy@backref
```

```

6931      \newblock
6932      \backref{\csname br@#4\endcsname}%
6933      \fi
6934      \par
6935  }%

```

\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:

```

6936  \long\def\HAR@checkcitations#1#2#3#4{%
6937    \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6938    \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6939      \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6940      \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6941        \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6942        \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6943          \else
6944            \@tempswatrue
6945          \fi
6946        \else
6947          \@tempswatrue
6948        \fi
6949      \else
6950        \@tempswatrue
6951      \fi
6952    }%
6953  }%

6954 }{}

```

37.2 Package chicago

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

```

6955 \@ifpackageloaded{chicago}{%

```

\citeN

```

6956  \def\citeN{%
6957    \def\@citesep{-1000}%
6958    \def\@cite##1##2{##1}%
6959    \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6960    \@citedata@opt
6961  }%

```

\shortciteN

```

6962  \def\shortciteN{%
6963    \def\@citesep{-1000}%
6964    \def\@cite##1##2{##1}%
6965    \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6966    \@citedata@opt
6967  }%

```

\@citedata@opt

```

6968  \def\@citedata@opt{%
6969    \let\@cite@opt\@empty
6970    \@ifnextchar {%
6971      \@tempswatrue

```

```

6972 \citedatax@opt
6973 }{%
6974 \@tempwafalse
6975 \citedatax[]%
6976 }%
6977 }%

```

\citedatax@opt

```

6978 \def\citedatax@opt[#1]{%
6979 \def\cite@opt{, #1}%
6980 \citedatax[{#1}]%
6981 }%

6982 }{}

```

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.

```

6983 \def\Hy@EveryPageAnchor{%
6984 \Hy@DistillerDestFix
6985 \ifHy@pageanchor
6986 \ifHy@hypertextnames
6987 \ifHy@plainpages
6988 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6989 \else
6990 \begingroup
6991 \let\@number\@firstofone
6992 \Hy@unicodetrue
6993 \pdfstringdef\@theH@page{\thepage}%
6994 \endgroup
6995 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@theH@page}}%
6996 \fi
6997 \else
6998 \Hy@GlobalStepCount\Hy@pagecounter
6999 \def\Hy@TempPageAnchor{%
7000 \hyper@@anchor{page.\the\Hy@pagecounter}%
7001 }%
7002 \fi
7003 \vbox to 0pt{%
7004 \kern\voffset
7005 \kern\topmargin
7006 \kern-1bp\relax
7007 \hbox to 0pt{%
7008 \kern\hoffset
7009 \kern\ifodd\value{page}%
7010 \oddsidemargin
7011 \else
7012 \evensidemargin
7013 \fi
7014 \kern-1bp\relax
7015 \Hy@TempPageAnchor

```

```

7016     \hss
7017   }%
7018   \vss
7019 }%
7020 \fi
7021 }
7022 \g@addto@macro\Hy@EveryPageBoxHook{%
7023   \Hy@EveryPageAnchor
7024 }

```

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.

```

7025 \def\addcontentsline#1#2#3{% toc extension, type, tag
7026   \begingroup
7027     \let\label\@gobble
7028     \ifx\@currentHref\@empty
7029       \Hy@Warning{%
7030         No destination for bookmark of \string\addcontentsline,%
7031         \MessageBreak destination is added%
7032       }%
7033     \phantomsection
7034   \fi
7035   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7036     \begingroup
7037       \def\Hy@tempa{#1}%
7038       \ifx\Hy@tempa\Hy@bookmarkstype
7039         \Hy@WarningNoLine{%
7040           bookmark level for unknown #2 defaults to 0%
7041         }%
7042       \else
7043         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7044       \fi
7045     \endgroup
7046     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7047   \fi
7048   \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
7049   \Hy@writebookmark{\csname the#2\endcsname}%
7050     {#3}%
7051     {\@currentHref}%
7052     {\Hy@toclevel}%
7053     {#1}%
7054   \ifHy@verbose
7055     \begingroup
7056       \def\Hy@tempa{#3}%
7057       \@onelevel@sanitize\Hy@tempa
7058       \let\temp@online\on@line
7059       \let\on@line\@empty
7060       \Hy@Info{%
7061         bookmark\temp@online:\MessageBreak
7062         thecounter {\csname the#2\endcsname}\MessageBreak
7063         text {\Hy@tempa}\MessageBreak
7064         reference {\@currentHref}\MessageBreak
7065         toplevel {\Hy@toclevel}\MessageBreak

```

```

7066     type {#1}%
7067   }%
7068   \endgroup
7069   \fi
7070   \addtocontents{#1}{%
7071     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7072   }%
7073   \endgroup
7074 }
7075 \def\contentsline#1#2#3#4{%
7076   \ifx\#4\%
7077     \csname l@#1\endcsname{#2}{#3}%
7078   \else
7079     \ifcase\Hy@linktoc % none
7080       \csname l@#1\endcsname{#2}{#3}%
7081     \or % section
7082       \csname l@#1\endcsname{%
7083         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7084       }{#3}%
7085     \or % page
7086       \csname l@#1\endcsname{{#2}}{%
7087         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7088       }%
7089     \else % all
7090       \csname l@#1\endcsname{%
7091         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7092       }{%
7093         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7094       }%
7095     \fi
7096   \fi
7097 }
7098 \</package>
7099 \<*check>
7100 \checklatex
7101 \checkcommand\def\addcontentsline#1#2#3{%
7102   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7103 }
7104 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7105 \</check>
7106 \<*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.

```

7107 \let\H@definecounter\@definecounter
7108 \def\@definecounter#1{%
7109   \H@definecounter{#1}%
7110   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7111 }

```

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.

```

7112 \let\H@newctr\@newctr
7113 \def\@newctr#1[#2]{%

```

```

7114 \H@newctr#1[#2]%
7115 \expandafter\def\csname theH#1\endcsname{%
7116   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
7117 }%
7118 }

```

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.

```

7119 \@ifpackageloaded{amsmath}{%
7120   \def\Hy@make@anchor{%
7121     \Hy@MakeCurrentHrefAuto{AMS}%
7122     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7123   }%
7124   \def\Hy@make@df@tag@@#1{%
7125     \gdef\df@tag{%
7126       \maketag@@@{\Hy@make@anchor#1}%
7127       \def\@currentlabel{#1}%
7128     }%
7129   }%
7130   \def\Hy@make@df@tag@@@#1{%
7131     \gdef\df@tag{%
7132       \tagform@{\Hy@make@anchor#1}%
7133       \toks@{\exp{\p@equation{#1}}}%
7134       \edef\@currentlabel{\the\toks@}%
7135     }%
7136   }%
7137   \let\HyOrg@make@df@tag@@\make@df@tag@@
7138   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7139   \let\make@df@tag@@\Hy@make@df@tag@@
7140   \let\make@df@tag@@@\Hy@make@df@tag@@@
7141 }{}

```

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

```

7142 \@ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
7143   \let\H@seteqlabel\@seteqlabel
7144   \def\@seteqlabel#1{%
7145     \H@seteqlabel{#1}%
7146     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7147     \Hy@raisedlink{%
7148       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7149     }%
7150   }%
7151 }{}

```

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.

```
7152 \let\HyOrg@addtoreset\@addtoreset
7153 \def\@addtoreset#1#2{%
7154   \HyOrg@addtoreset{#1}{#2}%
7155   \expandafter\xdef\csname theH#1\endcsname{%
7156     \expandafter\noexpand
7157     \csname the\@ifundefined{theH#2}{H#2}\endcsname
7158     .\noexpand\the\noexpand\value{#1}%
7159   }%
7160 }
```

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

```
7161 </package>
7162 <*check>
7163 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7164 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7165   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7166     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7167       \@addtoreset{#2}{#3}%
7168       \@xp\xdef\csname the#2\endcsname{%
7169         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7170       }%
7171     }%
7172   }%
7173 }%
7174 </check>
7175 <*package>
7176 \@ifpackageloaded{amsmath}{%
7177   \@ifpackagelater{amsmath}{1999/12/14}{%
7178     \renewcommand*{\numberwithin}[3][\arabic]{%
7179       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7180         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7181           \HyOrg@addtoreset{#2}{#3}%
7182           \@xp\xdef\csname the#2\endcsname{%
7183             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7184           }%
7185           \@xp\xdef\csname theH#2\endcsname{%
7186             \@xp\@nx
7187             \csname the\@ifundefined{theH#3}{H#3}\endcsname
7188             .\@nx#1{#2}%
7189           }%
7190         }%
7191       }%
7192     }%
7193   }{%
7194     \Hy@WarningNoLine{%
7195       \string\numberwithin\space of package 'amsmath' %
7196       only fixed\MessageBreak
```

```

7197     for version 2000/06/06 v2.12 or newer%
7198   }%
7199 }%
7200 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7201 \ifHy@figures
7202   \let\Hy@Gin@setfile\Gin@setfile
7203   \def\Gin@setfile#1#2#3{%
7204     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7205   }%
7206 \fi
7207 \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 emboldening 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.

```

7208 \ifHy@hyperindex
7209   \def\HyInd@ParenLeft{()%
7210   \def\HyInd@ParenRight{)}%
7211   \def\hyperindexformat#1#2{%
7212     \let\HyOrg@hyperpage\hyperpage
7213     \let\hyperpage\@firstofone
7214     #1{\HyOrg@hyperpage{#2}}%
7215     \let\hyperpage\HyOrg@hyperpage
7216   }%
7217   \Hy@nextfalse
7218   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7219   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7220   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7221   \begingroup
7222     \lccode'\|=\expandafter\HyInd@EncapChar\relax
7223     \lccode'\|=\|\\relax
7224   \lowercase{\endgroup
7225   \ifHy@next
7226     \let\HyInd@org@wrindex\@wrindex
7227     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\\}%
7228     \def\HyInd@@wrindex#1#2|#3|#4\\{%
7229       \ifx\\#3\\%
7230         \HyInd@org@wrindex{#1}{#2|hyperpage}%
7231       \else
7232         \HyInd@@@wrindex{#1}{#2}#3\\%
7233       \fi
7234     }%

```

```

7235 \def\HyInd@@@wrindex#1#2#3#4\{\%
7236 \def\Hy@temp@A{#3}%
7237 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7238 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7239 \relax
7240 \HyInd@org@wrindex{#1}{\%
7241 #2|hyperindexformat{/#3#4}%
7242 }%
7243 \else
7244 \ifx\#4\%
7245 \ifx\Hy@temp@A\HyInd@ParenRight
7246 \HyInd@org@wrindex{#1}{#2|#3}%
7247 \else
7248 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7249 \fi
7250 \else
7251 \HyInd@org@wrindex{#1}{\%
7252 #2|#3hyperindexformat{/#4}%
7253 }%
7254 \fi
7255 \fi
7256 }%
7257 \else
7258 \def\@wrindex#1{\@@wrindex#1||\}%
7259 \def\@@wrindex#1|#2|#3\{\%
7260 \if@filesw
7261 \ifx\#2\%
7262 \protected@write\@indexfile{\%
7263 \string\indexentry{#1|hyperpage}{\thepage}%
7264 }%
7265 \else
7266 \HyInd@@@wrindex{#1}#2\%
7267 \fi
7268 \fi
7269 \endgroup
7270 \@esphack
7271 }%
7272 \def\HyInd@@@wrindex#1#2#3\{\%
7273 \def\Hy@temp@A{#2}%
7274 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7275 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7276 \relax
7277 \protected@write\@indexfile{\%
7278 \string\indexentry{
7279 #1|hyperindexformat{/#2#3}%
7280 }{\thepage}%
7281 }%
7282 \else
7283 \ifx\#3\%
7284 \ifx\Hy@temp@A\HyInd@ParenRight
7285 \protected@write\@indexfile{\%
7286 \string\indexentry{#1|#2}{\thepage}%
7287 }%
7288 \else
7289 \protected@write\@indexfile{\%
7290 \string\indexentry{#1|#2hyperpage}{\thepage}%
7291 }%

```

```

7292         \fi
7293     \else
7294         \protected@write\@indexfile{}\{
7295             \string\indexentry{%
7296                 #1|#2hyperindexformat{/#3}%
7297             }\thepage}%
7298     }%
7299     \fi
7300 \fi
7301 }%
7302 \fi
7303 }%
7304 \fi
7305 \Hy@DisableOption{hyperindex}
7306 \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.

```

7307 \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.

```

7308 \def\hyperpage#1{%
7309   \HyInd@hyperpage#1\nohyperpage{}\@nil
7310 }
7311 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7312   \HyInd@@hyperpage{#1}%
7313   #2%
7314   \def\Hy@temp{#3}%
7315   \ifx\Hy@temp\@empty
7316   \else
7317     \Hy@ReturnAfterFi{%
7318       \HyInd@hyperpage#3\@nil
7319     }%
7320   \fi
7321 }
7322 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7323 \def\@hyperpage#1--#2--#3\{\{%
7324   \ifx\#2\%
7325     \@commahyperpage{#1}%
7326   \else
7327     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7328   \fi
7329 }
7330 \def\@commahyperpage#1{\@commahyperpage#1, \}
7331 \def\@commahyperpage#1, #2,#3\{\{%
7332   \ifx\#2\%
7333     \HyInd@pagelink{#1}%
7334   \else
7335     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7336   \fi
7337 }

```

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

```

7338 \def\HyInd@pagelink#1{%
7339   \begingroup

```

```

7340 \toks@={}%
7341 \HyInd@removespaces#1 \@nil
7342 \endgroup
7343 }
7344 \def\HyInd@removespaces#1 #2\@nil{%
7345 \toks@=\expandafter{\the\toks@#1}%
7346 \ifx\#2\%
7347 \edef\x{\the\toks@}%
7348 \ifx\x\@empty
7349 \else
7350 \hyperlink{page.\the\toks@}{\the\toks@}%
7351 \fi
7352 \else
7353 \Hy@ReturnAfterFi{%
7354 \HyInd@removespaces#2\@nil
7355 }%
7356 \fi
7357 }

```

44 Compatibility with foiltex

```

7358 \@ifclassloaded{foils}{%
7359 \providecommand*\ext@table{lot}%
7360 \providecommand*\ext@figure{lof}%
7361 }{}

```

45 Compatibility with seminar slide package

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

```

7362 \@ifclassloaded{seminar}{%
7363 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7364 }{%
7365 \Hy@seminarslidesfalse
7366 }
7367 \@ifpackageloaded{slidesec}{%
7368 \newcommand\theHslidesection {\arabic{slidesection}}%
7369 \newcommand\theHslidesubsection{%
7370 \theHslidesection.\arabic{slidesubsection}}%
7371 }%
7372 \def\slide@heading[#1]#2{%
7373 \H@refstepcounter{slidesection}%
7374 \@addtoreset{slidesubsection}{slidesection}%
7375 \addtocontents{los}{%
7376 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7377 {\@SCTR}{slideheading.\theslidesection}}%
7378 }%
7379 \def\Hy@tempa{#2}%
7380 \ifx\Hy@tempa\@empty
7381 \else
7382 {%
7383 \edef\@currentlabel{%
7384 \csname p@slidesection\endcsname\theslidesection
7385 }%
7386 \makeslideheading{#2}%
7387 }%

```

```

7388 \fi
7389 \gdef\theslideheading{#1}%
7390 \gdef\theslidesubheading{}%
7391 \ifHy@bookmarksnumbered
7392   \def\Hy@slidetitle{\theslide\section\space #1}%
7393 \else
7394   \def\Hy@slidetitle{#1}%
7395 \fi
7396 \ifHy@hypertextnames
7397   \ifHy@naturalnames
7398     \hyper@@anchor{slideheading.\theslide\section}{\relax}%
7399     \Hy@writebookmark
7400       {\theslide\section}%
7401       {\Hy@slidetitle}%
7402       {slideheading.\theslide\section}%
7403       {1}%
7404       {toc}%
7405   \else
7406     \hyper@@anchor{slideheading.\theHslide\section}{\relax}%
7407     \Hy@writebookmark
7408       {\theslide\section}%
7409       {\Hy@slidetitle}%
7410       {slideheading.\theHslide\section}%
7411       {1}%
7412       {toc}%
7413   \fi
7414 \else
7415   \Hy@GlobalStepCount\Hy@linkcounter
7416   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7417   \Hy@writebookmark
7418     {\theslide\section}%
7419     {\Hy@slidetitle}%
7420     {slideheading.\the\Hy@linkcounter}%
7421     {1}%
7422     {toc}%
7423 \fi
7424 }%
7425 \def\slide@subheading[#1]#2{%
7426   \H@refstepcounter{slidesubsection}%
7427   \addtocontents{los}{%
7428     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7429     {\@SCTR}{slideheading.\theslidesubsection}%
7430   }%
7431   \def\Hy@tempa{#2}%
7432   \ifx\Hy@tempa\@empty
7433   \else
7434     {%
7435       \edef\@currentlabel{%
7436         \csname p@slidesubsection\endcsname\theslidesubsection
7437       }%
7438       \makeslidesubheading{#2}%
7439     }%
7440   \fi
7441   \gdef\theslidesubheading{#1}%
7442   \ifHy@bookmarksnumbered
7443     \def\Hy@slidetitle{\theslidesubsection\space #1}%
7444   \else

```

```

7445 \def\Hy@slidetitle{#1}%
7446 \fi
7447 \ifHy@hypertextnames
7448 \ifHy@naturalnames
7449 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7450 \Hy@writebookmark
7451 {\theslidesubsection}%
7452 {\Hy@slidetitle}%
7453 {slideheading.\theslidesubsection}%
7454 {2}%
7455 {toc}%
7456 \else
7457 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7458 \Hy@writebookmark
7459 {\theslidesubsection}%
7460 {\Hy@slidetitle}%
7461 {slideheading.\theHslidesubsection}%
7462 {2}%
7463 {toc}%
7464 \fi
7465 \else
7466 \Hy@GlobalStepCount\Hy@linkcounter
7467 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7468 \Hy@writebookmark
7469 {\theslidesubsection}%
7470 {\Hy@slidetitle}%
7471 {slideheading.\the\Hy@linkcounter}%
7472 {1}%
7473 {toc}%
7474 \fi
7475 }%
7476 \providecommand*\listslidenamelist{List of Slides}%
7477 \def\listofslides{%
7478 \section*{%
7479 \listslidenamelist
7480 \@mkboth{%
7481 \expandafter\MakeUppercase\listslidenamelist
7482 }{%
7483 \expandafter\MakeUppercase\listslidenamelist
7484 }%
7485 }%
7486 \def\l@slide##1##2##3##4{%
7487 \slide@undottedcline{%
7488 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7489 }{}%
7490 }%
7491 \let\l@subslide\l@slide
7492 \@startlos
7493 }%
7494 \def\slide@contents{%
7495 \def\l@slide##1##2##3##4{%
7496 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7497 }%
7498 \let\l@subslide\@gobblefour
7499 \@startlos
7500 }%
7501 \def\Slide@contents{%

```

```

7502 \def\l@slide##1##2##3##4{%
7503   \ifcase\lslide@flag
7504     \message{##1 ** \the\c@slidesection}%
7505     \ifnum##1>\c@slidesection
7506       \def\lslide@flag{1}%
7507       {%
7508         \large
7509         \slide@cline{%
7510           \slidenumberline{$\Rightarrow\bullet$}%
7511           {\hyperlink{##4}{##2}}}%
7512         }{##3}%
7513       }%
7514     \else
7515       {%
7516         \large
7517         \slide@cline{%
7518           \slidenumberline{$\surd\;\bullet$}%
7519           {\hyperlink{##4}{##2}}}%
7520         }{##3}%
7521       }%
7522     \fi
7523   \or
7524     \def\lslide@flag{2}%
7525     {%
7526       \large
7527       \slide@cline{%
7528         \slidenumberline{$\bullet$}%
7529         {\hyperlink{##4}{##2}}}%
7530       }{##3}%
7531     }%
7532   \or
7533     {%
7534       \large
7535       \slide@cline{%
7536         \slidenumberline{$\bullet$}%
7537         {\hyperlink{##4}{##2}}}%
7538       }{##3}%
7539     }%
7540   \fi
7541 }%
7542 \def\l@subslide##1##2##3##4{%
7543   \ifnum\lslide@flag=1 %
7544     \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7545   \fi
7546 }%
7547 \def\lslide@flag{0}%
7548 \@startlos
7549 }%
7550 }{}

```

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.)

```

7551 \ifHy@texht
7552   \expandafter\endinput
7553 \fi
7554 \let\real@setref\@setref
7555 \def\@setref#1#2#3{% csname, extract group, refname

```

```

7556 \ifx#1\relax
7557 \protect\G@refundefinedtrue
7558 \nfss@text{\reset@font\bfseries ??}%
7559 \@latex@warning{%
7560   Reference '#3' on page \thepage \space undefined%
7561 }%
7562 \else
7563 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7564 \fi
7565 }

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

7566 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7567 \begingroup
7568 \toks0={\hyper@@link{#5}{#4}}%
7569 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7570 \edef\x{\endgroup
7571   \the\toks0 {\the\toks1 }%
7572 }%
7573 \x
7574 }

7575 \def\@pagesetref#1#2#3{% curname, extract macro, ref
7576 \ifx#1\relax
7577 \protect\G@refundefinedtrue
7578 \nfss@text{\reset@font\bfseries ??}%
7579 \@latex@warning{%
7580   Reference '#3' on page \thepage \space undefined%
7581 }%
7582 \else
7583 \protect\hyper@@link
7584   {\expandafter\@fifthoffive#1}%
7585   {page.\expandafter\@secondoffive#1}%
7586   {\expandafter\@secondoffive#1}%
7587 \fi
7588 }

7589 \</package>
7590 \<*check>
7591 \checklatex
7592 \checkcommand\def\@setref#1#2#3{%
7593 \ifx#1\relax
7594 \protect\G@refundefinedtrue
7595 \nfss@text{\reset@font\bfseries ??}%
7596 \@latex@warning{%
7597   Reference '#3' on page \thepage \space undefined%
7598 }%
7599 \else
7600 \expandafter#2#1\null
7601 \fi
7602 }
7603 \</check>
7604 \<*package>

```

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

```

7605 \def\HyRef@StarSetRef#1{%
7606 \begingroup
7607 \Hy@safe@activetrue

```

```

7608 \edef\x{#1}%
7609 \@onelevel@sanitize\x
7610 \edef\x{\endgroup
7611 \noexpand\HyRef@@StarSetRef
7612 \expandafter\noexpand\csname r@\x\endcsname{\x}%
7613 }%
7614 \x
7615 }
7616 \def\HyRef@@StarSetRef#1#2#3{%
7617 \ifx#1\@undefined
7618 \let#1\relax
7619 \fi
7620 \real@setref#1#3{#2}%
7621 }
7622 \def\@refstar#1{%
7623 \HyRef@StarSetRef{#1}\@firstoffive
7624 }
7625 \def\@pagerefstar#1{%
7626 \HyRef@StarSetRef{#1}\@secondoffive
7627 }
7628 \def\@namerefstar#1{%
7629 \HyRef@StarSetRef{#1}\@thirdoffive
7630 }
7631 \Hy@AtBeginDocument{%
7632 \@ifpackageloaded{varioref}{%
7633 \def\@Refstar#1{%
7634 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7635 }%
7636 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7637 \MakeUppercase#1%
7638 }%
7639 \DeclareRobustCommand*\@Ref*{%
7640 \@ifstar\@Refstar\HyRef@Ref
7641 }%
7642 \def\HyRef@Ref#1{%
7643 \hyperref[{#1}]{\Ref*{#1}}%
7644 }%
7645 \def\Vr@f#1{%
7646 \leavevmode\unskip\vref@space
7647 \hyperref[{#1}]{%
7648 \Ref*{#1}%
7649 \let\vref@space\nobreakspace
7650 \@vpageref[\unskip]{#1}%
7651 }%
7652 }%
7653 \def\vr@f#1{%
7654 \leavevmode\unskip\vref@space
7655 \begingroup
7656 \let\T@pageref\@pagerefstar
7657 \hyperref[{#1}]{%
7658 \ref*{#1}%
7659 \vpageref[\unskip]{#1}%
7660 }%
7661 \endgroup
7662 }%
7663 }{}%
7664 }

```

```

7665 \DeclareRobustCommand*\autopageref}{%
7666   \@ifstar{%
7667     \HyRef@autopagerefname\pageref*%
7668   }\HyRef@autopageref
7669 }
7670 \def\HyRef@autopageref#1{%
7671   \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
7672 }
7673 \def\HyRef@autopagerefname{%
7674   \ltx@ifundefined{pageautorefname}{%
7675     \ltx@ifundefined{pagename}{%
7676       \Hy@Warning{No autoref name for 'page'}%
7677     }{%
7678       \pagename\nobreakspace
7679     }%
7680   }{%
7681     \pageautorefname\nobreakspace
7682   }%
7683 }
7684 \DeclareRobustCommand*\autoref}{%
7685   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7686 }
7687 \def\HyRef@autoref#1#2{%
7688   \begingroup
7689     \Hy@safe@activetrue
7690     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7691   \endgroup
7692 }
7693 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7694   \HyRef@ShowKeysRef{#2}%
7695   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7696   \edef\HyRef@thisref{%
7697     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7698   }%
7699   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7700   \Hy@safe@activesfalse
7701   #3{%
7702     \expandafter\@fifthoffive#1\@empty\@empty\@empty
7703   }{%
7704     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7705   }{%
7706     \HyRef@currentHtag
7707     \expandafter\@firstoffive#1\@empty\@empty\@empty
7708     \null
7709   }%
7710   \else
7711     \protect\G@refundefinedtrue
7712     \nfss@text{\reset@font\bfseries ??}%
7713     \@latex@warning{%
7714       Reference '#2' on page \thepage\space undefined%
7715     }%
7716   \fi
7717 }
7718 \def\HyRef@testreftype#1.#2\.{%
7719   \ltx@ifundefined{#1autorefname}{%
7720     \ltx@ifundefined{#1name}{%
7721       \HyRef@StripStar#1\*\@nil{#1}%

```

```

7722 \ltx@ifundefined{\HyRef@name autorefname}{%
7723 \ltx@ifundefined{\HyRef@name name}{%
7724 \def\HyRef@currentHtag{}%
7725 \Hy@Warning{No autoref name for '#1'}%
7726 }{%
7727 \edef\HyRef@currentHtag{%
7728 \expandafter\noexpand\csname\HyRef@name name\endcsname
7729 \noexpand~%
7730 }%
7731 }%
7732 }{%
7733 \edef\HyRef@currentHtag{%
7734 \expandafter\noexpand
7735 \csname\HyRef@name autorefname\endcsname
7736 \noexpand~%
7737 }%
7738 }%
7739 }{%
7740 \edef\HyRef@currentHtag{%
7741 \expandafter\noexpand\csname#1name\endcsname
7742 \noexpand~%
7743 }%
7744 }%
7745 }{%
7746 \edef\HyRef@currentHtag{%
7747 \expandafter\noexpand\csname#1autorefname\endcsname
7748 \noexpand~%
7749 }%
7750 }%
7751 }
7752 \def\HyRef@StripStar#1*\#2\@nil#3{%
7753 \def\HyRef@name{#2}%
7754 \ifx\HyRef@name\HyRef@CaseStar
7755 \def\HyRef@name{#1}%
7756 \else
7757 \def\HyRef@name{#3}%
7758 \fi
7759 }
7760 \def\HyRef@CaseStar{*\\}
7761 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7762 \let\HyRef@ShowKeysRef\@gobble
7763 \def\HyRef@ShowKeysInit{%
7764 \begingroup\expandafter\expandafter\expandafter\endgroup
7765 \expandafter\ifx\csname SK@@label\endcsname\relax
7766 \else
7767 \ifx\SK@ref\@empty
7768 \else
7769 \def\HyRef@ShowKeysRef{%
7770 \SK@\SK@@ref
7771 }%
7772 \fi
7773 \fi
7774 }
7775 \@ifpackageloaded{showkeys}{%

```

```

7776 \HyRef@ShowKeysInit
7777 }{%
7778 \Hy@AtBeginDocument{%
7779 \ifpackageloaded{showkeys}{%
7780 \HyRef@ShowKeysInit
7781 }{}%
7782 }%
7783 }

```

Defaults for the names that \autoref uses.

```

7784 \providecommand*\AMSautorefname{\equationautorefname}
7785 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7786 \providecommand*\Itemautorefname{\itemautorefname}
7787 \providecommand*\itemautorefname{item}
7788 \providecommand*\equationautorefname{Equation}
7789 \providecommand*\footnoteautorefname{footnote}
7790 \providecommand*\itemautorefname{item}
7791 \providecommand*\figureautorefname{Figure}
7792 \providecommand*\tableautorefname{Table}
7793 \providecommand*\partautorefname{Part}
7794 \providecommand*\appendixautorefname{Appendix}
7795 \providecommand*\chapterautorefname{chapter}
7796 \providecommand*\sectionautorefname{section}
7797 \providecommand*\subsectionautorefname{subsection}
7798 \providecommand*\subsubsectionautorefname{subsubsection}
7799 \providecommand*\paragraphautorefname{paragraph}
7800 \providecommand*\subparagraphautorefname{subparagraph}
7801 \providecommand*\FancyVerbLineautorefname{line}
7802 \providecommand*\theoremautorefname{Theorem}
7803 \providecommand*\pageautorefname{page}
7804 </package>

```

46 Configuration files

46.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

\Hy@pstringdef Therefore such strings should be passed through \Hy@pstringdef. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_T_EX offers \pdfescapestring.

```

7805 <*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7806 \RequirePackage{pdfTEXcmds}[2009/04/10]
7807 \begingroup\expandafter\expandafter\expandafter\endgroup
7808 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7809 \begingroup
7810 \catcode'\| =0 %
7811 \@makeother\| %
7812 |@firstofone{| \endgroup
7813 |def|Hy@pstringdef#1#2{%
7814 | \begingroup
7815 |edef~{|string~}%
7816 |xdef|Hy@gtemp{#2}%
7817 | \endgroup

```

```

7818 |let#1|Hy@gtemp
7819 |@onelevel@sanitize#1%
7820 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7821 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7822 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7823 }%
7824 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7825 #1%
7826 |ifx|\#2|\%%
7827 |else
7828 \\\%
7829 |Hy@ReturnAfterFi{%
7830 |Hy@ExchangeBackslash#2|@nil
7831 }%
7832 |fi
7833 }%
7834 }%
7835 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7836 #1%
7837 \ifx\#2\%%
7838 \else
7839 \@backslashchar{%
7840 \Hy@ReturnAfterFi{%
7841 \Hy@ExchangeLeftParenthesis#2\@nil
7842 }%
7843 \fi
7844 }%
7845 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7846 #1%
7847 \ifx\#2\%%
7848 \else
7849 \@backslashchar{%
7850 \Hy@ReturnAfterFi{%
7851 \Hy@ExchangeRightParenthesis#2\@nil
7852 }%
7853 \fi
7854 }%
7855 \else
7856 \def\Hy@pstringdef#1#2{%
7857 \begingroup
7858 \edef~{\string~}%
7859 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7860 \endgroup
7861 \let#1\Hy@gtemp
7862 }%
7863 \fi
7864 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)

```

46.2 pdfTeX

```

7865 <*pdfTeX>
7866 \providecommand*{\XR@ext}{pdf}
7867 \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`.

- pdfTeX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfTeX 1.30, 2005-08-08: \pdfminorversion

```

7868 \let\Hy@pdfminorversion\relax
7869 \begingroup\expandafter\expandafter\expandafter\endgroup
7870 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7871 \begingroup\expandafter\expandafter\expandafter\endgroup
7872 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7873 \else
7874 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7875 \fi
7876 \else
7877 \def\Hy@pdfminorversion{\pdfminorversion}%
7878 \fi
7879 \@ifundefined{Hy@pdfminorversion}{%
7880 \PackageInfo{hyperref}{%
7881 PDF version is not set, because pdfTeX is too old (<1.10a)%
7882 }%
7883 }{%
7884 \ifHy@ocgcolorlinks
7885 \ifnum\Hy@pdfminorversion<5 %
7886 \setkeys{Hyp}{pdfversion=1.5}%
7887 \fi
7888 \fi
7889 \ifHy@setpdfversion
7890 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7891 \else
7892 \Hy@pdfminorversion=\Hy@pdfversion\relax
7893 \fi
7894 \PackageInfo{hyperref}{%
7895 \expandafter\string\Hy@pdfminorversion
7896 :=\number\Hy@pdfversion\space
7897 }%
7898 \fi
7899 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7900 }
7901 \Hy@DisableOption{pdfversion}%
7902 \ifHy@ocgcolorlinks
7903 \immediate\pdfobj{%
7904 <<%
7905 /Type/OCG%
7906 /Name(View)%
7907 /Usage<<%
7908 /Print<<%
7909 /PrintState/OFF%
7910 >>%
7911 /View<<%
7912 /ViewState/ON%
7913 >>%
7914 >>%
7915 >>%
7916 }%
7917 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7918 \immediate\pdfobj{%
7919 <<%
7920 /Type/OCG%
7921 /Name(Print)%

```

```

7922     /Usage<<%
7923     /Print<<%
7924     /PrintState/ON%
7925     >>%
7926     /View<<%
7927     /ViewState/OFF%
7928     >>%
7929     >>%
7930     >>%
7931 }%
7932 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
7933 \immediate\pdfobj{%
7934 [%
7935   \OBJ@OCG@view\space\OBJ@OCG@print
7936 ]%
7937 }%
7938 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
7939 \pdfcatalog{%
7940   /OCProperties<<%
7941   /OCGs \OBJ@OCGs
7942   /D<<%
7943   /OFF[\OBJ@OCG@print]%
7944   /AS[%
7945     <<%
7946     /Event/View%
7947     /OCGs \OBJ@OCGs
7948     /Category[/View]%
7949     >>%
7950     <<%
7951     /Event/Print%
7952     /OCGs \OBJ@OCGs
7953     /Category[/Print]%
7954     >>%
7955     <<%
7956     /Event/Export%
7957     /OCGs \OBJ@OCGs
7958     /Category[/Print]%
7959     >>%
7960   ]%
7961   >>%
7962   >>%
7963 }%
7964 \begingroup
7965 \edef\x{\endgroup
7966 \pdfpageresources{%
7967   /Properties<<%
7968   /OCView \OBJ@OCG@view
7969   /OCPrint \OBJ@OCG@print
7970   >>%
7971 }%
7972 }%
7973 \x
7974 \Hy@AtBeginDocument{%
7975   \def\Hy@colorlink#1{%
7976     \begingroup
7977     \ifHy@ocgcolorlinks
7978       \def\Hy@ocgcolor{#1}%

```

```

7979     \setbox0=\color@hbox
7980     \else
7981     \HyColor@UseColor#1%
7982     \fi
7983 }%
7984 \def\Hy@endcolorlink{%
7985     \ifHy@ocgcolorlinks
7986     \color@endbox
7987     \mbox{%
7988         \pdfliteral page{/OC/OCPrint BDC}%
7989         \rlap{\copy0}%
7990         \pdfliteral page{EMC/OC/OCView BDC}%
7991         \begingroup
7992         \expandafter\HyColor@UseColor\Hy@ocgcolor
7993         \box0 %
7994         \endgroup
7995         \pdfliteral page{EMC}%
7996     }%
7997     \fi
7998     \endgroup
7999 }%
8000 }%
8001 \else
8002 \Hy@DisableOption{ocgcolorlinks}%
8003 \fi

```

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

```

8004 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8005 \ifx\pdfstartlink\@undefined% less than version 14
8006 \let\pdfstartlink\pdfannotlink
8007 \let\pdfinkmargin\@tempdima
8008 \let\pdfxform\pdfform
8009 \let\pdflastxform\pdfastform
8010 \let\pdfrefxform\pdfrefform
8011 \else
8012 \pdfinkmargin1pt %
8013 \fi

```

First set up the default linking

```
8014 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8015 \def\new@pdfink#1{%
8016     \Hy@SaveLastskip
8017     \Hy@VerboseAnchor{#1}%
8018     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8019     \Hy@DestName\Hy@pstringDest\@pdfview
8020     \Hy@RestoreLastskip
8021 }
8022 \let\pdf@endanchor\@empty

```

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

```

8023 \def\Hy@DestName#1#2{%
8024     \pdfdest name{#1}#2\relax
8025 }

```

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.

```

8026 \providecommand*\@pdfborder{0 0 1}
8027 \providecommand*\@pdfborderstyle{}
8028 \def\Hy@undefinedname{UNDEFINED}
8029 \def\find@pdflink#1#2{%
8030   \leavevmode
8031   \protected@edef\Hy@testname{#2}%
8032   \ifx\Hy@testname\@empty
8033     \Hy@Warning{%
8034       Empty destination name,\MessageBreak
8035       using '\Hy@undefinedname'%
8036     }%
8037   \let\Hy@testname\Hy@undefinedname
8038   \else
8039     \Hy@pstringdef\Hy@testname{%
8040       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8041     }%
8042   \fi
8043   \Hy@StartlinkName{%
8044     \ifHy@pdfa /F 4\fi
8045     \Hy@setpdfborder
8046     \ifx\@pdfhighlight\@empty
8047       \else
8048         /H\@pdfhighlight
8049       \fi
8050     \ifx\CurrentBorderColor\relax
8051       \else
8052         /C[\CurrentBorderColor]%
8053       \fi
8054   }\Hy@testname
8055   \expandafter\Hy@colorlink\csname @#1color\endcsname
8056 }
8057 \def\Hy@StartlinkName#1#2{%
8058   \pdfstartlink attr{#1}goto name{#2}\relax
8059 }
8060 \def\close@pdflink{%
8061   \Hy@endcolorlink
8062   \Hy@VerboseLinkStop
8063   \pdfendlink
8064 }
8065 \def\hyper@anchor#1{%
8066   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8067 }
8068 \def\hyper@anchorstart#1{%
8069   \new@pdflink{#1}%
8070   \Hy@activeanchortrue
8071 }
8072 \def\hyper@anchorend{%
8073   \pdf@endanchor
8074   \Hy@activeanchorfalse
8075 }
8076 \def\hyper@linkstart#1#2{%
8077   \Hy@VerboseLinkStart{#1}{#2}%
8078   \ltx@ifundefined{@#1bordercolor}{%
8079     \let\CurrentBorderColor\relax
8080   }{%

```

```

8081 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8082 }%
8083 \find@pdfink{#1}{#2}%
8084 }
8085 \def\hyper@linkend{\close@pdfink}
8086 \def\hyper@link#1#2#3{%
8087 \Hy@VerboseLinkStart{#1}{#2}%
8088 \ltx@ifundefined{@#1bordercolor}{%
8089 \let\CurrentBorderColor\relax
8090 }{%
8091 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8092 }%
8093 \find@pdfink{#1}{#2}#3%
8094 \close@pdfink
8095 }
8096 \let\CurrentBorderColor\@linkbordercolor
8097 \def\hyper@linkurl#1#2{%
8098 \begingroup
8099 \Hy@pstringdef\Hy@pstringURI{#2}%
8100 \hyper@chars
8101 \leavevmode
8102 \pdfstartlink
8103 attr{%
8104 \Hy@setpdfborder
8105 \ifx\@pdfhighlight\@empty
8106 \else
8107 /H\@pdfhighlight
8108 \fi
8109 \ifx\@urlbordercolor\relax
8110 \else
8111 /C[\@urlbordercolor]%
8112 \fi
8113 }%
8114 user{%
8115 /Subtype/Link%
8116 \ifHy@pdfa /F 4\fi
8117 /A<<%
8118 /Type/Action%
8119 /S/URI%
8120 /URI(\Hy@pstringURI)%
8121 >>%
8122 }%
8123 \relax
8124 \Hy@colorlink\@urlcolor#1%
8125 \close@pdfink
8126 \endgroup
8127 }
8128 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8129 \begingroup
8130 \Hy@pstringdef\Hy@pstringF{#2}%
8131 \Hy@pstringdef\Hy@pstringD{#3}%
8132 \leavevmode
8133 \pdfstartlink
8134 attr{%
8135 \Hy@setpdfborder
8136 \ifx\@pdfhighlight\@empty
8137 \else

```

```

8138      /H\@pdfhighlight
8139      \fi
8140      \ifx\@filebordercolor\relax
8141      \else
8142      /C[\@filebordercolor]%
8143      \fi
8144      }%
8145      user {%
8146      /Subtype/Link%
8147      \ifHy@pdfa /F 4\fi
8148      /A<<%
8149      /F(\Hy@pstringF)%
8150      /S/GoToR%
8151      \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}

```

```

8152      \ifx\#3\%
8153      /D[0 \@pdfstartview]%
8154      \else
8155      /D(\Hy@pstringD)%
8156      \fi
8157      >>%
8158      }%
8159      \relax
8160      \Hy@colorlink\@filecolor#1%
8161      \close@pdfink
8162      \endgroup
8163      }
8164      \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8165      \begingroup
8166      \Hy@pstringdef\Hy@pstringF{#1}%
8167      \Hy@pstringdef\Hy@pstringP{#3}%
8168      \leavevmode
8169      \pdfstartlink
8170      attr{%
8171      \Hy@setpdfborder
8172      \ifx\@pdfhighlight\@empty
8173      \else
8174      /H\@pdfhighlight
8175      \fi
8176      \ifx\@runbordercolor\relax
8177      \else
8178      /C[\@runbordercolor]%
8179      \fi
8180      }%
8181      user {%
8182      /Subtype/Link%
8183      \ifHy@pdfa /F 4\fi

```

```

8184      /A<<%
8185      /F(\Hy@pstringF)%
8186      /S/Launch%
8187      \Hy@SetNewWindow
8188      \ifx\#3\%
8189      \else
8190      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8191      \fi
8192      >>%
8193      }%
8194      \relax
8195      \Hy@colorlink\@runcolor#2%
8196      \close@pdflink
8197      \endgroup
8198      }

```

\@pdfproducer

```

8199 \ifx\@pdfproducer\relax
8200 \begingroup\expandafter\expandafter\expandafter\endgroup
8201 \expandafter\ifx\csname luatexversion\endcsname\relax
8202 \def\@pdfproducer{pdfTeX}%
8203 \ifx\eTeXversion\@undefined
8204 \else
8205 \ifx\eTeXversion\relax
8206 \else
8207 \ifnum\eTeXversion>0 %
8208 \def\@pdfproducer{pdfTeX}%
8209 \fi
8210 \fi
8211 \fi
8212 \ifx\pdfTeXversion\@undefined
8213 \else
8214 \ifnum\pdfTeXversion<100 %
8215 \edef\@pdfproducer{%
8216 \@pdfproducer
8217 \the\pdfTeXversion.\pdfTeXrevision
8218 }%
8219 \else
8220 \ifnum\pdfTeXversion<130 %
8221 \edef\@pdfproducer{%
8222 \@pdfproducer-%
8223 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8224 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8225 \pdfTeXrevision
8226 }%
8227 \else
8228 \ifnum\pdfTeXversion<140 %
8229 \else
8230 \def\@pdfproducer{pdfTeX}%
8231 \fi
8232 \edef\@pdfproducer{%
8233 \@pdfproducer-%
8234 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8235 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8236 \pdfTeXrevision
8237 }%
8238 \fi

```

```

8239 \fi
8240 \fi
8241 \else
8242 \begingroup
8243 \count@=\luatexversion
8244 \divide\count@ by 100 %
8245 \edef\x{\the\count@}%
8246 \count@=-\x\relax
8247 \multiply\count@ by 100 %
8248 \advance\count@ by \luatexversion
8249 \edef\x{\endgroup
8250 \def\noexpand\@pdfproducer{%
8251 LuaTeX-\x.\the\count@.\luatexrevision
8252 }%
8253 }%
8254 \x
8255 \fi
8256 \fi

```

\PDF@SetupDox

```

8257 \def\PDF@SetupDoc{%
8258 \ifx\@pdfpagescrop\@empty
8259 \else
8260 \edef\process@me{%
8261 \pdfpagesattr={%
8262 /CropBox[\@pdfpagescrop]%
8263 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8264 \else
8265 ~J\the\pdfpagesattr
8266 \fi
8267 }%
8268 }%
8269 \process@me
8270 \fi
8271 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8272 \pdfcatalog{%
8273 /PageMode/\@pdfpagemode
8274 \ifx\@baseurl\@empty
8275 \else
8276 /URI<</Base(\Hy@pstringB)>>%
8277 \fi
8278 }%
8279 \ifx\@pdfstartpage\@empty
8280 \else
8281 \ifx\@pdfstartview\@empty
8282 \else
8283 openaction goto page\@pdfstartpage{\@pdfstartview}%
8284 \fi
8285 \fi
8286 \edef\Hy@temp{%
8287 \ifHy@toolbar\else /HideToolbar true\fi
8288 \ifHy@menubar\else /HideMenubar true\fi
8289 \ifHy>windowui\else /HideWindowUI true\fi
8290 \ifHy@fitwindow /FitWindow true\fi
8291 \ifHy@centerwindow /CenterWindow true\fi
8292 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8293 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

8294 \Hy@UseNameKey{Direction}\@pdfdirection
8295 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8296 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8297 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8298 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8299 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8300 \Hy@UseNameKey{Duplex}\@pdfduplex
8301 \ifx\@pdfpicktraybypdfsize\@empty
8302 \else
8303 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8304 \fi
8305 \ifx\@pdfprintpagerange\@empty
8306 \else
8307 /PrintPageRange[\@pdfprintpagerange]%
8308 \fi
8309 \ifx\@pdfnumcopies\@empty
8310 \else
8311 /NumCopies \@pdfnumcopies
8312 \fi
8313 }%
8314 \pdfcatalog{%
8315 \ifx\Hy@temp\@empty
8316 \else
8317 /ViewerPreferences<<\Hy@temp>>%
8318 \fi
8319 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8320 \ifx\@pdflang\@empty
8321 \else
8322 /Lang(\@pdflang)%
8323 \fi
8324 }%
8325 }

```

\PDF@FinishDoc

```

8326 \def\PDF@FinishDoc{%
8327 \Hy@UseMaketitleInfos
8328 \HyInfo@GenerateAddons
8329 \pdfinfo{%
8330 /Author(\@pdfauthor)%
8331 /Title(\@pdftitle)%
8332 /Subject(\@pdfsubject)%
8333 /Creator(\@pdfcreator)%
8334 \ifx\@pdfcreationdate\@empty
8335 \else
8336 /CreationDate(\@pdfcreationdate)%
8337 \fi
8338 \ifx\@pdfmoddate\@empty
8339 \else
8340 /ModDate(\@pdfmoddate)%
8341 \fi
8342 \ifx\@pdfproducer\relax
8343 \else
8344 /Producer(\@pdfproducer)%
8345 \fi
8346 /Keywords(\@pdfkeywords)%
8347 \ifx\@pdftrapped\@empty
8348 \else

```

```

8349 /Trapped/\@pdftrapped
8350 \fi
8351 \HyInfo@Addons
8352 }%
8353 \Hy@DisableOption{pdfauthor}%
8354 \Hy@DisableOption{pdftitle}%
8355 \Hy@DisableOption{pdfsubject}%
8356 \Hy@DisableOption{pdfcreator}%
8357 \Hy@DisableOption{pdfcreationdate}%
8358 \Hy@DisableOption{pdfmoddate}%
8359 \Hy@DisableOption{pdfproducer}%
8360 \Hy@DisableOption{pdfkeywords}%
8361 \Hy@DisableOption{pdftrapped}%
8362 \Hy@DisableOption{pdfinfo}%
8363 }

```

`\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`.

```

8364 \def\hyper@pagetransition{%
8365 \ifx\@pdfpagetransition\relax
8366 \else
8367 \expandafter\Hy@RemoveTransPageAttr
8368 \the\pdfpageattr^^J/Trans{}}>>\END
8369 \ifx\@pdfpagetransition\@empty
8370 \else
8371 \edef\@processme{%
8372 \global\pdfpageattr{%
8373 \the\pdfpageattr
8374 ^^J/Trans << /S /\@pdfpagetransition\space >>%
8375 }%
8376 }%
8377 \@processme
8378 \fi
8379 \fi
8380 }

```

`\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.

```

8381 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8382 \ifx\\#2\\%
8383 \global\pdfpageattr{#1}%
8384 \else
8385 \Hy@RemoveTransPageAttr#1#4\END
8386 \fi
8387 }

```

`\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`.

```

8388 \def\hyper@pageduration{%
8389 \ifx\@pdfpageduration\relax
8390 \else
8391 \expandafter
8392 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{}} \END

```

```

8393 \ifx\@pdfpageduration\@empty
8394 \else
8395 \edef\@processme{%
8396 \global\pdfpageattr{%
8397 \the\pdfpageattr
8398 ^^J/Dur \@pdfpageduration\space
8399 }%
8400 }%
8401 \@processme
8402 \fi
8403 \fi
8404 }

```

`\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.

```

8405 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8406 \ifx\#2\%
8407 \global\pdfpageattr{#1}%
8408 \else
8409 \Hy@RemoveDurPageAttr#1#4\END
8410 \fi
8411 }

```

`\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).

```

8412 \def\hyper@pagehidden{%
8413 \ifHy@useHidKey
8414 \expandafter
8415 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8416 \ifHy@pdfpagehidden
8417 \edef\@processme{%
8418 \global\pdfpageattr{%
8419 \the\pdfpageattr
8420 ^^J/Hid true % SPACE
8421 }%
8422 }%
8423 \@processme
8424 \fi
8425 \fi
8426 }

```

`\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.

```

8427 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8428 \ifx\#2\%
8429 \global\pdfpageattr{#1}%
8430 \else
8431 \Hy@RemoveHidPageAttr#1#4\END
8432 \fi
8433 }

```

```

8434 \g@addto@macro\Hy@EveryPageHook{%

```

```

8435 \hyper@pagetransition
8436 \hyper@pageduration
8437 \hyper@pagehidden
8438 }

```

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

```

8439 </pdfTeX>
8440 <*pdfTeX | xetex>
8441 \Hy@AtBeginDocument{%
8442   \ifHy@setpagesize
8443     \expandafter\@firstofone
8444   \else
8445     \expandafter\@gobble
8446   \fi
8447   {%
8448     \@ifclassloaded{seminar}{%
8449 <*pdfTeX>
8450   \setlength{\pdfhorigin}{1truein}%
8451   \setlength{\pdfvorigin}{1truein}%
8452 </pdfTeX>
8453   \ifportrait
8454     \ifdim\paperwidth=\z@
8455     \else
8456       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8457     \fi
8458     \ifdim\paperheight=\z@
8459     \else
8460       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8461     \fi
8462   \else
8463     \ifdim\paperheight=\z@
8464     \else
8465       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8466     \fi
8467     \ifdim\paperwidth=\z@
8468     \else
8469       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8470     \fi
8471   \fi
8472 }{%
8473   \ltx@ifundefined{stockwidth}{%
8474     \ifdim\paperwidth>\z@
8475       \setlength{\pdfpagewidth}{\paperwidth}%
8476     \fi
8477     \ifdim\paperheight>\z@
8478       \setlength{\pdfpageheight}{\paperheight}%
8479     \fi
8480   }{%
8481     \ifdim\stockwidth>\z@
8482       \setlength{\pdfpagewidth}{\stockwidth}%
8483     \fi
8484     \ifdim\stockheight>\z@
8485       \setlength{\pdfpageheight}{\stockheight}%
8486     \fi
8487   }%
8488 }%
8489 }%

```

```

8490 \Hy@DisableOption{setpagesize}%
8491 }
8492 </pdfTeX | xetex>
8493 <*pdfTeX>
8494 \def\Acrobatmenu#1#2{%
8495 \Hy@Acrobatmenu{#1}{#2}{%
8496 \pdfstartlink
8497 attr{%
8498 \Hy@setpdfborder
8499 \ifx\@pdfhighlight\@empty
8500 \else
8501 /H\@pdfhighlight
8502 \fi
8503 \ifx\@menubordercolor\relax
8504 \else
8505 /C[\@menubordercolor]%
8506 \fi
8507 }%
8508 user{%
8509 /Subtype/Link%
8510 \ifHy@pdfa /F 4\fi
8511 /A<<%
8512 /S/Named/N/#1%
8513 >>%
8514 }%
8515 \relax
8516 \Hy@colorlink\@menucolor#2%
8517 \close@pdflink
8518 }%
8519 }

```

46.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

```

8520 \def\Hy@FixNotFirstPage{%
8521 \gdef\Hy@FixNotFirstPage{%
8522 \setbox\AtBeginShipoutBox=\hbox{%
8523 \copy\AtBeginShipoutBox
8524 }%
8525 }%
8526 }
8527 \AtBeginShipout{\Hy@FixNotFirstPage}
8528 </pdfTeX>

```

46.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the \TeX file — the \TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form href="#name_string" with the *name_string* identical to the one in the name command) or as part of a URL (of the form URL#name_string). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```
8529 \*hypertext
8530 \providecommand*\XR@ext}{dvi}
8531 \def\PDF@FinishDoc{}
8532 \def\PDF@SetupDoc{%
8533   \ifx\@baseurl\@empty
8534   \else
8535     \special{html:<base href="\@baseurl">}%
8536   \fi
8537 }
8538 \def\hyper@anchor#1{%
8539   \Hy@SaveLastskip
8540   \Hy@VerboseAnchor{#1}%
8541   \begingroup
8542     \let\protect=\string
8543     \hyper@chars
8544     \special{html:<a name=%
8545       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8546   \endgroup
8547   \Hy@activeanchortrue
8548   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8549   \special{html:</a>}%
8550   \Hy@activeanchorfalse
8551   \Hy@RestoreLastskip
8552 }
8553 \def\hyper@anchorstart#1{%
8554   \Hy@SaveLastskip
8555   \Hy@VerboseAnchor{#1}%
8556   \begingroup
8557     \hyper@chars
8558     \special{html:<a name=%
8559       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8560   \endgroup
```

```

8561 \Hy@activeanchortrue
8562 }
8563 \def\hyper@anchorend{%
8564 \special{html:</a>}%
8565 \Hy@activeanchorfalse
8566 \Hy@RestoreLastskip
8567 }
8568 \def\@urltype{url}
8569 \def\hyper@linkstart#1#2{%
8570 \Hy@VerboseLinkStart{#1}{#2}%
8571 \expandafter\Hy@colorlink\csname @#1color\endcsname
8572 \def\Hy@tempa{#1}%
8573 \ifx\Hy@tempa\@urltype
8574 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8575 \else
8576 \begingroup
8577 \hyper@chars
8578 \special{html:<a href=%
8579 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
8580 \endgroup
8581 \fi
8582 }
8583 \def\hyper@linkend{%
8584 \special{html:</a>}%
8585 \Hy@endcolorlink
8586 }
8587 \def\hyper@linkfile#1#2#3{%
8588 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8589 }
8590 \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.

```

8591 \leavevmode
8592 \ifHy@raiselinks
8593 \setbox\@tempboxa=\color@hbox #1\color@endbox
8594 \@linkdim\dp\@tempboxa
8595 \lower\@linkdim\hbox{%
8596 \hyper@chars
8597 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8598 }%
8599 \Hy@colorlink\@urlcolor#1%
8600 \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvihps` processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new `dvips` (Jan 1997).

```

8601 \advance\@linkdim by -6.5\p@
8602 \raise\@linkdim\hbox{\special{html:</a>}}%
8603 \Hy@endcolorlink
8604 \else
8605 \begingroup
8606 \hyper@chars
8607 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8608 \Hy@colorlink\@urlcolor#1%
8609 \special{html:</a>}%
8610 \Hy@endcolorlink
8611 \endgroup

```

```
8612 \fi
8613 }
```

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

```
8614 \def\hyper@link#1#2#3{%
8615 \Hy@VerboseLinkStart{#1}{#2}%
8616 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
8617 }

8618 \def\hyper@image#1#2{%
8619 \begingroup
8620 \hyper@chars
8621 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8622 \endgroup
8623 }
8624 \</hypertex>
8625 \<*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, L^AT_EX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```
8626 \providecommand*\XR@ext{-}{dvi}
8627 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8628 \def\hyper@anchor#1{%
8629 \Hy@SaveLastskip
8630 \Hy@VerboseAnchor{#1}%
8631 \begingroup
8632 \let\protect=\string
8633 \special{mark: #1}%
8634 \endgroup
8635 \Hy@activeanchortrue
8636 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8637 \Hy@activeanchorfalse
8638 \Hy@RestoreLastskip
8639 }
8640 \def\hyper@anchorstart#1{%
8641 \Hy@SaveLastskip
8642 \Hy@VerboseAnchor{#1}%
8643 \special{mark: #1}%
8644 \Hy@activeanchortrue
8645 }
8646 \def\hyper@anchorend{%
8647 \Hy@activeanchorfalse
8648 \Hy@RestoreLastskip
8649 }
8650 \def\hyper@linkstart#1#2{%
8651 \Hy@VerboseLinkStart{#1}{#2}%
8652 \expandafter\Hy@colorlink\csname @#1color\endcsname
```

```

8653 \special{button: %
8654 10000000 %
8655 \number\baselineskip\space
8656 #2%
8657 }%
8658 }
8659 \def\hyper@linkend{%
8660 \Hy@endcolorlink
8661 }
8662 \def\hyper@link#1#2#3{%
8663 \Hy@VerboseLinkStart{#1}{#2}%
8664 \setbox\@tempboxa=\color@hbox #3\color@endbox
8665 \leavevmode
8666 \ifHy@raiselinks
8667 \@linkdim\dp\@tempboxa
8668 \lower\@linkdim\hbox{%
8669 \special{button: %
8670 \number\wd\@tempboxa\space
8671 \number\ht\@tempboxa\space
8672 #2%
8673 }%
8674 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8675 \Hy@endcolorlink
8676 }%
8677 \@linkdim\ht\@tempboxa
8678 \advance\@linkdim by -6.5\p@
8679 \raise\@linkdim\hbox{}}%
8680 \else
8681 \special{button: %
8682 \number\wd\@tempboxa\space
8683 \number\ht\@tempboxa\space
8684 #2%
8685 }%
8686 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8687 \Hy@endcolorlink
8688 \fi
8689 }
8690 \def\hyper@linkurl#1#2{%
8691 \begingroup
8692 \hyper@chars
8693 \leavevmode
8694 \setbox\@tempboxa=\color@hbox #1\color@endbox
8695 \ifHy@raiselinks
8696 \@linkdim\dp\@tempboxa
8697 \lower\@linkdim\hbox{%
8698 \special{button: %
8699 \number\wd\@tempboxa\space
8700 \number\ht\@tempboxa\space
8701 launch: \wwwbrowser\space
8702 #2%
8703 }%
8704 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8705 }%
8706 \@linkdim\ht\@tempboxa
8707 \advance\@linkdim by -6.5\p@
8708 \raise\@linkdim\hbox{}}%
8709 \else

```

```

8710 \special{button: %
8711 \number\wd\@tempboxa\space
8712 \number\ht\@tempboxa\space
8713 launch: \wwwbrowser\space
8714 #2%
8715 }%
8716 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8717 \fi
8718 \endgroup
8719 }
8720 \def\hyper@linkfile#1#2#3{%
8721 \begingroup
8722 \hyper@chars
8723 \leavevmode
8724 \setbox\@tempboxa=\color@hbox #1\color@endbox
8725 \ifHy@raiselinks
8726 \@linkdim\dp\@tempboxa
8727 \lower\@linkdim\hbox{%
8728 \special{button: %
8729 \number\wd\@tempboxa\space
8730 \number\ht\@tempboxa\space
8731 #3,%
8732 file: #2%
8733 }%
8734 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8735 }%
8736 \@linkdim\ht\@tempboxa
8737 \advance\@linkdim by -6.5\p@
8738 \raise\@linkdim\hbox{}}%
8739 \else
8740 \special{button: %
8741 \number\wd\@tempboxa\space
8742 \number\ht\@tempboxa\space
8743 #3,%
8744 file: #2%
8745 }%
8746 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8747 \fi
8748 \endgroup
8749 }
8750 \ifx\@pdfproducer\relax
8751 \def\@pdfproducer{dviwindo + Distiller}%
8752 \fi
8753 \HyInfo@AddonUnsupportedtrue
8754 \def\PDF@FinishDoc{%
8755 \Hy@UseMaketitleInfos
8756 \HyInfo@TrappedUnsupported
8757 \special{PDF: Keywords \@pdfkeywords}%
8758 \special{PDF: Title \@pdftitle}%
8759 \special{PDF: Creator \@pdfcreator}%
8760 \ifx\@pdfcreationdate\@empty
8761 \else
8762 \special{PDF: CreationDate \@pdfcreationdate}%
8763 \fi
8764 \ifx\@pdfmoddate\@empty
8765 \else
8766 \special{PDF: ModDate \@pdfmoddate}%

```

```

8767 \fi
8768 \special{PDF: Author \@pdfauthor}%
8769 \ifx\@pdfproducer\relax
8770 \else
8771 \special{PDF: Producer \@pdfproducer}%
8772 \fi
8773 \special{PDF: Subject \@pdfsubject}%
8774 \Hy@DisableOption{pdfauthor}%
8775 \Hy@DisableOption{pdftitle}%
8776 \Hy@DisableOption{pdfsubject}%
8777 \Hy@DisableOption{pdfcreator}%
8778 \Hy@DisableOption{pdfcreationdate}%
8779 \Hy@DisableOption{pdfmoddate}%
8780 \Hy@DisableOption{pdfproducer}%
8781 \Hy@DisableOption{pdfkeywords}%
8782 \Hy@DisableOption{pdftrapped}%
8783 \Hy@DisableOption{pdfinfo}%
8784 }
8785 \def\PDF@SetupDoc{%
8786 \ifx\@baseurl\@empty
8787 \else
8788 \special{PDF: Base \@baseurl}%
8789 \fi
8790 \ifx\@pdfpagescrop\@empty\else
8791 \special{PDF: BBox \@pdfpagescrop}%
8792 \fi
8793 \def\Hy@temp{%
8794 \ifx\@pdfstartpage\@empty
8795 \else
8796 \ifx\@pdfstartview\@empty
8797 \else
8798 \edef\Hy@temp{%
8799 ,Page=\@pdfstartpage
8800 ,View=\@pdfstartview
8801 }%
8802 \fi
8803 \fi
8804 \edef\Hy@temp{%
8805 \noexpand\pdfmark{%
8806 pdfmark=/DOCVIEW,%
8807 PageMode=/\@pdfpagemode
8808 \Hy@temp
8809 }%
8810 }%
8811 \Hy@temp
8812 \ifx\@pdfpagescrop\@empty
8813 \else
8814 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8815 \fi
8816 \edef\Hy@temp{%
8817 \ifHy@toolbar\else /HideToolbar true\fi
8818 \ifHy@menubar\else /HideMenubar true\fi
8819 \ifHy>windowui\else /HideWindowUI true\fi
8820 \ifHy@fitwindow /FitWindow true\fi
8821 \ifHy@centerwindow /CenterWindow true\fi
8822 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8823 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

8824 \Hy@UseNameKey{Direction}\@pdfdirection
8825 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8826 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8827 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8828 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8829 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8830 \Hy@UseNameKey{Duplex}\@pdfduplex
8831 \ifx\@pdfpicktraybypdfsize\@empty
8832 \else
8833 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8834 \fi
8835 \ifx\@pdfprintpagerange\@empty
8836 \else
8837 /PrintPageRange[\@pdfprintpagerange]%
8838 \fi
8839 \ifx\@pdfnumcopies\@empty
8840 \else
8841 /NumCopies \@pdfnumcopies
8842 \fi
8843 }%
8844 \pdfmark{pdfmark=/PUT,%
8845 Raw={%
8846 \string{Catalog\string}<<%
8847 \ifx\Hy@temp\@empty
8848 \else
8849 /ViewerPreferences<<\Hy@temp>>%
8850 \fi
8851 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8852 \ifx\@pdflang\@empty
8853 \else
8854 /Lang(\@pdflang)%
8855 \fi
8856 >>%
8857 }%
8858 }%
8859 }
8860 </dviwindo>
8861 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8862 \providecommand*{\XR@ext}{pdf}
8863 \Hy@setbreaklinks{true}
8864 \newsavebox{\pdfm@box}
8865 \def\@pdfm@mark#1{\special{pdf:#1}}
8866 \def\@pdfm@dest#1{%
8867 \Hy@SaveLastskip
8868 \Hy@VerboseAnchor{#1}%
8869 \begingroup
8870 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8871 \def\x{XYZ}%
8872 \ifx\x\@pdfview
8873 \def\x{XYZ @xpos @ypos null}%
8874 \else
8875 \def\x{FitH}%
8876 \ifx\x\@pdfview

```

```

8877     \def\x{FitH @ypos}%
8878     \else
8879     \def\x{FitBH}%
8880     \ifx\x\@pdfview
8881     \def\x{FitBH @ypos}%
8882     \else
8883     \def\x{FitV}%
8884     \ifx\x\@pdfview
8885     \def\x{FitV @xpos}%
8886     \else
8887     \def\x{FitBV}%
8888     \ifx\x\@pdfview
8889     \def\x{FitBV @xpos}%
8890     \else
8891     \def\x{Fit}%
8892     \ifx\x\@pdfview
8893     \let\x\@pdfview
8894     \else
8895     \def\x{FitB}%
8896     \ifx\x\@pdfview
8897     \let\x\@pdfview
8898     \else
8899     \def\x{FitR}%
8900     \ifx\x\@pdfview
8901     \Hy@Warning{'pdfview=FitR' is not supported}%
8902     \def\x{XYZ @xpos @ypos null}%
8903     \else
8904     \@onelevel@sanitize\@pdfview
8905     \Hy@Warning{%
8906       Unknown value '\@pdfview' for pdfview%
8907     }%
8908     \def\x{XYZ @xpos @ypos null}%
8909     \fi
8910     \fi
8911     \fi
8912     \fi
8913     \fi
8914     \fi
8915     \fi
8916     \fi
8917     \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8918 \endgroup
8919 \Hy@RestoreLastskip
8920 }
8921 \providecommand*\@pdfview{XYZ}
8922 \providecommand*\@pdfborder{0 0 1}
8923 \providecommand*\@pdfborderstyle{}
8924 \def\hyper@anchor#1{%
8925   \@pdfm@dest{#1}%
8926 }
8927 \def\hyper@anchorstart#1{%
8928   \Hy@activeanchortrue
8929   \@pdfm@dest{#1}%
8930 }
8931 \def\hyper@anchorend{%
8932   \Hy@activeanchorfalse
8933 }

```

```

8934 \newcounter{Hy@AnnotLevel}
8935 \ifHy@ocgcolorlinks
8936 \def\OBJ@OCG@view{@OCG@view}%
8937 \@pdfm@mark{%
8938   obj \OBJ@OCG@view <<%
8939     /Type/OCG%
8940     /Name(View)%
8941     /Usage<<%
8942     /Print<<%
8943     /PrintState/OFF%
8944     >>%
8945     /View<<%
8946     /ViewState/ON%
8947     >>%
8948     >>%
8949     >>%
8950   }%
8951 \@pdfm@mark{close \OBJ@OCG@view}%
8952 \def\OBJ@OCG@print{@OCG@print}%
8953 \@pdfm@mark{%
8954   obj \OBJ@OCG@print <<%
8955     /Type/OCG%
8956     /Name(Print)%
8957     /Usage<<%
8958     /Print<<%
8959     /PrintState/ON%
8960     >>%
8961     /View<<%
8962     /ViewState/OFF%
8963     >>%
8964     >>%
8965     >>%
8966   }%
8967 \@pdfm@mark{close \OBJ@OCG@print}%
8968 \def\OBJ@OCGs{@OCGs}%
8969 \@pdfm@mark{%
8970   obj \OBJ@OCGs [%
8971     \OBJ@OCG@view\space\OBJ@OCG@print
8972   ]%
8973   }%
8974 \@pdfm@mark{close \OBJ@OCGs}%
8975 \@pdfm@mark{%
8976   put @catalog <<%
8977     /OCProperties<<%
8978     /OCGs \OBJ@OCGs
8979     /D<<%
8980     /OFF[\OBJ@OCG@print]%
8981     /AS[%
8982       <<%
8983         /Event/View%
8984         /OCGs \OBJ@OCGs
8985         /Category[/View]%
8986       >>%
8987       <<%
8988         /Event/Print%
8989         /OCGs \OBJ@OCGs
8990         /Category[/Print]%

```

```

8991      >>%
8992      <<%
8993      /Event/Export%
8994      /OCGs \OBJ@OCGs
8995      /Category[/Print]%
8996      >>%
8997      ]%
8998      >>%
8999      >>%
9000      >>%
9001      }%
9002      \AtBeginShipout{%
9003      \setbox\AtBeginShipoutBox=\hbox{%
9004      \copy\AtBeginShipoutBox
9005      \@pdfm@mark{%
9006      put @resources <<%
9007      /Properties<<%
9008      /OCView \OBJ@OCG@view
9009      /OCPrint \OBJ@OCG@print
9010      >>%
9011      >>%
9012      }%
9013      }%
9014      }%
9015      \Hy@AtBeginDocument{%
9016      \def\Hy@colorlink#1{%
9017      \begingroup
9018      \ifHy@ocgcolorlinks
9019      \def\Hy@ocgcolor{#1}%
9020      \setbox0=\color@hbox
9021      \else
9022      \HyColor@UseColor#1%
9023      \fi
9024      }%
9025      \def\Hy@endcolorlink{%
9026      \ifHy@ocgcolorlinks
9027      \color@endbox
9028      \mbox{%
9029      \@pdfm@mark{content /OC/OCPrint BDC}%
9030      \rlap{\copy0}%
9031      \@pdfm@mark{content EMC/OC/OCView BDC}%
9032      \begingroup
9033      \expandafter\HyColor@UseColor\Hy@ocgcolor
9034      \box0 %
9035      \endgroup
9036      \@pdfm@mark{content EMC}%
9037      }%
9038      \fi
9039      \endgroup
9040      }%
9041      }%
9042      \else
9043      \Hy@DisableOption{ocgcolorlinks}%
9044      \fi
9045      \def\Hy@BeginAnnot#1{%
9046      \stepcounter{Hy@AnnotLevel}%
9047      \ifnum\value{Hy@AnnotLevel}=\@ne

```

```

9048   #1%
9049   \fi
9050 }
9051 \def\Hy@endAnnot{%
9052   \ifnum\value{Hy@AnnotLevel}=\@ne
9053     \Hy@endcolorlink
9054     \@pdfm@mark{eann}%
9055   \fi
9056   \addtocounter{Hy@AnnotLevel}\m@ne
9057 }

9058 \def\Hy@undefinedname{UNDEFINED}
9059 \def\hyper@linkstart#1#2{%
9060   \Hy@VerboseLinkStart{#1}{#2}%
9061   \Hy@BeginAnnot{%
9062     \protected@edef\Hy@testname{#2}%
9063     \ifx\Hy@testname\@empty
9064       \Hy@Warning{%
9065         Empty destination name,\MessageBreak
9066         using '\Hy@undefinedname'%
9067       }%
9068       \let\Hy@testname\Hy@undefinedname
9069     \else
9070       \Hy@pstringdef\Hy@testname{%
9071         \expandafter\HyperDestNameFilter\expandafter{%
9072           \Hy@testname
9073         }%
9074       }%
9075     \fi
9076     \@pdfm@mark{%
9077       bann<<%
9078       /Type/Annot%
9079       /Subtype/Link%
9080       \ifHy@pdfa /F 4\fi
9081       \Hy@setpdfborder
9082       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9083       \else
9084         /C[\csname @#1bordercolor\endcsname]%
9085       \fi
9086       /A<<%
9087       /S/GoTo%
9088       /D(\Hy@testname)%
9089       >>%
9090     >>%
9091   }%
9092   \expandafter\Hy@colorlink\csname @#1color\endcsname
9093 }%
9094 }
9095 \def\hyper@linkend{\Hy@endAnnot}%
9096 \def\hyper@link#1#2#3{%
9097   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9098 }
9099 \def\hyper@linkfile#1#2#3{%
9100   \leavevmode
9101   \Hy@BeginAnnot{%
9102     \Hy@pstringdef\Hy@pstringF{#2}%
9103     \Hy@pstringdef\Hy@pstringD{#3}%
9104     \@pdfm@mark{%

```

```

9105      bann<<%
9106          /Type/Annot%
9107          /Subtype/Link%
9108          \ifHy@pdfa /F 4\fi
9109          \Hy@setpdfborder
9110          \ifx\@filebordercolor\relax
9111          \else
9112              /C[\@filebordercolor]%
9113          \fi
9114          /A<<%
9115          /S/GoToR%
9116          /F(\Hy@pstringF)%
9117          /D\ifx\#3\[\0 \@pdfstartview\else(\Hy@pstringD)\fi
9118          \Hy@SetNewWindow
9119      >>%
9120  >>%
9121  }%
9122  \Hy@colorlink\@filecolor
9123  }%
9124  #1%
9125  \Hy@endAnnot
9126  }
9127  \def\hyper@linkurl#1#2{%
9128      \leavevmode
9129      \Hy@BeginAnnot{%
9130          \Hy@pstringdef\Hy@pstringURI{#2}%
9131          \@pdfm@mark{%
9132              bann<<%
9133                  /Type/Annot%
9134                  /Subtype/Link%
9135                  \ifHy@pdfa /F 4\fi
9136                  \Hy@setpdfborder
9137                  \ifx\@urlbordercolor\relax
9138                  \else
9139                      /C[\@urlbordercolor]%
9140                  \fi
9141                  /A<<%
9142                  /S/URI%
9143                  /URI(\Hy@pstringURI)%
9144              >>%
9145          >>%
9146          }%
9147          \Hy@colorlink\@urlcolor
9148          }%
9149          #1%
9150          \Hy@endAnnot
9151      }
9152  \def\Acrobatmenu#1#2{%
9153      \Hy@Acrobatmenu{#1}{#2}{%
9154          \Hy@BeginAnnot{%
9155              \@pdfm@mark{%
9156                  bann<<%
9157                      /Type/Annot%
9158                      /Subtype/Link%
9159                      \ifHy@pdfa /F 4\fi
9160                      /A<<%
9161                      /S/Named%

```

```

9162      /N/#1%
9163      >>%
9164      \Hy@setpdfborder
9165      \ifx\@menubordercolor\relax
9166      \relax
9167      /C[\@menubordercolor]%
9168      \fi
9169      >>%
9170      }%
9171      \Hy@colorlink\@menucolor
9172      }%
9173      #2%
9174      \Hy@EndAnnot
9175      }%
9176  }
9177  \ifx\@pdfproducer\relax
9178  \def\@pdfproducer{dvipdfm}%

```

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

```

9179  \begingroup\expandafter\expandafter\expandafter\endgroup
9180  \expandafter\ifx\csname XeTeXversion\endcsname\relax
9181  \else
9182  \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9183  \fi
9184  \fi
9185  \def\PDF@FinishDoc{%
9186  \Hy@UseMaketitleInfos
9187  \HyInfo@GenerateAddons
9188  \@pdfm@mark{%
9189  docinfo<<%
9190  /Title(\@pdftitle)%
9191  /Subject(\@pdfsubject)%
9192  /Creator(\@pdfcreator)%
9193  \ifx\@pdfcreationdate\@empty
9194  \else
9195  /CreationDate(\@pdfcreationdate)%
9196  \fi
9197  \ifx\@pdfmoddate\@empty
9198  \else
9199  /ModDate(\@pdfmoddate)%
9200  \fi
9201  /Author(\@pdfauthor)%
9202  \ifx\@pdfproducer\relax
9203  \else
9204  /Producer(\@pdfproducer)%
9205  \fi
9206  /Keywords(\@pdfkeywords)%
9207  \ifx\@pdftrapped\@empty
9208  \else
9209  /Trapped/\@pdftrapped
9210  \fi
9211  \HyInfo@Addons
9212  >>%
9213  }%
9214  \Hy@DisableOption{pdfauthor}%
9215  \Hy@DisableOption{pdftitle}%
9216  \Hy@DisableOption{pdfsubject}%
9217  \Hy@DisableOption{pdfcreator}%

```

```

9218 \Hy@DisableOption{pdfcreationdate}%
9219 \Hy@DisableOption{pdfmoddate}%
9220 \Hy@DisableOption{pdfproducer}%
9221 \Hy@DisableOption{pdfkeywords}%
9222 \Hy@DisableOption{pdftrapped}%
9223 \Hy@DisableOption{pdfinfo}%
9224 }

9225 \def\PDF@SetupDoc{%
9226 \edef\Hy@temp{%
9227 \ifHy@toolbar\else /HideToolbar true\fi
9228 \ifHy@menubar\else /HideMenubar true\fi
9229 \ifHy>windowui\else /HideWindowUI true\fi
9230 \ifHy@fitwindow /FitWindow true\fi
9231 \ifHy@centerwindow /CenterWindow true\fi
9232 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9233 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9234 \Hy@UseNameKey{Direction}\@pdfdirection
9235 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9236 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9237 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9238 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9239 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9240 \Hy@UseNameKey{Duplex}\@pdfduplex
9241 \ifx\@pdfpicktraybypdfsize\@empty
9242 \else
9243 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9244 \fi
9245 \ifx\@pdfprintpagerange\@empty
9246 \else
9247 /PrintPageRange[\@pdfprintpagerange]%
9248 \fi
9249 \ifx\@pdfnumcopies\@empty
9250 \else
9251 /NumCopies \@pdfnumcopies
9252 \fi
9253 }%
9254 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9255 \@pdfm@mark{%
9256 docview<<%
9257 \ifx\@pdfstartpage\@empty
9258 \else
9259 \ifx\@pdfstartview\@empty
9260 \else
9261 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9262 \fi
9263 \fi
9264 \ifx\@baseurl\@empty
9265 \else
9266 /URI<</Base(\Hy@pstringB)>>%
9267 \fi
9268 /PageMode/\@pdfpagemode
9269 \ifx\Hy@temp\@empty
9270 \else
9271 /ViewerPreferences<<\Hy@temp>>%
9272 \fi
9273 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9274 \ifx\@pdflang\@empty

```

```

9275     \else
9276         /Lang(\@pdflang)%
9277     \fi
9278     >>%
9279 }%
9280 \ifx\@pdfpagescrop\@empty
9281 \else
9282     \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9283 \fi
9284 }
9285 </dvipdfm | xetex>

```

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

```

9286 <*dvipdfm>
9287 \AtBeginShipoutFirst{%
9288     \ifHy@setpagesize
9289         \begingroup
9290             \@ifundefined{stockwidth}{%
9291                 \ifdim\paperwidth>\z@
9292                     \ifdim\paperheight>\z@
9293                         \special{papersize=\the\paperwidth,\the\paperheight}%
9294                     \fi
9295                 \fi
9296             }{%
9297                 \ifdim\stockwidth>\z@
9298                     \ifdim\stockheight>\z@
9299                         \special{papersize=\the\stockwidth,\the\stockheight}%
9300                     \fi
9301                 \fi
9302             }%
9303         \endgroup
9304     \fi
9305     \Hy@DisableOption{setpagesize}%
9306 }
9307 </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.

```

9308 <*vtexhtml>
9309 \providecommand*{\XR@ext}{.htm}
9310 \RequirePackage{vtexhtml}
9311 \newif\if@Localurl
9312 \def\PDF@FinishDoc{}
9313 \def\PDF@SetupDoc{%
9314     \ifx\@baseurl\@empty
9315         \else
9316             \special{!direct <base href="\@baseurl">}%
9317         \fi
9318 }
9319 \def\@urltype{url}
9320 \def\hyper@link#1#2#3{%
9321     \Hy@VerboseLinkStart{#1}{#2}%
9322     \leavevmode
9323     \special{!direct <a href=%

```

```

9324 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9325 #3%
9326 \special{!direct </a>}%
9327 }
9328 \def\hyper@linkurl#1#2{%
9329 \begingroup
9330 \hyper@chars
9331 \leavevmode
9332 \MathBSuppress=1\relax
9333 \special{!direct <a href=%
9334 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9335 #1%
9336 \MathBSuppress=0\relax
9337 \special{!direct </a>}%
9338 \endgroup
9339 }
9340 \def\hyper@linkfile#1#2#3{%
9341 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9342 }
9343 \def\hyper@linkstart#1#2{%
9344 \Hy@VerboseLinkStart{#1}{#2}%
9345 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9346 \@Localurltrue
9347 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9348 \else
9349 \@Localurlfalse
9350 \begingroup
9351 \hyper@chars
9352 \special{!aref \HyperDestNameFilter{#2}}%
9353 \endgroup
9354 \fi
9355 }
9356 \def\hyper@linkend{%
9357 \if@Localurl
9358 \special{!endaref}%
9359 \else
9360 \special{!direct </a>}%
9361 \fi
9362 }
9363 \def\hyper@anchorstart#1{%
9364 \Hy@SaveLastskip
9365 \Hy@VerboseAnchor{#1}%
9366 \begingroup
9367 \hyper@chars
9368 \special{!aname #1}%
9369 \special{!direct <a name=%
9370 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9371 \endgroup
9372 \Hy@activeanchortrue
9373 }
9374 \def\hyper@anchorend{%
9375 \special{!direct </a>}%
9376 \Hy@activeanchorfalse
9377 \Hy@RestoreLastskip
9378 }
9379 \def\hyper@anchor#1{%
9380 \Hy@SaveLastskip

```

```

9381 \Hy@VerboseAnchor{#1}%
9382 \begingroup
9383 \let\protect=\string
9384 \hyper@chars
9385 \leavevmode
9386 \special{!aname #1}%
9387 \special{!direct <a name=%
9388     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9389 \endgroup
9390 \Hy@activeanchortrue
9391 \bgroup\anchor@spot\egroup
9392 \special{!direct </a>}%
9393 \Hy@activeanchorfalse
9394 \Hy@RestoreLastskip
9395 }
9396 \def\@Form[#1]{%
9397 \typeout{Sorry, TeXpider does not yet support FORMs}%
9398 }
9399 \def\@endForm{}
9400 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9401 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9402 }
9403 \def\@TextField[#1]#2{% parameters, label
9404 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9405 }
9406 \def\@CheckBox[#1]#2{% parameters, label
9407 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9408 }
9409 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9410 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9411 }
9412 \def\@PushButton[#1]#2{% parameters, label
9413 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9414 }
9415 \def\@Reset[#1]#2{%
9416 \typeout{Sorry, TeXpider does not yet support FORMs}%
9417 }
9418 \def\@Submit[#1]#2{%
9419 \typeout{Sorry, TeXpider does not yet support FORMs}%
9420 }
9421 \</vtexhtml>
9422 \< *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.

```

9423 \ifx\mediaheight\@undefined
9424 \else
9425 \ifx\mediaheight\relax
9426 \else
9427 \ifHy@setpagesize
9428 \providecommand*\VTeXInitMediaSize{%
9429 \ltx@ifUndefined{stockwidth}{%
9430 \ifdim\paperheight>0pt %
9431 \setlength\mediaheight\paperheight
9432 \fi
9433 \ifdim\paperheight>0pt %

```

```

9434         \setlength\mediawidth\paperwidth
9435     \fi
9436 }{%
9437     \ifdim\stockheight>0pt %
9438         \setlength\mediaheight\stockheight
9439     \fi
9440     \ifdim\stockwidth>0pt %
9441         \setlength\mediawidth\stockwidth
9442     \fi
9443 }%
9444 }%
9445 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9446 \fi
9447 \Hy@DisableOption{setpagesize}%
9448 \fi
9449 \fi

```

Older versions of VTeX require xyz in lower case.

```

9450 \providecommand*\@pdfview{xyz}
9451 \providecommand*\@pdfborder{0 0 1}
9452 \providecommand*\@pdfborderstyle{}
9453 \let\CurrentBorderColor\@linkbordercolor
9454 \def\hyper@anchor#1{%
9455     \Hy@SaveLastskip
9456     \Hy@VerboseAnchor{#1}%
9457     \begingroup
9458         \let\protect=\string
9459         \hyper@chars
9460         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9461     \endgroup
9462     \Hy@activeanchortrue
9463     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9464     \Hy@activeanchorfalse
9465     \Hy@RestoreLastskip
9466 }
9467 \def\hyper@anchorstart#1{%
9468     \Hy@SaveLastskip
9469     \Hy@VerboseAnchor{#1}%
9470     \begingroup
9471         \hyper@chars
9472         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9473     \endgroup
9474     \Hy@activeanchortrue
9475 }
9476 \def\hyper@anchorend{%
9477     \Hy@activeanchorfalse
9478     \Hy@RestoreLastskip
9479 }
9480 \def\@urltype{url}
9481 \def\Hy@undefinedname{UNDEFINED}
9482 \def\hyper@linkstart#1#2{%
9483     \Hy@VerboseLinkStart{#1}{#2}%
9484     \Hy@pstringdef\Hy@pstringURI{#2}%
9485     \expandafter\Hy@colorlink\csname @#1color\endcsname
9486     \ltx@ifundefined{@#1bordercolor}{%
9487         \let\CurrentBorderColor\relax
9488     }{%
9489         \edef\CurrentBorderColor{%

```

```

9490 \csname @#1bordercolor\endcsname
9491 }%
9492 }%
9493 \def\Hy@tempa{#1}%
9494 \ifx\Hy@tempa\@uratype
9495 \special{!%
9496   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9497   a=<%
9498     \ifHy@pdfa /F 4\fi
9499     \Hy@setpdfborder
9500     \ifx\CurrentBorderColor\relax
9501     \else
9502       /C [\CurrentBorderColor]%
9503     \fi
9504   >%
9505 }%
9506 \else
9507 \protected@edef\Hy@testname{#2}%
9508 \ifx\Hy@testname\@empty
9509 \Hy@Warning{%
9510   Empty destination name,\MessageBreak
9511   using '\Hy@undefinedname'%
9512 }%
9513 \let\Hy@testname\Hy@undefinedname
9514 \fi
9515 \special{!%
9516   aref \expandafter\HyperDestNameFilter
9517     \expandafter{\Hy@testname};%
9518   a=<%
9519     \ifHy@pdfa /F 4\fi
9520     \Hy@setpdfborder
9521     \ifx\CurrentBorderColor\relax
9522     \else
9523       /C [\CurrentBorderColor]%
9524     \fi
9525   >%
9526 }%
9527 \fi
9528 }
9529 \def\hyper@linkend{%
9530 \special{!endaref}%
9531 \Hy@endcolorlink
9532 }
9533 \def\hyper@linkfile#1#2#3{%
9534 \leavevmode
9535 \special{!%
9536   aref <%
9537     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9538     f=#2>#3;%
9539   a=<%
9540     \ifHy@pdfa /F 4\fi
9541     \Hy@setpdfborder
9542     \ifx\@filebordercolor\relax
9543     \else
9544       /C [\@filebordercolor]%
9545     \fi
9546   >%

```

```

9547 }%
9548 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9549 \special{!endaref}%
9550 }
9551 \def\hyper@linkurl#1#2{%
9552 \begingroup
9553 \Hy@pstringdef\Hy@pstringURI{#2}%
9554 \hyper@chars
9555 \leavevmode
9556 \special{!%
9557   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9558   a=<%
9559     \ifHy@pdfa /F 4\fi
9560     \Hy@setpdfborder
9561     \ifx\@urlbordercolor\relax
9562     \else
9563       /C [\@urlbordercolor]%
9564     \fi
9565   >%
9566 }%
9567 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9568 \special{!endaref}%
9569 \endgroup
9570 }
9571 \def\hyper@link#1#2#3{%
9572 \Hy@VerboseLinkStart{#1}{#2}%
9573 \ltx@ifundefined{@#1bordercolor}{%
9574   \let\CurrentBorderColor\relax
9575 }{%
9576   \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9577 }%
9578 \leavevmode
9579 \protected@edef\Hy@testname{#2}%
9580 \ifx\Hy@testname\@empty
9581   \Hy@Warning{%
9582     Empty destination name,\MessageBreak
9583     using '\Hy@undefinedname'%
9584   }%
9585   \let\Hy@testname\Hy@undefinedname
9586 \fi
9587 \special{!%
9588   aref \expandafter\HyperDestNameFilter
9589     \expandafter{\Hy@testname};%
9590   a=<%
9591     \ifHy@pdfa /F 4\fi
9592     \Hy@setpdfborder
9593     \ifx\CurrentBorderColor\relax
9594     \else
9595       /C [\CurrentBorderColor]%
9596     \fi
9597   >%
9598 }%
9599 \expandafter
9600 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9601 \special{!endaref}%
9602 }
9603 \def\hyper@image#1#2{%

```

```

9604 \hyper@linkurl{#2}{#1}%
9605 }
9606 \def\@hyper@launch run:#1\#2#3{%
9607 \Hy@pstringdef\Hy@pstringF{#1}%
9608 \Hy@pstringdef\Hy@pstringP{#3}%
9609 \leavevmode
9610 \special{!aref %
9611 <u=%
9612 /Type/Action%
9613 /S/Launch%
9614 /F(\Hy@pstringF)%
9615 \Hy@SetNewWindow
9616 \ifx\#3\%
9617 \else
9618 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9619 \fi%
9620 >%
9621 a=<%
9622 \ifHy@pdfa /F 4\fi
9623 \Hy@setpdfborder
9624 \ifx\@runbordercolor\relax
9625 \else
9626 /C[\@runbordercolor]%
9627 \fi
9628 >%
9629 }%
9630 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9631 \special{!endaref}%
9632 }
9633 \def\Acrobatmenu#1#2{%
9634 \Hy@Acrobatmenu{#1}{#2}{%
9635 \special{!%
9636 aref <u=/S /Named /N /#1>;%
9637 a=<%
9638 \ifHy@pdfa /F 4\fi
9639 \Hy@setpdfborder
9640 \ifx\@menubordercolor\relax
9641 \else
9642 /C[\@menubordercolor]%
9643 \fi
9644 >%
9645 }%
9646 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9647 \special{!endaref}%
9648 }%
9649 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for \TeX 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` globally.

```

9650 \ifnum\Hy@VTeXversion<702 %
9651 \else
9652 \def\hyper@pagetransition{%
9653 \ifx\@pdfpagetransition\relax
9654 \else
9655 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9656 \else
9657 \hvtex@parse@trans\@pdfpagetransition
9658 \fi
9659 \fi
9660 }%

```

I have to write an “honest” parser to convert raw PDF code into V_TE_X \special.
(AVK)

Syntax of V_TE_X \special{!trans <transition_effect>}:

```

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

```

Transition codes:

```

9661 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9662 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9663 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9664 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9665 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9666 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9667 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

9668 \def\hvtex@par@dimension{/Dm}%
9669 \def\hvtex@par@direction{/Di}%
9670 \def\hvtex@par@duration{/D}%
9671 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9672 \def\hvtex@gettoken{%
9673 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9674 }%

```

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

```

9675 \def\hvtex@gettoken@#1 #2\@nil{%
9676 \edef\hvtex@token{#1}%
9677 \edef\hvtex@buffer{#2}%
9678 }%
9679 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9680 \let\hvtex@trans@code\@empty
9681 \let\hvtex@param@dimension\@empty
9682 \let\hvtex@param@direction\@empty
9683 \let\hvtex@param@duration\@empty
9684 \let\hvtex@param@motion\@empty
9685 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```
9686 \hvtex@gettoken
9687 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
9688 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
9689 \else
9690 \hvtex@gettoken
9691 \fi
9692 \fi
9693 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
9694 \hvtex@trans@params
9695 }%
```

Reentrant macro to parse optional parameters.

```
9696 \def\hvtex@trans@params{%
9697 \ifx\hvtex@buffer\@empty
9698 \else
9699 \hvtex@gettoken
9700 \let\hvtex@trans@par\hvtex@token
9701 \ifx\hvtex@buffer\@empty
9702 \else
9703 \hvtex@gettoken
9704 \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
9705 \let\hvtex@param@duration\hvtex@token
9706 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9707 \expandafter\edef\expandafter\hvtex@param@motion
9708 \expandafter{\expandafter\@gobble\hvtex@token}%
9709 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9710 \expandafter\edef\expandafter\hvtex@param@dimension
9711 \expandafter{\expandafter\@gobble\hvtex@token}%
9712 \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).

```
9713 \let\hvtex@param@direction\hvtex@token
9714 \fi\fi\fi\fi
9715 \fi
9716 \fi
9717 \ifx\hvtex@buffer\@empty
9718 \let\next\hvtex@produce@trans
9719 \else
9720 \let\next\hvtex@trans@params
9721 \fi
9722 \next
9723 }%
```

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

```
9724 \def\hvtex@produce@trans{%
```

```

9725 \let\vtex@trans@special\@empty
9726 \if S\hvtex@trans@code
9727   \edef\vtex@trans@special{\hvtex@trans@code
9728     \hvtex@param@dimension\hvtex@param@motion}%
9729 \else\if B\hvtex@trans@code
9730   \edef\vtex@trans@special{%
9731     \hvtex@trans@code\hvtex@param@dimension
9732   }%
9733 \else\if X\hvtex@trans@code
9734   \edef\vtex@trans@special{%
9735     \hvtex@trans@code\hvtex@param@motion
9736   }%
9737 \else\if W\hvtex@trans@code
9738   \edef\vtex@trans@special{%
9739     \hvtex@trans@code\hvtex@param@direction
9740   }%
9741 \else\if D\hvtex@trans@code
9742   \let\vtex@trans@special\hvtex@trans@code
9743 \else\if R\hvtex@trans@code
9744   \let\vtex@trans@special\hvtex@trans@code
9745 \else\if G\hvtex@trans@code
9746   \edef\vtex@trans@special{%
9747     \hvtex@trans@code\hvtex@param@direction
9748   }%
9749 \fi\fi\fi\fi\fi\fi
9750 \ifx\vtex@trans@special\@empty
9751 \else
9752   \ifx\hvtex@param@duration\@empty
9753   \else
9754     \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9755   \multiply\dimen@\@m
9756   \edef\vtex@trans@special{%
9757     \vtex@trans@special,\strip@pt\dimen@
9758   }%
9759 \fi

```

And all the mess is just for this.

```

9760   \special{!trans \vtex@trans@special}%
9761 \fi
9762 }%

9763 \def\hyper@pageduration{%
9764   \ifx\@pdfpageduration\relax
9765   \else
9766     \ifx\@pdfpageduration\@empty
9767       \special{!duration-}%
9768     \else
9769       \special{!duration \@pdfpageduration}%
9770     \fi
9771   \fi
9772 }%

9773 \def\hyper@pagehidden{%
9774   \ifHy@useHidKey
9775     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9776   \fi
9777 }%

9778 \g@addto@macro\Hy@EveryPageBoxHook{%

```

```

9779 \hyper@pagetransition
9780 \hyper@pageduration
9781 \hyper@pagehidden
9782 }%
9783 \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

```

9784 \ifx\@pdfproducer\relax
9785 \def\@pdfproducer{VTeX}%
9786 \ifnum\Hy@VTeXversion>\z@
9787 \count@\VTeXversion
9788 \divide\count@ 100 %
9789 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9790 \multiply\count@ -100 %
9791 \advance\count@\VTeXversion
9792 \edef\@pdfproducer{%
9793 \@pdfproducer
9794 .\ifnum\count@<10 0\fi\the\count@
9795 \ifx\VTeXOS\@undefined\else
9796 \ifnum\VTeXOS>0 %
9797 \ifnum\VTeXOS<6 %
9798 \space(%
9799 \ifcase\VTeXOS
9800 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9801 \fi
9802 )%
9803 \fi
9804 \fi
9805 \fi
9806 ,\space
9807 \ifnum\OpMode=\@ne PDF\else PS\fi
9808 \space backend%
9809 \ifx\gexmode\@undefined\else
9810 \ifnum\gexmode>\z@\space with GeX\fi
9811 \fi
9812 }%
9813 \fi
9814 \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).

```

9815 \def\PDF@SetupDoc{%
9816 \ifx\@pdfpagescrop\@empty
9817 \else
9818 \special{!pdfinfo b=<\@pdfpagescrop>}%
9819 \fi
9820 \ifx\@pdfstartpage\@empty
9821 \else
9822 \ifx\@pdfstartview\@empty
9823 \else
9824 \special{!onopen Page\@pdfstartpage}%
9825 \fi
9826 \fi
9827 \special{!pdfinfo p=</\@pdfpagemode>}%
9828 \ifx\@baseurl\@empty
9829 \else
9830 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9831 \fi
9832 \special{!pdfinfo v=<<<%
9833 \ifHy@toolbar\else /HideToolbar true\fi
9834 \ifHy@menubar\else /HideMenubar true\fi
9835 \ifHy>windowui\else /HideWindowUI true\fi
9836 \ifHy@fitwindow /FitWindow true\fi
9837 \ifHy@centerwindow /CenterWindow true\fi
9838 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9839 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9840 \Hy@UseNameKey{Direction}\@pdfdirection
9841 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9842 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9843 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9844 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9845 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9846 \Hy@UseNameKey{Duplex}\@pdfduplex
9847 \ifx\@pdfpicktraybypdfsize\@empty
9848 \else
9849 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9850 \fi
9851 \ifx\@pdfprintpagerange\@empty
9852 \else
9853 /PrintPageRange[\@pdfprintpagerange]%
9854 \fi
9855 \ifx\@pdfnumcopies\@empty
9856 \else
9857 /NumCopies \@pdfnumcopies

```

```

9858 \fi
9859 >>>}%
9860 \ifx\@pdfpagelayout\@empty
9861 \else
9862 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9863 \fi
9864 }%
9865 \HyInfo@AddonUnsupportedtrue
9866 \def\PDF@FinishDoc{%
9867 \Hy@UseMaketitleInfos
9868 \HyInfo@TrappedUnsupported
9869 \special{!pdfinfo a=<\@pdfauthor>}%
9870 \special{!pdfinfo t=<\@pdftitle>}%
9871 \special{!pdfinfo s=<\@pdfsubject>}%
9872 \special{!pdfinfo c=<\@pdfcreator>}%
9873 \ifx\@pdfproducer\relax
9874 \else
9875 \special{!pdfinfo r=<\@pdfproducer>}%
9876 \fi
9877 \special{!pdfinfo k=<\@pdfkeywords>}%
9878 \Hy@DisableOption{pdfauthor}%
9879 \Hy@DisableOption{pdftitle}%
9880 \Hy@DisableOption{pdfsubject}%
9881 \Hy@DisableOption{pdfcreator}%
9882 \Hy@DisableOption{pdfcreationdate}%
9883 \Hy@DisableOption{pdfmoddate}%
9884 \Hy@DisableOption{pdfproducer}%
9885 \Hy@DisableOption{pdfkeywords}%
9886 \Hy@DisableOption{pdftrapped}%
9887 \Hy@DisableOption{pdfinfo}%
9888 }
9889 </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.

```

9890 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9891 <package>\providecommand*{\Hy@DistillerDestFix}{%
9892 <*pdfmark | dviwindo>
9893 \def\Hy@DistillerDestFix{%
9894 \beginngroup
9895 \let\x\literalps@out

```

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

```

9896 \ifnum \@ifundefined{OpMode}{0}{%
9897 \ifundefined{gexmode}{0}{%
9898 \ifnum\gexmode>0 \OpMode\else 0\fi
9899 }}>1 %

```

```

9900 \def\x##1{%
9901 \immediate\special{!=##1}%
9902 }%
9903 \fi
9904 \x{%
9905 /product where{%
9906 pop %
9907 product(Distiller)search{%
9908 pop pop pop %
9909 version(.)search{%
9910 exch pop exch pop%
9911 (3011)eq{%
9912 gsave %
9913 newpath 0 0 moveto closepath clip%
9914 /Courier findfont 10 scalefont setfont %
9915 72 72 moveto(.)show %
9916 grestore%
9917 }if%
9918 }{pop}ifelse%
9919 }{pop}ifelse%
9920 }if%
9921 }%
9922 \endgroup
9923 }
9924 </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

```

9925 <*pdfmark>
9926 \Hy@breaklinks@unsupported
9927 \def\hyper@anchor#1{%
9928 \Hy@SaveLastskip
9929 \Hy@VerboseAnchor{#1}%
9930 \begingroup
9931 \pdfmark[\anchor@spot]{%
9932 pdfmark=/DEST,%
9933 linktype=anchor,%
9934 View=/\@pdfview \@pdfviewparams,%
9935 DestAnchor={#1}%
9936 }%
9937 \endgroup
9938 \Hy@RestoreLastskip
9939 }
9940 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}

```

```

9941 \def\hyper@anchorstart#1{%
9942   \Hy@SaveLastskip
9943   \Hy@VerboseAnchor{#1}%
9944   \literalps@out{H.S}%
9945   \Hy@AllowHyphens
9946   \xdef\hyper@currentanchor{#1}%
9947   \Hy@activeanchortrue
9948 }
9949 \def\hyper@anchorend{%
9950   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9951   \pdfmark{%
9952     pdfmark=/DEST,%
9953     linktype=anchor,%
9954     View=/\@pdfview \@pdfviewparams,%
9955     DestAnchor=\hyper@currentanchor,%
9956   }%
9957   \Hy@activeanchorfalse
9958   \Hy@RestoreLastskip
9959 }
9960 \def\hyper@linkstart#1#2{%
9961   \Hy@VerboseLinkStart{#1}{#2}%
9962   \ifHy@breaklinks
9963   \else
9964     \leavevmode\hbox\bgroup
9965     \fi
9966     \expandafter\Hy@colorlink\csname @#1color\endcsname
9967     \literalps@out{H.S}%
9968     \Hy@AllowHyphens
9969     \xdef\hyper@currentanchor{#2}%
9970     \gdef\hyper@currentlinktype{#1}%
9971 }
9972 \def\hyper@linkend{%
9973   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9974   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
9975     \let\Hy@tempcolor\relax
9976   }{%
9977     \edef\Hy@tempcolor{%
9978       \csname @\hyper@currentlinktype bordercolor\endcsname
9979     }%
9980   }%
9981   \pdfmark{%
9982     pdfmark=/ANN,%
9983     linktype=link,%
9984     Subtype=/Link,%
9985     PDFAFlags=4,%
9986     Dest=\hyper@currentanchor,%
9987     AcroHighlight=\@pdfhighlight,%
9988     Border=\@pdfborder,%
9989     BorderStyle=\@pdfborderstyle,%
9990     Color=\Hy@tempcolor,%
9991     Raw=H.B%
9992   }%
9993   \Hy@endcolorlink
9994   \ifHy@breaklinks
9995   \else
9996     \egroup
9997   \fi

```

```
9998 }
```

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.

```
9999 \begingroup
10000 \catcode'P=12 %
10001 \catcode'T=12 %
10002 \lowercase{\endgroup
10003 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
10004 }
10005 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}
```

\hyper@pagetransition

```
10006 \def\hyper@pagetransition{%
10007 \ifx\@pdfpagetransition\relax
10008 \else
10009 \ifx\@pdfpagetransition\@empty
10010 % 1. Does an old entry have to be deleted?
10011 % 2. If 1=yes, how to delete?
10012 \else
10013 \pdfmark{%
10014 pdfmark=/PUT,%
10015 Raw={%
10016 \string{ThisPage\string}%
10017 <</Trans << /S /\@pdfpagetransition\space >> >>%
10018 }%
10019 }%
10020 \fi
10021 \fi
10022 }
```

\hyper@pageduration

```
10023 \def\hyper@pageduration{%
10024 \ifx\@pdfpageduration\relax
10025 \else
10026 \ifx\@pdfpageduration\@empty
10027 % 1. Does an old entry have to be deleted?
10028 % 2. If 1=yes, how to delete?
10029 \else
10030 \pdfmark{%
10031 pdfmark=/PUT,%
10032 Raw={%
10033 \string{ThisPage\string}%
10034 <</Dur \@pdfpageduration>>%
10035 }%
10036 }%
10037 \fi
10038 \fi
10039 }
```

\hyper@pagehidden

```
10040 \def\hyper@pagehidden{%
10041 \ifHy@useHidKey
10042 \pdfmark{%
10043 pdfmark=/PUT,%
10044 Raw={%
```

```

10045      \string{ThisPage\string}%
10046      <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10047    }%
10048  }%
10049 \fi
10050 }

10051 \g@addto@macro\Hy@EveryPageBoxHook{%
10052   \hyper@pagetransition
10053   \hyper@pageduration
10054   \hyper@pagehidden
10055 }

10056 \def\hyper@image#1#2{%
10057   \hyper@linkurl{#2}{#1}%
10058 }

10059 \def\Hy@undefinedname{UNDEFINED}
10060 \def\hyper@link#1#2#3{%
10061   \Hy@VerboseLinkStart{#1}{#2}%
10062   \ltx@ifundefined{@#1bordercolor}{%
10063     \let\Hy@tempcolor\relax
10064   }{%
10065     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10066   }%
10067   \begingroup
10068     \protected@edef\Hy@testname{#2}%
10069     \ifx\Hy@testname\@empty
10070       \Hy@Warning{%
10071         Empty destination name,\MessageBreak
10072         using '\Hy@undefinedname'%
10073       }%
10074       \let\Hy@testname\Hy@undefinedname
10075     \fi
10076     \pdfmark[{#3}]{%
10077       Color=\Hy@tempcolor,%
10078       linktype={#1},%
10079       AcroHighlight=\@pdfhighlight,%
10080       Border=\@pdfborder,%
10081       BorderStyle=\@pdfborderstyle,%
10082       pdfmark=/ANN,%
10083       Subtype=/Link,%
10084       PDFAFlags=4,%
10085       Dest=\Hy@testname
10086     }%
10087   \endgroup
10088 }

10089 \newtoks\pdf@docset
10090 \def\PDF@FinishDoc{%
10091   \Hy@UseMaketitleInfos
10092   \Hy@Info@GenerateAddons
10093   \let\Hy@temp\@empty
10094   \ifx\@pdfcreationdate\@empty
10095     \else
10096       \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10097     \fi
10098   \ifx\@pdfmoddate\@empty
10099     \else
10100     \expandafter\def\expandafter\Hy@temp\expandafter{%
10101       \Hy@temp

```

```

10102     ModDate=\@pdfmoddate,%
10103 }%
10104 \fi
10105 \ifx\@pdfproducer\relax
10106 \else
10107 \expandafter\def\expandafter\Hy@temp\expandafter{%
10108     \Hy@temp
10109     Producer=\@pdfproducer,%
10110 }%
10111 \fi
10112 \expandafter
10113 \pdfmark\expandafter{%
10114     \Hy@temp
10115     pdfmark=/DOCINFO,%
10116     Title=\@pdftitle,%
10117     Subject=\@pdfsubject,%
10118     Creator=\@pdfcreator,%
10119     Author=\@pdfauthor,%
10120     Keywords=\@pdfkeywords,%
10121     Trapped=\@pdftrapped
10122 }%
10123 \ifx\HyInfo@Addons\@empty
10124 \else
10125 \pdfmark{%
10126     pdfmark=/DOCINFO,%
10127     Raw={\HyInfo@Addons}%
10128 }%
10129 \fi
10130 \Hy@DisableOption{pdfauthor}%
10131 \Hy@DisableOption{pdftitle}%
10132 \Hy@DisableOption{pdfsubject}%
10133 \Hy@DisableOption{pdfcreator}%
10134 \Hy@DisableOption{pdfcreationdate}%
10135 \Hy@DisableOption{pdfmoddate}%
10136 \Hy@DisableOption{pdfproducer}%
10137 \Hy@DisableOption{pdfkeywords}%
10138 \Hy@DisableOption{pdftrapped}%
10139 \Hy@DisableOption{pdfinfo}%
10140 }
10141 \def\PDF@SetupDoc{%
10142     \def\Hy@temp{}%
10143     \ifx\@pdfstartpage\@empty
10144     \else
10145         \ifx\@pdfstartview\@empty
10146         \else
10147             \edef\Hy@temp{%
10148                 ,Page=\@pdfstartpage
10149                 ,View=\@pdfstartview
10150             }%
10151         \fi
10152     \fi
10153     \edef\Hy@temp{%
10154         \noexpand\pdfmark{%
10155             pdfmark=/DOCVIEW,%
10156             PageMode=/\@pdfpagemode
10157             \Hy@temp
10158         }%

```

```

10159 }%
10160 \Hy@temp
10161 \ifx\@pdfpagescrop\@empty
10162 \else
10163 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10164 \fi
10165 \edef\Hy@temp{%
10166 \ifHy@toolbar\else /HideToolbar true\fi
10167 \ifHy@menubar\else /HideMenubar true\fi
10168 \ifHy>windowui\else /HideWindowUI true\fi
10169 \ifHy@fitwindow /FitWindow true\fi
10170 \ifHy@centerwindow /CenterWindow true\fi
10171 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10172 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10173 \Hy@UseNameKey{Direction}\@pdfdirection
10174 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10175 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10176 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10177 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10178 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10179 \Hy@UseNameKey{Duplex}\@pdfduplex
10180 \ifx\@pdfpicktraybypdfsize\@empty
10181 \else
10182 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10183 \fi
10184 \ifx\@pdfprintpagerange\@empty
10185 \else
10186 /PrintPageRange[\@pdfprintpagerange]%
10187 \fi
10188 \ifx\@pdfnumcopies\@empty
10189 \else
10190 /NumCopies \@pdfnumcopies
10191 \fi
10192 }%
10193 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10194 \pdfmark{%
10195 pdfmark=/PUT,%
10196 Raw={%
10197 \string{Catalog}\string}<<%
10198 \ifx\Hy@temp\@empty
10199 \else
10200 /ViewerPreferences<<\Hy@temp>>%
10201 \fi
10202 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10203 \ifx\@pdflang\@empty
10204 \else
10205 /Lang(\@pdflang)%
10206 \fi
10207 \ifx\@baseurl\@empty
10208 \else
10209 /URI<</Base(\Hy@pstringB)>>%
10210 \fi
10211 >>%
10212 }%
10213 }%
10214 }
10215 </pdfmark>

```

10216 \langle *pdfmarkbase \rangle

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.

```

10217 \newif\ifHy@pdfmarkerror
10218 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
10219 \def\pdfmark@[#1]#2{%
10220   \Hy@pdfmarkerrorfalse
10221   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10222   \@processme
10223   \let\pdf@type\relax
10224   \setkeys{PDF}{#2}%
10225   \ifHy@pdfmarkerror
10226   \else
10227     \ifx\pdf@type\relax
10228       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10229       \ifx\#1\%
10230       \else
10231         \pdf@rect{#1}%
10232       \fi
10233     \else
10234       \ifx\#1\%
10235         \literalps@out{%
10236           [\the\pdf@toks\space\pdf@type\space pdfmark%
10237         ]%
10238       \else
10239         \ltx@ifundefined{@\pdf@linktype color}{%
10240           \Hy@colorlink\@linkcolor
10241         }{%
10242           \expandafter\Hy@colorlink
10243             \csname @\pdf@linktype color\endcsname
10244         }%
10245         \pdf@rect{#1}%
10246         \literalps@out{%
10247           [\the\pdf@toks\space\pdf@type\space pdfmark%
10248         ]%
10249         \Hy@endcolorlink
10250       \fi
10251     \fi
10252   \fi
10253 }
```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}
```

```
10254 \newsavebox{\pdf@box}
```

```

10255 \providecommand*{\Hy@setouterhbox}{\sbox}
10256 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10257 \def\Hy@DEST{/DEST}
10258 \def\pdf@rect#1{%
10259   \leavevmode
10260   \ifHy@breaklinks
10261     \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10262   \else
10263     \sbox\pdf@box{#1}%
10264   \fi
10265   \dimen@ \ht\pdf@box
10266   \ifdim\dp\pdf@box=\z@
10267     \literalps@out{H.S}%
10268   \else
10269     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10270   \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...).

```

10271 \ifHy@breaklinks
10272   \expandafter\Hy@breaklinksunhbox
10273 \else
10274   \expandafter\box
10275 \fi
10276 \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

10277 \ifdim\dimen@=\z@
10278   \literalps@out{H.R}%
10279 \else
10280   \raise\dimen@\hbox{\literalps@out{H.R}}%
10281 \fi
10282 \ifx\pdf@type\Hy@DEST
10283 \else
10284   \pdf@addtoksx{H.B}%
10285 \fi
10286 }

```

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.

```

10287 \newtoks\pdf@toks
10288 \newtoks\pdf@defaulttoks
10289 \pdf@defaulttoks={}%
10290 \def\pdf@addtoks#1#2{%
10291   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10292   \@processme
10293 }
10294 \def\pdf@addtoksx#1{%
10295   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10296   \@processme
10297 }
10298 \def\PDFdefaults#1{%
10299   \pdf@defaulttoks={#1}%
10300 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

10301 % what is the type of pdfmark?
10302 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10303 % what is the link type?
10304 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10305 \def\pdf@linktype{link}
10306 % parameter is a stream of PDF
10307 \define@key{PDF}{Raw}{\pdf@addtoks{#1}}
10308 % parameter is a name
10309 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10310 % parameter is a array
10311 \define@key{PDF}{Border}{%
10312   \edef\Hy@temp{#1}%
10313   \ifx\Hy@temp\@empty
10314     \else
10315       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10316     \fi
10317 }
10318 \let\Hy@BorderArrayPatch\@empty
10319 % parameter is a dictionary
10320 \define@key{PDF}{BorderStyle}{%
10321   \edef\Hy@temp{#1}%
10322   \ifx\Hy@temp\@empty
10323     \else
10324       \pdf@addtoks{<<#1>>}{BS}%
10325     \fi
10326 }
10327 % parameter is a array
10328 \define@key{PDF}{Color}{%
10329   \ifx\relax#1\relax
10330     \else
10331       \pdf@addtoks{[#1]}{Color}% hash-ok
10332     \fi
10333 }
10334 % parameter is a string
10335 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10336 % parameter is a integer
10337 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10338 % parameter is a array
10339 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10340 % parameter is a string
10341 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10342 % parameter is a string or file
10343 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10344 % parameter is a destination
10345 \define@key{PDF}{Dest}{%
10346   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10347   \ifx\Hy@pstringDest\@empty
10348     \Hy@pdfmarkerrortrue
10349     \Hy@Warning{Destination with empty name ignored}%
10350   \else
10351     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10352   \fi
10353 }
10354 \define@key{PDF}{DestAnchor}{%
10355   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10356   \ifx\Hy@pstringDest\@empty

```

```

10357 \Hy@pdfmarkerrortrue
10358 \Hy@Warning{Destination with empty name ignored}%
10359 \else
10360 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10361 \fi
10362 }
10363 % parameter is a string
10364 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10365 % parameter is a string
10366 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10367 % parameter is a int
10368 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10369 \define@key{PDF}{PDFAFlags}{%
10370 \ifHy@pdfa
10371 \pdf@addtoks{#1}{F}%
10372 \fi
10373 }
10374 % parameter is a name
10375 \define@key{PDF}{AcroHighlight}{%
10376 \begingroup
10377 \edef\x{#1}%
10378 \expandafter\endgroup\ifx\x@empty
10379 \else
10380 \pdf@addtoks{#1}{H}%
10381 \fi
10382 }
10383 % parameter is a string
10384 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10385 % parameter is a string
10386 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10387 % parameter is a string
10388 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10389 % parameter is a string
10390 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10391 % parameter is a Boolean
10392 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10393 % parameter is a integer or name
10394 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10395 % parameter is a name
10396 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10397 % parameter is a string
10398 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10399 % parameter is a array
10400 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10401 % parameter is a integer
10402 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10403 % parameter is a name
10404 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10405 % parameter is a string
10406 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10407 % parameter is a string
10408 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10409 % parameter is a string
10410 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10411 % parameter is an array
10412 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10413 % parameter is a string

```

```
10414 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}
```

These are the keys used in the DOCINFO section.

```
10415 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10416 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10417 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10418 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10419 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10420 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10421 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10422 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10423 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10424 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10425 \define@key{PDF}{Trapped}{%
10426   \edef\Hy@temp{#1}%
10427   \ifx\Hy@temp\@empty
10428     \else
10429       \pdf@addtoks{/#1}{Trapped}%
10430     \fi
10431 }
10432
10433 </pdfmarkbase>
10434 <*pdfmark>
10435 \def\Acrobatmenu#1#2{%
10436   \Hy@Acrobatmenu{#1}{#2}{%
10437     \pdfmark[{#2}]{%
10438       linktype=menu,%
10439       pdfmark=/ANN,%
10440       AcroHighlight=\@pdfhighlight,%
10441       Border=\@pdfborder,%
10442       BorderStyle=\@pdfborderstyle,%
10443       Action={<< /Subtype /Named /N /#1 >>},%
10444       Subtype=/Link,%
10445       PDFAFlags=4%
10446     }%
10447   }%
10448 }
```

And now for some useful examples:

```
10449 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10450 \def\PDFNextPage@[#1]#2{%
10451   \pdfmark[{#2}]{%
10452     #1,%
10453     Border=\@pdfborder,%
10454     BorderStyle=\@pdfborderstyle,%
10455     Color=.2 .1 .5,%
10456     pdfmark=/ANN,%
10457     Subtype=/Link,%
10458     PDFAFlags=4,%
10459     Page=/Next%
10460   }%
10461 }
10462 \def\PDFPreviousPage{%
10463   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10464 }
10465 \def\PDFPreviousPage@[#1]#2{%
10466   \pdfmark[{#2}]{%
10467     #1,%
```

```

10468   Border=\@pdfborder,%
10469   BorderStyle=\@pdfborderstyle,%
10470   Color=.4 .4 .1,%
10471   pdfmark=/ANN,%
10472   Subtype=/Link,%
10473   PDFAFlags=4,%
10474   Page=/Prev%
10475 }%
10476 }
10477 \def\PDFOpen#1{%
10478   \pdfmark{#1,pdfmark=/DOCVIEW}%
10479 }

```

This will only work if you use Distiller 2.1 or higher.

```

10480 \def\hyper@linkurl#1#2{%
10481   \begingroup
10482     \Hy@pstringdef\Hy@pstringURI{#2}%
10483     \hyper@chars
10484     \leavevmode
10485     \pdfmark[{#1}]{%
10486       pdfmark=/ANN,%
10487       linktype=url,%
10488       AcroHighlight=\@pdfhighlight,%
10489       Border=\@pdfborder,%
10490       BorderStyle=\@pdfborderstyle,%
10491       Color=\@urlbordercolor,%
10492       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10493       Subtype=/Link,%
10494       PDFAFlags=4%
10495     }%
10496   \endgroup
10497 }
10498 \def\hyper@linkfile#1#2#3{%
10499   \begingroup
10500     \Hy@pstringdef\Hy@pstringF{#2}%
10501     \Hy@pstringdef\Hy@pstringD{#3}%
10502     \leavevmode
10503     \pdfmark[{#1}]{%
10504       pdfmark=/ANN,%
10505       Subtype=/Link,%
10506       PDFAFlags=4,%
10507       AcroHighlight=\@pdfhighlight,%
10508       Border=\@pdfborder,%
10509       BorderStyle=\@pdfborderstyle,%
10510       linktype=file,%
10511       Color=\@filebordercolor,%
10512       Action={%
10513         <<%
10514           /S/GoToR%
10515           \Hy@SetNewWindow
10516           /F(\Hy@pstringF)%
10517           /D\ifx\#3\[\0 \@pdfstartview\]\else(\Hy@pstringD)cvn\fi
10518         >>%
10519       }%
10520     }%
10521   \endgroup
10522 }
10523 \def\@hyper@launch run:#1\#2#3{%

```

```

10524 \begingroup
10525 \Hy@pstringdef\Hy@pstringF{#1}%
10526 \Hy@pstringdef\Hy@pstringP{#3}%
10527 \leavevmode
10528 \pdfmark[{#2}]{%
10529   pdfmark=/ANN,%
10530   Subtype=/Link,%
10531   PDFAFlags=4,%
10532   AcroHighlight=\@pdfhighlight,%
10533   Border=\@pdfborder,%
10534   BorderStyle=\@pdfborderstyle,%
10535   linktype=run,%
10536   Color=\@runbordercolor,%
10537   Action={%
10538     <<%
10539     /S/Launch%
10540     \Hy@SetNewWindow
10541     /F(\Hy@pstringF)%
10542     \ifx\#3\%
10543     \else
10544     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10545     \fi
10546     >>%
10547   }%
10548 }%
10549 \endgroup
10550 }
10551 </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.

```

10552 < *dvips>
10553 \providecommand*{\XR@ext}{pdf}
10554 \def\Hy@raisedlink{}
10555 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
10556 \def\headerps@out#1{\special{! #1}}%
10557 \input{pdfmark.def}%
10558 \ifx\@pdfproducer\relax
10559   \def\@pdfproducer{dvips + Distiller}%
10560 \fi
10561 \providecommand*\@pdfborder{0 0 1}
10562 \providecommand*\@pdfborderstyle{}
10563 \providecommand*\@pdfview{XYZ}
10564 \providecommand*\@pdfviewparams{H.V}
10565 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10566 \g@addto@macro\Hy@FirstPageHook{%
10567   \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.

```
10568 /DvipsToPDF{72.27 mul Resolution div} def%
10569 /PDFToDvips{72.27 div Resolution mul} def%
10570 /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.

```
10571 /BorderArrayPatch{%
10572   lsexch{%
10573     dup dup type/integertype eq exch type/realtype eq or%
10574     {BPToDvips}if%
10575   }forall}%
10576 }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.

```
10577 /HyperBorder {1 PDFToDvips} def%
10578 /H.V {pdf@hoff pdf@voff null} def%
10579 /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

```
10580 /H.S {%
10581   currentpoint %
10582   HyperBorder add /pdf@lly exch def %
10583   dup DvipsToPDF 72 add /pdf@hoff exch def %
10584   HyperBorder sub /pdf@llx exch def%
10585 } 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`

```
10586 /H.L {%
10587   2 sub dup%
10588   /HyperBasePt exch def %
10589   PDFToDvips /HyperBaseDvips exch def %
10590   currentpoint %
10591   HyperBaseDvips sub /pdf@ury exch def%
10592   /pdf@urx exch def%
10593 } def%
10594 /H.A {%
10595   H.L %
10596 % |pdf@voff| = the distance from the top of the page to a point
10597 % |\baselineskip| above the current point in PDF coordinates
10598   currentpoint exch pop %
```

```

10599     vsize 72 sub exch DvipsToPDF %
10600     HyperBasePt sub % baseline skip
10601     sub /pdf@voff exch def%
10602   } def%
10603   /H.R. {%
10604     currentpoint %
10605     HyperBorder sub /pdf@ury exch def %
10606     HyperBorder add /pdf@urx exch def %
10607   % | /pdf@voff| = the distance from the top of the page to the current point, in
10608   % PDF coordinates
10609     currentpoint exch pop vsize 72 sub %
10610     exch DvipsToPDF sub /pdf@voff exch def%
10611   } def%
10612 } %
10613 }
10614 \AtBeginShipoutFirst{%
10615   \ifHy@setpagesize
10616     \begingroup
10617     \@ifundefined{stockwidth}{%
10618       \ifdim\paperwidth>\z@
10619         \ifdim\paperheight>\z@
10620           \special{papersize=\the\paperwidth,\the\paperheight}%
10621         \fi
10622       \fi
10623     }{%
10624       \ifdim\stockwidth>\z@
10625         \ifdim\stockheight>\z@
10626           \special{papersize=\the\stockwidth,\the\stockheight}%
10627         \fi
10628       \fi
10629     }%
10630   \endgroup
10631   \fi
10632   \Hy@DisableOption{setpagesize}%
10633 }
10634 </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.

```

10635 <*vtexpdfmark>
10636 \providecommand*{\XR@ext}{pdf}
10637 \def\Hy@raisedlink{}
10638 \def\literalps@out#1{\special{pS:#1}}%
10639 \def\headerps@out#1{\immediate\special{pS:#1}}%
10640 \input{pdfmark.def}%
10641 \ifx\@pdfproducer\relax
10642   \ifnum\OpMode=\@ne
10643     \def\@pdfproducer{VTeX}%
10644   \else
10645     \def\@pdfproducer{VTeX + Distiller}%
10646   \fi
10647 \fi

```

```

10648 \providecommand*\@pdfborder{0 0 1}
10649 \providecommand*\@pdfborderstyle{}
10650 \providecommand*\@pdfview{XYZ}
10651 \providecommand*\@pdfviewparams{ H.V}

10652 \g@addto@macro\Hy@FirstPageHook{%
10653   \headerps@out{%
10654     /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.

```

10655   /HyperBorder {1} def%
10656   /H.V {pdf@hoff pdf@voff null} def%
10657   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10658   /H.S {%
10659     currentpoint %
10660     HyperBorder sub%
10661     /pdf@lly exch def %
10662     dup 72 add /pdf@hoff exch def %
10663     HyperBorder sub%
10664     /pdf@llx exch def%
10665   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10666   /H.L {%
10667     2 sub%
10668     /HyperBasePt exch def %
10669     currentpoint %
10670     HyperBasePt add HyperBorder add%
10671     /pdf@ury exch def %
10672     HyperBorder add%
10673     /pdf@urx exch def%
10674   } def%
10675   /H.A {%
10676     H.L %
10677     currentpoint exch pop %
10678     vsize 72 sub exch %
10679     HyperBasePt add add%
10680     /pdf@voff exch def%
10681   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10682   /H.R {%
10683     currentpoint %
10684     HyperBorder add%
10685     /pdf@ury exch def %
10686     HyperBorder add%
10687     /pdf@urx exch def %
10688     currentpoint exch pop vsize 72 sub add%
10689     /pdf@voff exch def%
10690   } def%
10691 }%
10692 }
10693 </vtxpdfmark>

```

46.11 Textures

```
10694 \providecommand*{\XR@ext}{pdf}
10695 \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.

```
10696 \begingroup
10697 \obeylines %
10698 \gdef\Hy@ps@CR{\noexpand
10699 }%
10700 \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.

```
10701 \def\literalps@out#1{%
10702 \special{postscript 0 0 transform}%
10703 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10704 }%
10705 %
```

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.

```
10706 \def\headerps@out#1{%
10707 \special{%
10708 prepostscript TeXdict begin\Hy@ps@CR
10709 #1\Hy@ps@CR
10710 end%
10711 }%
10712 }%
10713 %
```

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.

```
10714 \g@addto@macro\Hy@FirstPageHook{%
10715 \headerps@out{%
10716 /betterpdfmark {%
10717 systemdict begin %
10718 dup /BP eq%
10719 {cleartomark gsave nulldevice []}%
10720 {dup /EP eq%
10721 {cleartomark cleartomark grestore}}%
```

```

10722      {cleartomark}%
10723      ifelse%
10724      }ifelse %
10725      end%
10726      }def\Hy@ps@CR
10727      ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10728      }% end of \headerps@out
10729      }% end of \AtBeginShipoutFirst
10730      %
10731      \input{pdfmark.def}%
10732      %
10733      \ifx\@pdfproducer\relax
10734      \def\@pdfproducer{Textures + Distiller}%
10735      \fi
10736      \providecommand*\@pdfborder{0 0 1}
10737      \providecommand*\@pdfborderstyle{}
10738      \providecommand*\@pdfview{XYZ}
10739      \providecommand*\@pdfviewparams{ H.V}
10740      %

```

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 .

```

10741 \Hy@AtBeginDocument{%
10742   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

10743   /vsize {\Hy@pageheight} def%
10744   /DvipsToPDF {} def%
10745   /PDFToDvips {} def%
10746   /BPToDvips {} def%
10747   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10748   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10749   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10750   /H.S {%
10751     currentpoint %
10752     HyperBorder add /pdf@lly exch def %
10753     dup DvipsToPDF 72 add /pdf@hoff exch def %
10754     HyperBorder sub /pdf@llx exch def%
10755   } def\Hy@ps@CR
10756   /H.L {%
10757     2 sub %
10758     PDFToDvips /HyperBase exch def %
10759     currentpoint %
10760     HyperBase sub /pdf@ury exch def%
10761     /pdf@urx exch def%
10762   } def\Hy@ps@CR
10763   /H.A {%
10764     H.L %
10765     currentpoint exch pop %
10766     vsize 72 sub exch DvipsToPDF %
10767     HyperBase sub % baseline skip
10768     sub /pdf@voff exch def%
10769   } def\Hy@ps@CR
10770   /H.R {%
10771     currentpoint %

```

```

10772   HyperBorder sub /pdf@ury exch def %
10773   HyperBorder add /pdf@urx exch def %
10774   currentpoint exch pop vsize 72 sub %
10775   exch DvipsToPDF sub /pdf@voff exch def%
10776   } def\Hy@ps@CR
10777 }%
10778 }

10779 \Hy@AtBeginDocument{%
10780 \ifHy@colorlinks
10781 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10782 \fi
10783 }

```

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.

```

10784 \expandafter\let\expandafter\keepPDF@SetupDoc
10785 \csname PDF@SetupDoc\endcsname
10786 \def\PDF@SetupDoc{%
10787 \ifx\@baseurl\@empty
10788 \else
10789 \special{html:<base href="\@baseurl">}%
10790 \fi
10791 \keepPDF@SetupDoc
10792 }

10793 \def\hyper@anchor#1{%
10794 \Hy@SaveLastskip
10795 \Hy@VerboseAnchor{#1}%
10796 \begingroup
10797 \let\protect=\string
10798 \special{html:<a name=%
10799 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10800 \endgroup
10801 \Hy@activeanchortrue
10802 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10803 \special{html:</a>}%
10804 \Hy@activeanchorfalse
10805 \Hy@RestoreLastskip
10806 }

10807 \def\hyper@anchorstart#1{%
10808 \Hy@SaveLastskip
10809 \Hy@VerboseAnchor{#1}%
10810 \begingroup
10811 \hyper@chars
10812 \special{html:<a name=%
10813 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10814 \endgroup
10815 \Hy@activeanchortrue
10816 }

10817 \def\hyper@anchorend{%
10818 \special{html:</a>}%
10819 \Hy@activeanchorfalse
10820 \Hy@RestoreLastskip
10821 }

10822 \def\@urltype{url}
10823 \def\hyper@linkstart#1#2{%
10824 \Hy@VerboseLinkStart{#1}{#2}%
10825 \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

10826 \def\Hy@tempa{#1}%
10827 \ifx\Hy@tempa\@urlltype
10828   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10829 \else
10830   \begingroup
10831     \hyper@chars
10832     \special{%
10833       html:<a href=%
10834         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
10835     }%
10836   \endgroup
10837 \fi
10838 }
10839 \def\hyper@linkend{%
10840   \special{html:</a>}%
10841   \Hy@endcolorlink
10842 }
10843 \def\hyper@linkfile#1#2#3{%
10844   \hyper@linkurl{#1}{%
10845     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10846   }%
10847 }
10848 \def\hyper@linkurl#1#2{%
10849   \leavevmode
10850   \ifHy@raiselinks
10851     \setbox\@tempboxa=\color@hbox #1\color@endbox
10852     \@linkdim\dp\@tempboxa
10853     \lower\@linkdim\hbox{%
10854       \hyper@chars
10855       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10856     }%
10857     \Hy@colorlink\@urlcolor#1%
10858     \@linkdim\ht\@tempboxa
10859     \advance\@linkdim by -6.5\p@
10860     \raise\@linkdim\hbox{\special{html:</a>}}%
10861     \Hy@endcolorlink
10862   \else
10863     \begingroup
10864       \hyper@chars
10865       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10866       \Hy@colorlink\@urlcolor#1%
10867       \special{html:</a>}%
10868       \Hy@endcolorlink
10869     \endgroup
10870   \fi
10871 }

```

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

```

10872 \def\hyper@link#1#2#3{%
10873   \Hy@VerboseLinkStart{#1}{#2}%
10874   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
10875 }
10876 \def\hyper@image#1#2{%
10877   \begingroup
10878     \hyper@chars
10879     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10880   \endgroup
10881 }

```

10882 </textures>

46.12 dvipsone

```
10883 % \subsection{dvipsone driver}
10884 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10885 % |\special| commands.
10886 <*dvipsone>
10887 \providecommand*{\XR@ext}{pdf}
10888 \def\Hy@raisedlink{}
10889 \providecommand*\@pdfborder{0 0 1}
10890 \providecommand*\@pdfborderstyle{}
10891 \def\literalps@out#1{\special{ps:#1}}%
10892 \def\headerps@out#1{\special{headertext=#1}}%
10893 \input{pdfmark.def}%
10894 \ifx\@pdfproducer\relax
10895   \def\@pdfproducer{dvipsone + Distiller}%
10896 \fi
10897 \HyInfo@AddonUnsupportedtrue
10898 \def\PDF@FinishDoc{%
10899   \Hy@UseMaketitleInfos
10900   \HyInfo@TrappedUnsupported
10901   \special{PDF: Keywords \@pdfkeywords}%
10902   \special{PDF: Title \@pdftitle}%
10903   \special{PDF: Creator \@pdfcreator}%
10904   \ifx\@pdfcreationdate\@empty
10905     \else
10906       \special{PDF: CreationDate \@pdfcreationdate}%
10907   \fi
10908   \ifx\@pdfmoddate\@empty
10909     \else
10910       \special{PDF: ModDate \@pdfmoddate}%
10911   \fi
10912   \special{PDF: Author \@pdfauthor}%
10913   \ifx\@pdfproducer\relax
10914     \else
10915       \special{PDF: Producer \@pdfproducer}%
10916   \fi
10917   \special{PDF: Subject \@pdfsubject}%
10918   \Hy@DisableOption{pdfauthor}%
10919   \Hy@DisableOption{pdftitle}%
10920   \Hy@DisableOption{pdfsubject}%
10921   \Hy@DisableOption{pdfcreator}%
10922   \Hy@DisableOption{pdfcreationdate}%
10923   \Hy@DisableOption{pdfmoddate}%
10924   \Hy@DisableOption{pdfproducer}%
10925   \Hy@DisableOption{pdfkeywords}%
10926   \Hy@DisableOption{pdftrapped}%
10927   \Hy@DisableOption{pdfinfo}%
10928 }
10929 \def\PDF@SetupDoc{%
10930   \def\Hy@temp{}%
10931   \ifx\@pdfstartpage\@empty
10932     \else
10933       \ifx\@pdfstartview\@empty
10934         \else
10935           \edef\Hy@temp{%
```

```

10936     ,Page=\@pdfstartpage
10937     ,View=\@pdfstartview
10938   }%
10939   \fi
10940 \fi
10941 \edef\Hy@temp{%
10942   \noexpand\pdfmark{%
10943     pdfmark=/DOCVIEW,%
10944     PageMode=/\@pdfpagemode
10945   \Hy@temp
10946   }%
10947 }%
10948 \Hy@temp
10949 \ifx\@pdfpagescrop\@empty
10950 \else
10951   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10952 \fi
10953 \edef\Hy@temp{%
10954   \ifHy@toolbar\else /HideToolbar true\fi
10955   \ifHy@menubar\else /HideMenubar true\fi
10956   \ifHy>windowui\else /HideWindowUI true\fi
10957   \ifHy@fitwindow /FitWindow true\fi
10958   \ifHy@centerwindow /CenterWindow true\fi
10959   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10960   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10961   \Hy@UseNameKey{Direction}\@pdfdirection
10962   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10963   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10964   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10965   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10966   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10967   \Hy@UseNameKey{Duplex}\@pdfduplex
10968   \ifx\@pdfpicktraybypdfsize\@empty
10969   \else
10970     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10971   \fi
10972   \ifx\@pdfprintpagerange\@empty
10973   \else
10974     /PrintPageRange[\@pdfprintpagerange]%
10975   \fi
10976   \ifx\@pdfnumcopies\@empty
10977   \else
10978     /NumCopies \@pdfnumcopies
10979   \fi
10980 }%
10981 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10982 \pdfmark{%
10983   pdfmark=/PUT,%
10984   Raw={%
10985     \string{Catalog\string}<<%
10986     \ifx\Hy@temp\@empty
10987     \else
10988       /ViewerPreferences<<\Hy@temp>>%
10989     \fi
10990     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10991     \ifx\@pdflang\@empty
10992     \else

```

```

10993      /Lang(\@pdflang)%
10994      \fi
10995      \ifx\@baseurl\@empty
10996      \else
10997      /URI<</Base(\Hy@pstringB)>>%
10998      \fi
10999      >>%
11000    }%
11001  }%
11002 }
11003 \providecommand*\@pdfview{XYZ}
11004 \providecommand*\@pdfviewparams{ %
11005   gsave revscl currentpoint grestore %
11006   72 add exch pop null exch null%
11007 }
11008 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

11009 \g@addto@macro\Hy@FirstPageHook{%
11010   \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

11011   /DvipsToPDF { 65781 div } def%
11012   /PDFToDvips { 65781 mul } def%
11013   /BPToDvips{65781 mul}def%
11014   /HyperBorder { 1 PDFToDvips } def%
11015   /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.

```

11016   /BorderArrayPatch{%
11017     [exch{%
11018       dup dup type/integertype eq exch type/realtype eq or%
11019       {BPToDvips}if%
11020     }forall]%
11021   }def%
11022   /H.S {%
11023     currentpoint %
11024     HyperBorder add /pdf@lly exch def %
11025     dup DvipsToPDF 72 add /pdf@hoff exch def %
11026     HyperBorder sub /pdf@llx exch def%
11027   } def%
11028   /H.L {%
11029     2 sub %
11030     PDFToDvips /HyperBase exch def %
11031     currentpoint %
11032     HyperBase sub /pdf@ury exch def%
11033     /pdf@urx exch def%
11034   } def%
11035   /H.A {%
11036     H.L %
11037     currentpoint exch pop %
11038     HyperBase sub % baseline skip
11039     DvipsToPDF /pdf@voff exch def%

```

```

11040 } def%
11041 /H.R {%
11042   currentpoint %
11043   HyperBorder sub /pdf@ury exch def %
11044   HyperBorder add /pdf@urx exch def %
11045   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11046 } def%
11047 }%
11048 }
11049 </dvipsone>

```

46.13 TeX4ht

```

11050 <*tex4ht>
11051 \providecommand*{\XR@ext}{html}
11052 \def\Hy@raisedlink{}
11053 \@ifpackageloaded{tex4ht}{%
11054   \typeout{hyperref tex4ht: tex4ht already loaded}%
11055 }{%
11056   \RequirePackage[hx4ht]{tex4ht}%
11057 }
11058 \hyperlinkfileprefix{}
11059 \def\PDF@FinishDoc{}
11060 \def\PDF@SetupDoc{%
11061   \ifx\@baseurl\@empty
11062   \else
11063     \special{t4ht=<base href="\@baseurl">}%
11064   \fi
11065 }
11066 \def\hyper@anchor#1{%
11067   \Hy@SaveLastskip
11068   \Hy@VerboseAnchor{#1}%
11069   \begingroup
11070     \let\protect=\string
11071     \special{t4ht=<a name=%
11072       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11073   \endgroup
11074   \Hy@activeanchortrue
11075   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11076   \special{t4ht=</a>}%
11077   \Hy@activeanchorfalse
11078   \Hy@RestoreLastskip
11079 }
11080 \def\hyper@anchorstart#1{%
11081   \Hy@SaveLastskip
11082   \Hy@VerboseAnchor{#1}%
11083   \begingroup
11084     \hyper@chars\special{t4ht=<a name=%
11085       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11086   \endgroup
11087   \Hy@activeanchortrue
11088 }
11089 \def\hyper@anchorend{%
11090   \special{t4ht=</a>}%
11091   \Hy@activeanchorfalse
11092   \Hy@RestoreLastskip
11093 }
11094 \def\@urltype{url}

```

```

11095 \def\hyper@linkstart#1#2{%
11096   \Hy@VerboseLinkStart{#1}{#2}%
11097   \expandafter\Hy@colorlink\csname @#1color\endcsname
11098   \def\Hy@tempa{#1}%
11099   \ifx\Hy@tempa \@urltype
11100     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11101   \else
11102     \begingroup
11103       \hyper@chars
11104       \special{t4ht=<a href=%
11105         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
11106     \endgroup
11107   \fi
11108 }
11109 \def\hyper@linkend{%
11110   \special{t4ht=</a>}%
11111   \Hy@endcolorlink
11112 }
11113 \def\hyper@linkfile#1#2#3{%
11114   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11115 }
11116 \def\hyper@linkurl#1#2{%
11117   \leavevmode
11118   \ifHy@raiselinks
11119     \setbox\@tempboxa=\color@hbox #1\color@endbox
11120     \@linkdim\dp\@tempboxa
11121     \lower\@linkdim\hbox{%
11122       \begingroup
11123         \hyper@chars
11124         \special{%
11125           t4ht=<a href=\hyper@quote#2\hyper@quote>%
11126         }%
11127       \endgroup
11128     }%
11129     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11130     \@linkdim\ht\@tempboxa
11131     \advance\@linkdim by -6.5\p@
11132     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11133   \else
11134     \begingroup
11135       \hyper@chars
11136       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11137       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11138       \special{t4ht=</a>}%
11139     \endgroup
11140   \fi
11141 }

```

Poor implementation of \hyper@link without considering #1.

```

11142 \def\hyper@link#1#2#3{%
11143   \Hy@VerboseLinkStart{#1}{#2}%
11144   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
11145 }
11146 \def\hyper@image#1#2{%
11147   \begingroup
11148     \hyper@chars
11149     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11150   \endgroup

```

```

11151 }
11152 \let\autoref\ref
11153 \ifx \rEfLiNK \UnDef
11154   \def\rEfLiNK #1#2{#2}%
11155 \fi
11156 \def\backref#1{}
11157 </tex4ht>
11158 <*tex4htcfg>
11159 \IfFileExists{\jobname.cfg}{\endinput}{}
11160 \Preamble{html}
11161   \begin{document}%
11162 \EndPreamble
11163 \def\TeX{\TeX}
11164 \def\OMEGA{\Omega}
11165 \def\LaTeX{\LaTeX}
11166 \def\LaTeXe{\LaTeX2e}
11167 \def\eTeX{e-TeX}
11168 \def\MF{Metafont}
11169 \def\MP{MetaPost}
11170 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11171 <*pdfmark>
11172 \long\def\@Form[#1]{%
11173   \g@addto@macro\Hy@FirstPageHook{%
11174     \headerps@out{%
11175 [%
11176   /__objdef{pdfDocEncoding}%
11177   /type/dict%
11178   /OBJ pdfmark%
11179 [%
11180   {pdfDocEncoding}%
11181   <<%
11182     /Type/Encoding%
11183     /Differences%
11184     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11185     /tilde %
11186     39/quotesingle %
11187     96/grave %
11188     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11189     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11190     /quotedblbase/quotedblleft/quotedblright/quoteleft%
11191     /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11192     /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11193     164/currency %
11194     166/brokenbar %
11195     168/dieresis/copyright/ordfeminine %
11196     172/logicalnot/.notdef/registered/macron/degree/plusminus%
11197     /twosuperior/threesuperior/acute/mu %
11198     183/periodcentered/cedilla/onesuperior/ordmasculine %
11199     188/onequarter/onehalf/threequarters %
11200     192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11201     /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11202     /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11203     /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%

```

```

11204      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11205      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11206      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11207      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
11208      /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11209      /ucircumflex/udieresis/yacute/thorn/ydieresis%
11210    ]%
11211  >>%
11212 /PUT pdfmark%
11213 [%
11214   /_objdef{ZaDb}%
11215   /type/dict%
11216 /OBJ pdfmark%
11217 [%
11218   {ZaDb}%
11219   <<%
11220     /Type/Font%
11221     /Subtype/Type1%
11222     /Name/ZaDb%
11223     /BaseFont/ZapfDingbats%
11224   >>%
11225 /PUT pdfmark%
11226 [%
11227   /_objdef{Helv}%
11228   /type/dict%
11229 /OBJ pdfmark%
11230 [%
11231   {Helv}%
11232   <<%
11233     /Type/Font%
11234     /Subtype/Type1%
11235     /Name/Helv%
11236     /BaseFont/Helvetica%
11237     /Encoding{pdfDocEncoding}%
11238   >>%
11239 /PUT pdfmark%
11240 [%
11241   /_objdef{aform}%
11242   /type/dict%
11243 /OBJ pdfmark%
11244 [%
11245   /_objdef{afields}%
11246   /type/array%
11247 /OBJ pdfmark%
11248 {%
11249   [%
11250     /BBox[0 0 100 100]%
11251     /_objdef{Check}%
11252   /BP pdfmark %
11253   1 0 0 setrgbcolor%
11254   /ZapfDingbats 80 selectfont %
11255   20 20 moveto%
11256   (4)show%
11257   [/EP pdfmark%
11258   [%
11259     /BBox[0 0 100 100]%
11260     /_objdef{Cross}%

```

```

11261 /BP pdfmark %
11262 1 0 0 setrgbcolor%
11263 /ZapfDingbats 80 selectfont %
11264 20 20 moveto%
11265 (8)show%
11266 [/EP pdfmark%
11267 [%
11268 /BBox[0 0 250 100]%
11269 /_objdef{Submit}%
11270 /BP pdfmark %
11271 0.6 setgray %
11272 0 0 250 100 rectfill %
11273 1 setgray %
11274 2 2 moveto %
11275 2 98 lineto %
11276 248 98 lineto %
11277 246 96 lineto %
11278 4 96 lineto %
11279 4 4 lineto %
11280 fill %
11281 0.34 setgray %
11282 248 98 moveto %
11283 248 2 lineto %
11284 2 2 lineto %
11285 4 4 lineto %
11286 246 4 lineto %
11287 246 96 lineto %
11288 fill%
11289 /Helvetica 76 selectfont %
11290 0 setgray %
11291 8 22.5 moveto%
11292 (Submit)show%
11293 [/EP pdfmark%
11294 [%
11295 /BBox[0 0 250 100]%
11296 /_objdef{SubmitP}%
11297 /BP pdfmark %
11298 0.6 setgray %
11299 0 0 250 100 rectfill %
11300 0.34 setgray %
11301 2 2 moveto %
11302 2 98 lineto %
11303 248 98 lineto %
11304 246 96 lineto %
11305 4 96 lineto %
11306 4 4 lineto %
11307 fill %
11308 1 setgray %
11309 248 98 moveto %
11310 248 2 lineto %
11311 2 2 lineto %
11312 4 4 lineto %
11313 246 4 lineto %
11314 246 96 lineto %
11315 fill%
11316 /Helvetica 76 selectfont %
11317 0 setgray %

```

```

11318 10 20.5 moveto%
11319 (Submit)show%
11320 [/EP pdfmark%
11321 } ?pdfmark%
11322 [%
11323 {aform}%
11324 <<%
11325 /Fields{afields}%
11326 /DR<<%
11327 /Font<<%
11328 /ZaDb{ZaDb}%
11329 /Helv{Helv}%
11330 >>%
11331 >>%
11332 /DA(/Helv 10 Tf 0 g)%
11333 /CO{corder}%
11334 \ifHy@pdfa
11335 \else
11336 /NeedAppearances true%
11337 \fi
11338 >>%
11339 /PUT pdfmark%
11340 [%
11341 {Catalog}%
11342 <<%
11343 /AcroForm{aform}%
11344 >>%
11345 /PUT pdfmark%
11346 [%
11347 /_objdef{corder}%
11348 /type/array%
11349 /OBJ pdfmark% dps
11350 }}%
11351 \setkeys{Form}{#1}%
11352 }
11353 \def\@endForm{}
11354 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11355 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11356 }
11357 \def\@TextField[#1]#2{% parameters, label
11358 \def\Fld@name{#2}%
11359 \def\Fld@default{}%
11360 \let\Fld@value\@empty
11361 \def\Fld@width{\DefaultWidthofText}%
11362 \def\Fld@height{%
11363 \ifFld@multiline
11364 \DefaultHeightofTextMultiline
11365 \else
11366 \DefaultHeightofText
11367 \fi
11368 }%
11369 \begingroup
11370 \Field@toks={}%
11371 \expandafter\HyField@SetKeys\expandafter{%
11372 \DefaultOptionsofText,#1%
11373 }%
11374 \HyField@FlagsText

```

```

11375 \ifFld@hidden\def\Fld@width{1sp}\fi
11376 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11377 \LayoutTextField{#2}{%
11378   \Hy@escapeform\PDFForm@Text
11379   \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11380     pdfmark=/ANN,Raw={\PDFForm@Text}%
11381   }%
11382 }%
11383 \endgroup
11384 }
11385 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11386   \def\Fld@name{#2}%
11387   \let\Fld@default\relax
11388   \let\Fld@value\relax
11389   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11390   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11391   \begingroup
11392     \Fld@menulength=0 %
11393     \@tempdima\z@
11394     \@for\@curropt:=#3\do{%
11395       \expandafter\Fld@checkequals\@curropt==\%
11396       \Hy@StepCount\Fld@menulength
11397       \settowidth{\@tempdimb}{\@currDisplay}%
11398       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11399     }%
11400     \advance\@tempdima by 15\p@
11401     \Field@toks={ }%
11402     \begingroup
11403       \HyField@SetKeys{#1}%
11404     \edef\x{\endgroup
11405       \noexpand\expandafter
11406       \noexpand\HyField@SetKeys
11407       \noexpand\expandafter{%
11408         \expandafter\noexpand\csname DefaultOptionsof%
11409           \ifFld@radio
11410             Radio%
11411           \else
11412             \ifFld@combo
11413               \ifFld@popdown
11414                 PopdownBox%
11415               \else
11416                 ComboBox%
11417             \fi
11418           \else
11419             ListBox%
11420           \fi
11421         \fi
11422       \endcsname
11423     }%
11424   }\x
11425   \HyField@SetKeys{#1}%
11426   \ifFld@hidden\def\Fld@width{1sp}\fi
11427   \ifx\Fld@value\relax
11428     \let\Fld@value\Fld@default
11429   \fi
11430   \LayoutChoiceField{#2}{%
11431     \ifFld@radio

```

```

11432 \HyField@FlagsRadioButton
11433 \@@Radio{#3}%
11434 \else
11435 \beginngroup
11436 \HyField@FlagsChoice
11437 \ifdim\Fld@width<\@tempdima
11438 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11439 \edef\Fld@width{\the\@tempdima}%
11440 \fi
11441 \ifFld@combo
11442 \else
11443 \@tempdima=\the\Fld@menulength\Fld@charsize
11444 \advance\@tempdima by \Fld@borderwidth bp %
11445 \advance\@tempdima by \Fld@borderwidth bp %
11446 \edef\Fld@height{\the\@tempdima}%
11447 \fi
11448 \@@ListBox{#3}%
11449 \endgroup
11450 \fi
11451 }%
11452 \endgroup
11453 }
11454 \def\@@Radio#1{%
11455 \Fld@listcount=0 %
11456 \for\@curropt:=#1\do{%
11457 \expandafter\Fld@checkequals\@curropt==\%
11458 \Hy@StepCount\Fld@listcount
11459 \@currDisplay\space
11460 \Hy@escapeform\PDFForm@Radio
11461 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11462 pdfmark=/ANN,%
11463 Raw={%
11464 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11465 }%
11466 } % deliberate space between radio buttons
11467 }%
11468 }
11469 \newcount\Fld@listcount
11470 \def\@@ListBox#1{%
11471 \HyField@PDFChoices{#1}%
11472 \Hy@escapeform\PDFForm@List
11473 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11474 pdfmark=/ANN,Raw={\PDFForm@List}%
11475 }%
11476 }
11477 \def\@PushButton[#1]#2{% parameters, label
11478 \def\Fld@name{#2}%
11479 \beginngroup
11480 \Field@toks={ }%
11481 \expandafter\HyField@SetKeys\expandafter{%
11482 \DefaultOptionsofPushButton,#1%
11483 }%
11484 \ifHy@pdfa
11485 \PackageError{hyperref}{%
11486 PDF/A: Push button with JavaScript is prohibited%
11487 }\@ehc
11488 \LayoutPushButtonField{%

```

```

11489     \leavevmode
11490     \MakeButtonField{#2}%
11491   }%
11492 \else
11493   \HyField@FlagsPushButton
11494   \ifFld@hidden\def\Fld@width{1sp}\fi
11495   \LayoutPushButtonField{%
11496     \leavevmode
11497     \Hy@escapeform\PDFForm@Push
11498     \pdfmark[\MakeButtonField{#2}]{%
11499       pdfmark=/ANN,Raw={\PDFForm@Push}%
11500     }%
11501   }%
11502 \fi
11503 \endgroup
11504 }
11505 \def\@Submit[#1]#2{%
11506   \Field@toks={ }%
11507   \def\Fld@width{\DefaultWidthofSubmit}%
11508   \def\Fld@height{\DefaultHeightofSubmit}%
11509   \begingroup
11510     \expandafter\HyField@SetKeys\expandafter{%
11511       \DefaultOptionsofSubmit,#1%
11512     }%
11513     \HyField@FlagsPushButton
11514     \HyField@FlagsSubmit
11515     \ifFld@hidden\def\Fld@width{1sp}\fi
11516     \Hy@escapeform\PDFForm@Submit
11517     \pdfmark[\MakeButtonField{#2}]{%
11518       pdfmark=/ANN,%
11519       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11520     }%
11521   \endgroup
11522 }
11523 \def\@Reset[#1]#2{%
11524   \Field@toks={ }%
11525   \def\Fld@width{\DefaultWidthofReset}%
11526   \def\Fld@height{\DefaultHeightofReset}%
11527   \begingroup
11528     \expandafter\HyField@SetKeys\expandafter{%
11529       \DefaultOptionsofReset,#1%
11530     }%
11531     \leavevmode
11532     \ifHy@pdfa
11533       \PackageError{hyperref}{%
11534         PDF/A: Reset action is prohibited%
11535       }\@ehc
11536       \MakeButtonField{#2}%
11537     \else
11538       \HyField@FlagsPushButton
11539       \ifFld@hidden\def\Fld@width{1sp}\fi
11540       \Hy@escapeform\PDFForm@Reset
11541       \pdfmark[\MakeButtonField{#2}]{%
11542         pdfmark=/ANN,Raw={\PDFForm@Reset}%
11543       }%
11544     \fi
11545   \endgroup

```

```

11546 }%
11547 \def\@CheckBox[#1]#2{% parameters, label
11548   \def\Fld@name{#2}%
11549   \def\Fld@default{0}%
11550   \begingroup
11551     \def\Fld@width{\DefaultWidthofCheckBox}%
11552     \def\Fld@height{\DefaultHeightofCheckBox}%
11553     \Field@toks={ }%
11554     \expandafter\HyField@SetKeys\expandafter{%
11555       \DefaultOptionsofCheckBox,#1%
11556     }%
11557     \HyField@FlagsCheckBox
11558     \ifFld@hidden\def\Fld@width{1sp}\fi
11559     \LayoutCheckField{#2}{%
11560       \Hy@escapeform\PDFForm@Check
11561       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11562         pdfmark=/ANN,Raw={\PDFForm@Check}%
11563       }%
11564     }%
11565   \endgroup
11566 }
11567 \</pdfmark>

```

47.2 HyperTeX

```

11568 \<*hypertex>
11569 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11570 \def\@endForm{}
11571 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11572   \typeout{Sorry, HyperTeX does not support FORM gauges}%
11573 }
11574 \def\@TextField[#1]#2{% parameters, label
11575   \typeout{Sorry, HyperTeX does not support FORM text fields}%
11576 }
11577 \def\@CheckBox[#1]#2{% parameters, label
11578   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11579 }
11580 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11581   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11582 }
11583 \def\@PushButton[#1]#2{% parameters, label
11584   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11585 }
11586 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11587 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11588 \</hypertex>

```

47.3 TeX4ht

```

11589 \<*tex4ht>
11590 \def\@Form[#1]{%
11591   \setkeys{Form}{#1}%
11592   \HCode{<form action="\Form@action" method="\Form@method">}%
11593 }
11594 \def\@endForm{\HCode{</form>}}
11595 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11596   \typeout{Sorry, TeX4ht does not support gauges}%
11597 }
11598 \def\@TextField[#1]#2{% parameters, label

```

```

11599 \let\Hy@reserved@a\@empty
11600 \def\Fld@name{#2}%
11601 \def\Fld@default{}%
11602 \bgroup
11603 \Field@toks={ }%
11604 \setkeys{Field}{#1}%
11605 \HCode{<label for="\Fld@name">#2</label>}%
11606 \ifFld@password
11607 \@@PasswordField
11608 \else
11609 \@@TextField
11610 \fi
11611 \egroup
11612 }
11613 \def\@@PasswordField{%
11614 \HCode{%
11615 <input type="password" %
11616 id="\Fld@name" %
11617 name="\Fld@name" %
11618 \ifFld@hidden type="hidden" \fi
11619 value="\Fld@default" %
11620 \the\Field@toks
11621 >%
11622 }%
11623 }
11624 \def\@@TextField{%
11625 \ifFld@multiline
11626 \HCode{<textarea %
11627 \ifFld@readonly readonly \fi
11628 id="\Fld@name" %
11629 name="\Fld@name" %
11630 \ifFld@hidden type="hidden" \fi
11631 \the\Field@toks>%
11632 }%
11633 \Fld@default
11634 \HCode{</textarea>}%
11635 \else
11636 \HCode{<input type="text" %
11637 \ifFld@readonly readonly \fi
11638 id="\Fld@name" %
11639 name="\Fld@name" %
11640 \ifFld@hidden type="hidden" \fi
11641 value="\Fld@default" %
11642 \the\Field@toks>%
11643 }%
11644 \fi
11645 }
11646 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11647 \def\Fld@name{#2}%
11648 \def\Fld@default{}%
11649 \let\Hy@reserved@a\relax
11650 \beginngroup
11651 \expandafter\Fld@findlength#3\\%
11652 \Field@toks={ }%
11653 \setkeys{Field}{#1}%
11654 #2%
11655 \ifFld@radio

```

```

11656     \expandafter\@@Radio#3\\%
11657     \else
11658     \expandafter\@@Menu#3\\%
11659     \fi
11660 \endgroup
11661 }
11662 \def\Fld@findlength#1\\{%
11663   \Fld@menulength=0 %
11664   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11665 }
11666 \def\@@Menu#1\\{%
11667   \HCode{<select size="\the\Fld@menulength" %
11668     name="\Fld@name" %
11669     \the\Field@toks>%
11670   }%
11671   \@for\@curropt:=#1\do{%
11672     \expandafter\Fld@checkequals\@curropt==\\%
11673     \HCode{<option %
11674       \ifx\@curropt\Fld@default selected \fi
11675       value="\@currValue">\@currDisplay</option>%
11676     }%
11677   }%
11678   \HCode{</select>}%
11679 }
11680 \def\@@Radio#1\\{%
11681   \@for\@curropt:=#1\do{%
11682     \expandafter\Fld@checkequals\@curropt==\\%
11683     \HCode{<input type="radio" %
11684       \ifx\@curropt\Fld@default checked \fi
11685       name="\Fld@name" %
11686       value="\@currValue" %
11687       \the\Field@toks>%
11688     }%
11689     \@currDisplay
11690   }%
11691 }
11692 \def\@PushButton[#1]#2{% parameters, label
11693   \def\Fld@name{#2}%
11694   \bgroup
11695   \Field@toks={ }%
11696   \setkeys{Field}{#1}%
11697   \HCode{<input type="button" %
11698     name="\Fld@name" %
11699     value="#2" %
11700     \the\Field@toks>%
11701   }%
11702   \HCode{</button>}%
11703   \egroup
11704 }
11705 \def\@Submit[#1]#2{%
11706   \HCode{<button type="submit">#2</button>}%
11707 }
11708 \def\@Reset[#1]#2{%
11709   \HCode{<button type="reset">#2</button>}%
11710 }
11711 \def\@CheckBox[#1]#2{% parameters, label
11712   \let\Hy@reserved@a\@empty

```

```

11713 \def\Fld@name{#2}%
11714 \def\Fld@default{0}%
11715 \bgroup
11716 \Field@toks={ }%
11717 \setkeys{Field}{#1}%
11718 \HCode{<input type="checkbox" %
11719 \ifFld@checked checked \fi
11720 \ifFld@disabled disabled \fi
11721 \ifFld@readonly readonly \fi
11722 name="\Fld@name" %
11723 \ifFld@hidden type="hidden" \fi
11724 value="\Fld@default" %
11725 \the\Field@toks>%
11726 #2%
11727 }%
11728 \egroup
11729 }
11730 </tex4ht>

```

47.4 pdfTeX

```

11731 <*pdfTeX>
11732 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11733 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11734 }
11735 \def\MakeFieldObject#1#2{\sbox0{#1}%
11736 \immediate\pdfxform0 %
11737 \expandafter\edef\csname #2Object\endcsname{%
11738 \the\pdfastxform\space 0 R%
11739 }%
11740 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
11741 }%
11742 \def\HyField@afields{}
11743 \begingroup\expandafter\expandafter\expandafter\endgroup
11744 \expandafter\ifx\csname pdfastlink\endcsname\relax
11745 \let\HyField@AddToFields\relax
11746 \PackageInfo{hyperref}{%
11747 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11748 \MessageBreak
11749 Adobe Reader/Acrobat accepts an empty /Field array,%
11750 \MessageBreak
11751 but other PDF viewers might complain%
11752 }%
11753 \else
11754 \def\HyField@AuxAddToFields#1{%
11755 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11756 \Hy@AtBeginDocument{%
11757 \if@filesw
11758 \immediate\write\@mainaux{%
11759 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11760 }%
11761 \fi
11762 \let\HyField@AfterAuxOpen\@firstofone
11763 \def\HyField@AuxAddToFields#1{%
11764 \xdef\HyField@afields{%
11765 \ifx\HyField@afields\@empty
11766 \else
11767 \HyField@afields

```

```

11768     \space
11769     \fi
11770     #1 0 R%
11771   }%
11772 }%
11773 }%
11774 \def\HyField@AddToFields{%
11775   \expandafter\HyField@@AddToFields\expandafter{%
11776     \the\pdfastlink
11777   }%
11778 }%
11779 \def\HyField@@AddToFields#1{%
11780   \HyField@AfterAuxOpen{%
11781     \if@filesw
11782       \write\@mainaux{%
11783         \string\HyField@AuxAddToFields{#1}%
11784       }%
11785     \fi
11786   }%
11787 }%
11788 \fi
11789 \def\@Form[#1]{%
11790   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11791   \setkeys{Form}{#1}%
11792   \Hy@FormObjects
11793   \ifnum\pdfTeXversion>13 %
11794     \pdfrefobj\OBJ@pdfdocencoding
11795     \pdfrefobj\OBJ@ZaDb
11796     \pdfrefobj\OBJ@Helv
11797   \fi
11798   \AtVeryEndDocument{%
11799     \immediate\pdfobj{%
11800       <<%
11801         /Fields[\HyField@afields]%
11802         /DR<<%
11803         /Font<<%
11804           /ZaDb \OBJ@ZaDb\space 0 R%
11805           /Helv \OBJ@Helv\space 0 R%
11806         >>%
11807       >>%
11808       /DA(/Helv 10 Tf 0 g)%
11809       \ifHy@pdfa
11810       \else
11811         /NeedAppearances true%
11812       \fi
11813     >>%
11814   }%
11815   \edef\OBJ@acroform{\the\pdfastobj}%
11816   \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11817 }%
11818 \MakeFieldObject{%
Same as \ding{123} of package pifont.
11819   \begingroup
11820     \fontfamily{pzd}%
11821     \fontencoding{U}%
11822     \fontseries{m}%
11823     \fontshape{n}%

```

```

11824 \selectfont
11825 \char123 %
11826 \endgroup
11827 }{Ding}%
11828 \MakeFieldObject{%
11829 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11830 }{Submit}%
11831 \MakeFieldObject{%
11832 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11833 }{SubmitP}%
11834 }
11835 \def\@endForm{}
11836 \def\@TextField[#1]#2{% parameters, label
11837 \def\Fld@name{#2}%
11838 \def\Fld@default{}%
11839 \let\Fld@value\@empty
11840 \def\Fld@width{\DefaultWidthofText}%
11841 \def\Fld@height{%
11842 \ifFld@multiline
11843 \DefaultHeightofTextMultiline
11844 \else
11845 \DefaultHeightofText
11846 \fi
11847 }%
11848 \begingroup
11849 \Field@toks={ }%
11850 \expandafter\HyField@SetKeys\expandafter{%
11851 \DefaultOptionsofText,#1%
11852 }%
11853 \PDFForm@Name
11854 \HyField@FlagsText
11855 \ifFld@hidden\def\Fld@width{1sp}\fi
11856 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11857 \LayoutTextField{#2}{%
11858 \Hy@escapeform\PDFForm@Text
11859 \pdfstartlink user {\PDFForm@Text}\relax
11860 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11861 \HyField@AddToFields
11862 }%
11863 \endgroup
11864 }
11865 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11866 \def\Fld@name{#2}%
11867 \let\Fld@default\relax
11868 \let\Fld@value\relax
11869 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11870 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11871 \begingroup
11872 \Fld@menulength=0 %
11873 \@tempdima\z@
11874 \@for\@curropt:=#3\do{%
11875 \expandafter\Fld@checkequals\@curropt==\%
11876 \Hy@StepCount\Fld@menulength
11877 \settowidth{\@tempdimb}{\@currDisplay}%
11878 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11879 }%
11880 \advance\@tempdima by 15\p@

```

```

11881 \Field@toks={ }%
11882 \begingroup
11883 \HyField@SetKeys{#1}%
11884 \edef\x{\endgroup
11885 \noexpand\expandafter
11886 \noexpand\HyField@SetKeys
11887 \noexpand\expandafter{%
11888 \expandafter\noexpand\csname DefaultOptionsof%
11889 \ifFld@radio
11890 Radio%
11891 \else
11892 \ifFld@combo
11893 \ifFld@popdown
11894 PopdownBox%
11895 \else
11896 ComboBox%
11897 \fi
11898 \else
11899 ListBox%
11900 \fi
11901 \fi
11902 \endcsname
11903 }%
11904 }\x
11905 \HyField@SetKeys{#1}%
11906 \PDFForm@Name
11907 \ifFld@hidden\def\Fld@width{1sp}\fi
11908 \ifx\Fld@value\relax
11909 \let\Fld@value\Fld@default
11910 \fi
11911 \LayoutChoiceField{#2}{%
11912 \ifFld@radio
11913 \HyField@FlagsRadioButton
11914 \@@Radio{#3}%
11915 \else
11916 \begingroup
11917 \HyField@FlagsChoice
11918 \ifdim\Fld@width<\@tempdima
11919 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11920 \edef\Fld@width{\the\@tempdima}%
11921 \fi
11922 \ifFld@combo
11923 \else
11924 \@tempdima=\the\Fld@menulength\Fld@charsize
11925 \advance\@tempdima by \Fld@borderwidth bp %
11926 \advance\@tempdima by \Fld@borderwidth bp %
11927 \edef\Fld@height{\the\@tempdima}%
11928 \fi
11929 \@@Listbox{#3}%
11930 \endgroup
11931 \fi
11932 }%
11933 \endgroup
11934 }
11935 \def\@@Radio#1{%
11936 \Fld@listcount=0 %
11937 \@for\@curropt:=#1\do{%

```

```

11938 \expandafter\Fld@checkequals\@curropt==\%
11939 \Hy@StepCount\Fld@listcount
11940 \@currDisplay\space
11941 \leavevmode
11942 \Hy@escapeform\PDFForm@Radio
11943 \pdfstartlink user {%
11944 \PDFForm@Radio
11945 /AP<<%
11946 /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.

```

11947 /\@currValue\space \DingObject
11948 >>%
11949 >>%
11950 }%
11951 \relax
11952 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11953 \ifnum\Fld@listcount=1 %
11954 \HyField@AddToFields
11955 \fi
11956 \space % deliberate space between radio buttons
11957 }%
11958 }
11959 \newcount\Fld@listcount
11960 \def\@@ListBox#1{%
11961 \HyField@PDFChoices{#1}%
11962 \leavevmode
11963 \Hy@escapeform\PDFForm@List
11964 \pdfstartlink user {\PDFForm@List}\relax
11965 \MakeChoiceField{\Fld@width}{\Fld@height}%
11966 \pdfendlink
11967 \HyField@AddToFields
11968 }
11969 \def\@PushButton[#1]#2{% parameters, label
11970 \def\Fld@name{#2}%
11971 \begingroup
11972 \Field@toks={ }%
11973 \expandafter\HyField@SetKeys\expandafter{%
11974 \DefaultOptionsofPushButton,#1%
11975 }%
11976 \PDFForm@Name
11977 \ifHy@pdfa
11978 \PackageError{hyperref}{%
11979 PDF/A: Push button with JavaScript is prohibited%
11980 }\@ehc
11981 \LayoutPushButtonField{%
11982 \leavevmode
11983 \MakeButtonField{#2}%
11984 }%
11985 \else
11986 \HyField@FlagsPushButton
11987 \ifFld@hidden\def\Fld@width{1sp}\fi
11988 \LayoutPushButtonField{%
11989 \leavevmode
11990 \Hy@escapeform\PDFForm@Push
11991 \pdfstartlink user {\PDFForm@Push}\relax

```

```

11992 \MakeButtonField{#2}%
11993 \pdfendlink
11994 \HyField@AddToFields
11995 }%
11996 \fi
11997 \endgroup
11998 }
11999 \def\@Submit[#1]#2{%
12000 \Field@toks={ }%
12001 \def\Fld@width{\DefaultWidthofSubmit}%
12002 \def\Fld@height{\DefaultHeightofSubmit}%
12003 \begingroup
12004 \expandafter\HyField@SetKeys\expandafter{%
12005 \DefaultOptionsofSubmit,#1%
12006 }%
12007 \HyField@FlagsPushButton
12008 \HyField@FlagsSubmit
12009 \ifFld@hidden\def\Fld@width{1sp}\fi
12010 \leavevmode
12011 \Hy@escapeform\PDFForm@Submit
12012 \pdfstartlink user {%
12013 \PDFForm@Submit
12014 /AP<</N \SubmitObject/D \SubmitPObject>>%
12015 }%
12016 \relax
12017 \MakeButtonField{#2}%
12018 \pdfendlink
12019 \HyField@AddToFields
12020 \endgroup
12021 }
12022 \def\@Reset[#1]#2{%
12023 \Field@toks={ }%
12024 \def\Fld@width{\DefaultWidthofReset}%
12025 \def\Fld@height{\DefaultHeightofReset}%
12026 \begingroup
12027 \expandafter\HyField@SetKeys\expandafter{%
12028 \DefaultOptionsofReset,#1%
12029 }%
12030 \leavevmode
12031 \ifHy@pdfa
12032 \PackageError{hyperref}{%
12033 PDF/A: Reset action is prohibited%
12034 }\@ehc
12035 \MakeButtonField{#2}%
12036 \else
12037 \HyField@FlagsPushButton
12038 \ifFld@hidden\def\Fld@width{1sp}\fi
12039 \Hy@escapeform\PDFForm@Reset
12040 \pdfstartlink user {\PDFForm@Reset}\relax
12041 \MakeButtonField{#2}%
12042 \pdfendlink
12043 \HyField@AddToFields
12044 \fi
12045 \endgroup
12046 }
12047 \def\@CheckBox[#1]#2{% parameters, label
12048 \def\Fld@name{#2}%

```

```

12049 \def\Fld@default{0}%
12050 \begingroup
12051 \def\Fld@width{\DefaultWidthofCheckBox}%
12052 \def\Fld@height{\DefaultHeightofCheckBox}%
12053 \Field@toks={ }%
12054 \expandafter\HyField@SetKeys\expandafter{%
12055 \DefaultOptionsofCheckBox,#1%
12056 }%
12057 \PDFForm@Name
12058 \HyField@FlagsCheckBox
12059 \ifFld@hidden\def\Fld@width{1sp}\fi
12060 \LayoutCheckField{#2}{%
12061 \Hy@escapeform\PDFForm@Check
12062 \pdfstartlink user {\PDFForm@Check}\relax
12063 \MakeCheckField{\Fld@width}{\Fld@height}%
12064 \pdfendlink
12065 \HyField@AddToFields
12066 }%
12067 \endgroup
12068 }
12069 \def\Hy@FormObjects{%
12070 \pdfobj {%
12071 <<%
12072 /Type/Encoding%
12073 /Differences%
12074 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12075 /ring/tilde %
12076 39/quotesingle %
12077 96/grave %
12078 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12079 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12080 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12081 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12082 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12083 164/currency %
12084 166/brokenbar %
12085 168/dieresis/copyright/ordfeminine %
12086 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12087 /twosuperior/threesuperior/acute/mu %
12088 183/periodcentered/cedilla/onesuperior/ordmasculine %
12089 188/onequarter/onehalf/threequarters %
12090 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12091 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12092 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12093 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12094 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12095 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12096 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12097 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12098 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12099 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12100 ]%
12101 >>%
12102 }%
12103 \xdef\OBJ@pdfdocencoding{\the\pdfflastobj}%
12104 \pdfobj{%
12105 <<%

```

```

12106 /Type/Font%
12107 /Subtype/Type1%
12108 /Name/ZaDb%
12109 /BaseFont/ZapfDingbats%
12110 >>%
12111 }%
12112 \xdef\OBJ@ZaDb{\the\pdfastobj}%
12113 \pdfobj{%
12114 <<%
12115 /Type/Font%
12116 /Subtype/Type1%
12117 /Name/Helv%
12118 /BaseFont/Helvetica%
12119 /Encoding \OBJ@pdfdocencoding\space 0 R%
12120 >>%
12121 }%
12122 \xdef\OBJ@Helv{\the\pdfastobj}%
12123 \global\let\Hy@FormObjects\relax
12124 }
12125 </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.

```

12126 <*dvipdfm | xetex>

```

\@Gauge

```

12127 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12128 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12129 }

```

\@Form

```

12130 \def\@Form[#1]{%
12131 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12132 \setkeys{Form}{#1}%
12133 \Hy@FormObjects
12134 \@pdfm@mark{obj @afields []}%
12135 \@pdfm@mark{obj @corder []}%
12136 \@pdfm@mark{%
12137 obj @aform <<%
12138 /Fields @afields%
12139 /DR<<%
12140 /Font<<%
12141 /ZaDb @OBJZaDb%
12142 /Helv @OBJHelv%
12143 >>%
12144 >>%
12145 /DA(/Helv 10 Tf 0 g)%
12146 /CO @corder%
12147 \ifHy@pdfa
12148 \else
12149 /NeedAppearances true%
12150 \fi
12151 >>%
12152 }%
12153 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12154 }

```

\@endForm

12155 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

12156 \def\dvipdfm@setdim{%
12157 height \the\ht\pdfm@box\space
12158 width \the\wd\pdfm@box\space
12159 depth \the\dp\pdfm@box\space
12160 }

\HyField@AnnotCount

12161 \newcount\HyField@AnnotCount
12162 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount

12163 \def\HyField@AdvanceAnnotCount{%
12164 \global\advance\HyField@AnnotCount\@ne
12165 }

\HyField@TheAnnotCount

12166 \def\HyField@TheAnnotCount{%
12167 \the\HyField@AnnotCount
12168 }

\@TextField

12169 \def\@TextField[#1]#2{% parameters, label
12170 \def\Fld@name{#2}%
12171 \def\Fld@default{}%
12172 \let\Fld@value\@empty
12173 \def\Fld@width{\DefaultWidthofText}%
12174 \def\Fld@height{%
12175 \ifFld@multiline
12176 \DefaultHeightofTextMultiline
12177 \else
12178 \DefaultHeightofText
12179 \fi
12180 }%
12181 \begingroup
12182 \Field@toks={ }%
12183 \expandafter\HyField@SetKeys\expandafter{%
12184 \DefaultOptionsofText,#1%
12185 }%
12186 \PDFForm@Name
12187 \HyField@FlagsText
12188 \ifFld@hidden\def\Fld@width{1sp}\fi
12189 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12190 \setbox\pdfm@box=\hbox{%
12191 \MakeTextField{\Fld@width}{\Fld@height}%
12192 }%
12193 \HyField@AdvanceAnnotCount
12194 \LayoutTextField{#2}{%
12195 \Hy@escapeform\PDFForm@Text
12196 \@pdfm@mark{%
12197 ann @text\HyField@TheAnnotCount\space
12198 \dvipdfm@setdim << \PDFForm@Text >>%
12199 }%

```

12200 }%
12201 \unhbox\pdfm@box
12202 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12203 % record in @afields array
12204 \endgroup
12205 }

```

\@ChoiceMenu

```

12206 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12207 \def\Fld@name{#2}%
12208 \let\Fld@default\relax
12209 \let\Fld@value\relax
12210 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12211 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12212 \begingroup
12213 \Fld@menulength=0 %
12214 \@tempdima\z@
12215 \@for\@curropt:=#3\do{%
12216 \expandafter\Fld@checkequals\@curropt==\%
12217 \Hy@StepCount\Fld@menulength
12218 \settowidth{\@tempdimb}{\@currDisplay}%
12219 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12220 }%
12221 \advance\@tempdima by 15\p@
12222 \Field@toks={ }%
12223 \begingroup
12224 \HyField@SetKeys{#1}%
12225 \edef\x{\endgroup
12226 \noexpand\expandafter
12227 \noexpand\HyField@SetKeys
12228 \noexpand\expandafter{%
12229 \expandafter\noexpand\csname DefaultOptionsof%
12230 \ifFld@radio
12231 Radio%
12232 \else
12233 \ifFld@combo
12234 \ifFld@popdown
12235 PopdownBox%
12236 \else
12237 ComboBox%
12238 \fi
12239 \else
12240 ListBox%
12241 \fi
12242 \fi
12243 \endcsname
12244 }%
12245 }\x
12246 \HyField@SetKeys{#1}%
12247 \PDFForm@Name
12248 \ifFld@hidden\def\Fld@width{1sp}\fi
12249 \ifx\Fld@value\relax
12250 \let\Fld@value\Fld@default
12251 \fi
12252 \LayoutChoiceField{#2}{%
12253 \ifFld@radio
12254 \HyField@FlagsRadioButton

```

```

12255 \@@Radio{#3}%
12256 \else
12257 \beginingroup
12258 \HyField@FlagsChoice
12259 \ifdim\Fld@width<\@tempdima
12260 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12261 \edef\Fld@width{\the\@tempdima}%
12262 \fi
12263 \ifFld@combo
12264 \else
12265 \@tempdima=\the\Fld@menulength\Fld@charsize
12266 \advance\@tempdima by \Fld@borderwidth bp %
12267 \advance\@tempdima by \Fld@borderwidth bp %
12268 \edef\Fld@height{\the\@tempdima}%
12269 \fi
12270 \@@ListBox{#3}%
12271 \endgroup
12272 \fi
12273 }%
12274 \endgroup
12275 }

```

\@@Radio

```

12276 \def\@@Radio#1{%
12277 \Fld@listcount=0 %
12278 \setbox\pdfm@box=\hbox{%
12279 \MakeRadioField{\Fld@width}{\Fld@height}%
12280 }%
12281 \@for\@curropt:=#1\do{%
12282 \expandafter\Fld@checkequals\@curropt==\%
12283 \Hy@StepCount\Fld@listcount
12284 \@currDisplay\space
12285 \leavevmode
12286 \Hy@escapeform\PDFForm@Radio
12287 \ifnum\Fld@listcount=1 %
12288 \HyField@AdvanceAnnotCount
12289 \fi
12290 \@pdfm@mark{%
12291 ann %
12292 \ifnum\Fld@listcount=1 %
12293 @radio\HyField@TheAnnotCount%
12294 \space
12295 \fi
12296 \dvi pdfm@setdim
12297 <<%
12298 \PDFForm@Radio
12299 /AP<</N<</\@currValue /null>>>>%
12300 >>%
12301 }%
12302 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12303 \ifnum\Fld@listcount=1 %
12304 \@pdfm@mark{%
12305 put @aflds @radio\HyField@TheAnnotCount
12306 }%
12307 \fi
12308 }%
12309 }

```

\Fld@listcount

12310 \newcount\Fld@listcount

\@@Listbox

```
12311 \def\@@Listbox#1{%
12312   \HyField@PDFChoices{#1}%
12313   \setbox\pdfm@box=\hbox{%
12314     \MakeChoiceField{\Fld@width}{\Fld@height}%
12315   }%
12316   \leavevmode
12317   \Hy@escapeform\PDFForm@List
12318   \HyField@AdvanceAnnotCount
12319   \@pdfm@mark{%
12320     ann @list\HyField@TheAnnotCount\space
12321     \dvipdfm@setdim
12322     <<\PDFForm@List>>%
12323   }%
12324   \unhbox\pdfm@box
12325   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12326 }
```

\@PushButton

```
12327 \def\@PushButton[#1]#2{% parameters, label
12328   \def\Fld@name{#2}%
12329   \begingroup
12330     \Field@toks={ }%
12331     \expandafter\HyField@SetKeys\expandafter{%
12332       \DefaultOptionsofPushButton,#1%
12333     }%
12334     \PDFForm@Name
12335     \ifHy@pdfa
12336       \PackageError{hyperref}{%
12337         PDF/A: Push button with JavaScript is prohibited%
12338       }\@ehc
12339       \LayoutPushButtonField{%
12340         \leavevmode
12341         \MakeButtonField{#2}%
12342       }%
12343     \else
12344       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12345       \HyField@FlagsPushButton
12346       \ifFld@hidden\def\Fld@width{1sp}\fi
12347       \HyField@AdvanceAnnotCount
12348       \LayoutPushButtonField{%
12349         \leavevmode
12350         \Hy@escapeform\PDFForm@Push
12351         \@pdfm@mark{%
12352           ann @push\HyField@TheAnnotCount\space
12353           \dvipdfm@setdim
12354           <<\PDFForm@Push>>%
12355         }%
12356       }%
12357       \unhbox\pdfm@box
12358       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12359     \fi
12360   \endgroup
12361 }
```

\@Submit

```
12362 \def\@Submit[#1]#2{%
12363   \Field@toks={ }%
12364   \def\Fld@width{\DefaultWidthofSubmit}%
12365   \def\Fld@height{\DefaultHeightofSubmit}%
12366   \begingroup
12367     \expandafter\HyField@SetKeys\expandafter{%
12368       \DefaultOptionsofSubmit,#1%
12369     }%
12370     \HyField@FlagsPushButton
12371     \HyField@FlagsSubmit
12372     \ifFld@hidden\def\Fld@width{1sp}\fi
12373     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12374     \leavevmode
12375     \Hy@escapeform\PDFForm@Submit
12376     \HyField@AdvanceAnnotCount
12377     \@pdfm@mark{%
12378       ann @submit\HyField@TheAnnotCount\space
12379       \dvipdfm@setdim
12380       <<\PDFForm@Submit>>%
12381     }%
12382     \unhbox\pdfm@box%
12383     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12384   \endgroup
12385 }
```

\@Reset

```
12386 \def\@Reset[#1]#2{%
12387   \Field@toks={ }%
12388   \def\Fld@width{\DefaultWidthofReset}%
12389   \def\Fld@height{\DefaultHeightofReset}%
12390   \begingroup
12391     \expandafter\HyField@SetKeys\expandafter{%
12392       \DefaultOptionsofReset,#1%
12393     }%
12394     \leavevmode
12395     \ifHy@pdfa
12396       \PackageError{hyperref}{%
12397         PDF/A: Reset action is prohibited%
12398       }\@ehc
12399       \MakeButtonField{#2}%
12400     \else
12401       \HyField@FlagsPushButton
12402       \ifFld@hidden\def\Fld@width{1sp}\fi
12403       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12404       \Hy@escapeform\PDFForm@Reset
12405       \HyField@AdvanceAnnotCount
12406       \@pdfm@mark{%
12407         ann @reset\HyField@TheAnnotCount\space
12408         \dvipdfm@setdim
12409         <<\PDFForm@Reset>>%
12410       }%
12411       \unhbox\pdfm@box
12412       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12413     \fi
12414   \endgroup
12415 }
```

\@CheckBox

```
12416 \def\@CheckBox[#1]#2{% parameters, label
12417 \def\Fld@name{#2}%
12418 \def\Fld@default{0}%
12419 \begingroup
12420 \def\Fld@width{\DefaultWidthofCheckBox}%
12421 \def\Fld@height{\DefaultHeightofCheckBox}%
12422 \Field@toks={ }%
12423 \expandafter\HyField@SetKeys\expandafter{%
12424 \DefaultOptionsofCheckBox,#1%
12425 }%
12426 \PDFForm@Name
12427 \HyField@FlagsCheckBox
12428 \ifFld@hidden\def\Fld@width{1sp}\fi
12429 \setbox\pdfm@box=\hbox{%
12430 \MakeCheckField{\Fld@width}{\Fld@height}%
12431 }%
12432 \HyField@AdvanceAnnotCount
12433 \LayoutCheckField{#2}{%
12434 \Hy@escapeform\PDFForm@Check
12435 \@pdfm@mark{%
12436 ann @check\HyField@TheAnnotCount\space
12437 \dvipdfm@setdim
12438 <<\PDFForm@Check>>%
12439 }%
12440 \unhbox\pdfm@box
12441 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12442 }%
12443 \endgroup
12444 }

12445 \def\Hy@FormObjects{%
12446 \@pdfm@mark{obj @OBJpdfdocencoding%
12447 <<%
12448 /Type/Encoding%
12449 /Differences[%
12450 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12451 39/quotesingle %
12452 96/grave %
12453 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12454 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12455 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12456 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12457 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12458 164/currency %
12459 166/brokenbar %
12460 168/dieresis/copyright/ordfeminine %
12461 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12462 /twosuperior/threesuperior/acute/mu %
12463 183/periodcentered/cedilla/onesuperior/ordmasculine %
12464 188/onequarter/onehalf/threequarters %
12465 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12466 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12467 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12468 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12469 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12470 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
```

```

12471      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12472      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12473      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12474      /thorn/ydieresis%
12475      ]%
12476      >>%
12477      }%
12478      \@pdfm@mark{obj @OBJZaDb%
12479      <<%
12480      /Type/Font%
12481      /Subtype/Type1%
12482      /Name/ZaDb%
12483      /BaseFont/ZapfDingbats%
12484      >>%
12485      }%
12486      \@pdfm@mark{obj @OBJHelv%
12487      <<%
12488      /Type/Font%
12489      /Subtype/Type1%
12490      /Name/Helv%
12491      /BaseFont/Helvetica%
12492      /Encoding @OBJpdfdocencoding%
12493      >>%
12494      }%
12495      \global\let\Hy@FormObjects\relax
12496      }
12497      </dvipdfm | xetex>

```

47.6 Common forms part

```

12498 <*pdfmform>

```

\Hy@escapestring

```

12499 \begingroup\expandafter\expandafter\expandafter\endgroup
12500 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12501   \let\Hy@escapestring\@firstofone
12502   \def\Hy@escapeform#1{%
12503     \ifHy@escapeform
12504       \def\Hy@escapestring##1{%
12505         \noexpand\Hy@escapestring{\noexpand##1}%
12506       }%
12507       \edef\Hy@temp{#1}%
12508       \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12509     \def\Hy@escapestring##1{%
12510       \ifundefined{Hy@esc@\string##1}{%
12511         ##1%
12512         \ThisShouldNotHappen
12513       }{%
12514         \csname Hy@esc@\string##1\endcsname
12515       }%
12516     }%
12517   \else
12518     \let\Hy@escapestring\@firstofone
12519   \fi
12520 }%
12521 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
12522   \ifx\#3\%

```

```

12523 \else
12524 \expandafter
12525 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12526 \Hy@ReturnAfterFi{%
12527 \Hy@@escapeform#3\@nil
12528 }%
12529 \fi
12530 }%
12531 \else
12532 \def\Hy@escapeform#1{%
12533 \ifHy@escapeform
12534 \let\Hy@escapestring\pdfescapestring
12535 \else
12536 \let\Hy@escapestring\@firstofone
12537 \fi
12538 }%
12539 \Hy@escapeform{}}%
12540 \fi

```

\PDFForm@Name

```

12541 \def\PDFForm@Name{%
12542 \begingroup
12543 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12544 \ifHy@unicode
12545 \Hy@unicodedefalse
12546 \fi
12547 \fi
12548 \HyPsd@XeTeXBigCharstrue
12549 \pdfstringdef\Hy@gtemp\Fld@name
12550 \endgroup
12551 \let\Fld@name\Hy@gtemp
12552 }

```

\PDFForm@Check

```

12553 \def\PDFForm@Check{%
12554 /Subtype/Widget%
12555 \Fld@annotflags
12556 /T(\Fld@name)%
12557 /FT/Btn%
12558 \Fld@flags
12559 /Q \Fld@align
12560 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12561 /MK<<%
12562 \ifnum\Fld@rotation=\z@
12563 \else
12564 /R \Fld@rotation
12565 \fi
12566 \ifx\Fld@bordercolor\relax
12567 \else
12568 /BC[\Fld@bordercolor]%
12569 \fi
12570 \ifx\Fld@bcolor\relax
12571 \else
12572 /BG[\Fld@bcolor]%
12573 \fi
12574 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12575 >>%

```

```

12576 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12577 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12578 /H/P%
12579 \ifFld@checked /V/Yes\else /V/Off\fi
12580 }

```

\PDFForm@Push

```

12581 \ifHy@pdfa
12582 \else
12583 \def\PDFForm@Push{%
12584 /Subtype/Widget%
12585 \Fld@annotflags
12586 /T(\Fld@name)%
12587 /FT/Btn%
12588 \Fld@flags
12589 /H/P%
12590 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12591 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12592 \ifx\Fld@bordercolor\relax\else 1\fi
12593 \space
12594 \else
12595 /MK<<%
12596 \ifnum\Fld@rotation=\z@
12597 \else
12598 /R \Fld@rotation
12599 \fi
12600 \ifx\Fld@bordercolor\relax
12601 \else
12602 /BC[\Fld@bordercolor]%
12603 \fi
12604 >>%
12605 \fi
12606 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12607 }%
12608 \fi

```

\Fld@additionalactions

```

12609 \def\Fld@@additionalactions{%
K input (keystroke) format
12610 \ifx\Fld@keystroke@code\@empty
12611 \else
12612 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12613 \fi
F display format
12614 \ifx\Fld@format@code\@empty
12615 \else
12616 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12617 \fi
V validation
12618 \ifx\Fld@validate@code\@empty
12619 \else
12620 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12621 \fi
C calculation
12622 \ifx\Fld@calculate@code\@empty

```

```

12623 \else
12624   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12625 \fi

Fo receiving the input focus
12626 \ifx\Fld@onfocus@code\@empty
12627 \else
12628   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12629 \fi

Bl loosing the input focus (blurred)
12630 \ifx\Fld@onblur@code\@empty
12631 \else
12632   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12633 \fi

D pressing the mouse button (down)
12634 \ifx\Fld@onmousedown@code\@empty
12635 \else
12636   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12637 \fi

U releasing the mouse button (up)
12638 \ifx\Fld@onmouseup@code\@empty
12639 \else
12640   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12641 \fi

E cursor enters the annotation's active area.
12642 \ifx\Fld@onenter@code\@empty
12643 \else
12644   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12645 \fi

X cursor exits the annotation's active area.
12646 \ifx\Fld@onexit@code\@empty
12647 \else
12648   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12649 \fi
12650 }

12651 \def\Fld@additionalactions{%
12652 \if\Fld@@additionalactions-%
12653 \else
12654   \ifHy@pdfa
12655   \else
12656     /AA<<\Fld@@additionalactions>>%
12657   \fi
12658 \fi
12659 }

\PDFForm@List
12660 \def\PDFForm@List{%
12661   /Subtype/Widget%
12662   \Fld@annotflags
12663   /T(\Fld@name)%
12664   /FT/Ch%
12665   \Fld@flags
12666   /Q \Fld@align
12667   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12668   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```

```

12669     \ifx\Fld@bordercolor\relax\else 1\fi
12670     \ifx\Fld@bcolor\relax    \else 1\fi
12671     \space
12672 \else
12673 /MK<<%
12674   \ifnum\Fld@rotation=\z@
12675   \else
12676   /R \Fld@rotation
12677   \fi
12678   \ifx\Fld@bordercolor\relax
12679   \else
12680   /BC[\Fld@bordercolor]%
12681   \fi
12682   \ifx\Fld@bcolor\relax
12683   \else
12684   /BG[\Fld@bcolor]%
12685   \fi
12686 >>%
12687 \fi
12688 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12689   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12690 \Fld@choices
12691 \Fld@additionalactions
12692 }

```

\PDFForm@Radio

```

12693 \def\PDFForm@Radio{%
12694 /Subtype/Widget%
12695 \Fld@annotflags
12696 /T(\Fld@name)%
12697 /FT/Btn%
12698 \Fld@flags
12699 /H/P%
12700 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12701 /MK<<%
12702   \ifnum\Fld@rotation=\z@
12703   \else
12704   /R \Fld@rotation
12705   \fi
12706   \ifx\Fld@bordercolor\relax
12707   \else
12708   /BC[\Fld@bordercolor]%
12709   \fi
12710   \ifx\Fld@bcolor\relax
12711   \else
12712   /BG[\Fld@bcolor]%
12713   \fi
12714   /CA(\Fld@radiosymbol)%
12715 >>%
12716 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12717   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12718 \ifx\@currValue\Fld@default
12719 /V/\Fld@default
12720 \else
12721 /V/Off%
12722 \fi
12723 \Fld@additionalactions

```

12724 }

\PDFForm@Text

```
12725 \def\PDFForm@Text{%
12726   /Subtype/Widget%
12727   \Fld@annotflags
12728   /T(\Fld@name)%
12729   /FT/Tx%
12730   \Fld@flags
12731   /Q \Fld@align
12732   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12733   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12734     \ifx\Fld@bordercolor\relax\else 1\fi
12735     \ifx\Fld@bcolor\relax \else 1\fi
12736     \space
12737   \else
12738     /MK<<%
12739     \ifnum\Fld@rotation=\z@
12740     \else
12741       /R \Fld@rotation
12742     \fi
12743     \ifx\Fld@bordercolor\relax
12744     \else
12745       /BC[\Fld@bordercolor]%
12746     \fi
12747     \ifx\Fld@bcolor\relax
12748     \else
12749       /BG[\Fld@bcolor]%
12750     \fi
12751     >>%
12752   \fi
12753   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12754     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12755   /DV(\Hy@escapestring{\Fld@default})%
12756   /V(\Hy@escapestring{\Fld@value})%
12757   \Fld@additionalactions
12758   \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12759 }
```

\PDFForm@Submit

```
12760 \def\PDFForm@Submit{%
12761   /Subtype/Widget%
12762   \Fld@annotflags
12763   /T(\Fld@name)%
12764   /FT/Btn%
12765   \Fld@flags
12766   /H/P%
12767   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12768   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12769     \ifx\Fld@bordercolor\relax\else 1\fi
12770     \space
12771   \else
12772     /MK<<%
12773     \ifnum\Fld@rotation=\z@
12774     \else
12775       /R \Fld@rotation
12776     \fi
```

```

12777 \ifx\Fld@bordercolor\relax
12778 \else
12779 /BC[\Fld@bordercolor]%
12780 \fi
12781 >>%
12782 \fi
12783 /A<<%
12784 /S/SubmitForm%
12785 /F<<%
12786 /FS/URL%
12787 /F(\Hy@escapestring{\Form@action})%
12788 >>%
12789 \Fld@submitflags
12790 >>%
12791 }

```

\PDFForm@Reset

```

12792 \ifHy@pdfa
12793 \else
12794 \def\PDFForm@Reset{%
12795 /Subtype/Widget%
12796 \Fld@annotflags
12797 /T(\Fld@name)%
12798 /FT/Btn%
12799 \Fld@flags
12800 /H/P%
12801 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12802 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12803 \ifx\Fld@bordercolor\relax\else 1\fi
12804 \space
12805 \else
12806 /MK<<%
12807 \ifnum\Fld@rotation=\z@
12808 \else
12809 /R \Fld@rotation
12810 \fi
12811 \ifx\Fld@bordercolor\relax
12812 \else
12813 /BC[\Fld@bordercolor]%
12814 \fi
12815 % /CA (Clear)
12816 % /AC (Done)
12817 >>%
12818 \fi
12819 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12820 /A<</S/ResetForm>>%
12821 }%
12822 \fi
12823 </pdfform>
12824 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `reper.sty`); it needed the `reper` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
12825 \def\phantomsection{%
12826   \Hy@MakeCurrentHrefAuto{section*}%
12827   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12828 }
12829 \</package>
```

48.1 Bookmarks

```
12830 \<*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
12831 \def\Hy@writebookmark#1#2#3#4#5{%
12832   % section number, text, label, level, file
12833   \ifx\WriteBookmarks\relax%
12834   \else
12835     \ifnum#4>\Hy@bookmarksdepth\relax
12836     \else
12837       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12838     \fi
12839   \fi
12840 }
12841 \def\Hy@currentbookmarklevel{0}
12842 \def\Hy@numberline#1{#1 }
12843 \def\@@@writetorep#1#2#3#4#5{%
12844   \begingroup
12845   \edef\Hy@tempa{#5}%
12846   \ifx\Hy@tempa\Hy@bookmarkstype
12847     \edef\Hy@level{#4}%
12848     \ifx\Hy@levelcheck Y%
12849       \@tempcnta\Hy@level\relax
12850       \advance\@tempcnta by -1 %
12851       \ifnum\Hy@currentbookmarklevel<\@tempcnta
12852         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12853       \advance\@tempcnta by 1 %
12854       \Hy@Warning{%
12855         Difference (\the\@tempcnta) between bookmark levels is %
12856         greater \MessageBreak than one, level fixed%
12857       }%
12858       \@tempcnta\Hy@currentbookmarklevel
```

```

12859     \advance\@tempcnta by 1 %
12860     \edef\Hy@level{\the\@tempcnta}%
12861     \fi
12862   \else
12863     \global\let\Hy@levelcheck Y%
12864     \fi
12865     \global\let\Hy@currentbookmarklevel\Hy@level
12866     \@tempcnta\Hy@level\relax
12867     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12868     \advance\@tempcnta by -1 %
12869     \edef\Hy@tempa{#3}%
12870     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12871     \ifx\Hy@tempa\Hy@tempb
12872       \Hy@Warning{%
12873         The anchor of a bookmark and its parent's must not%
12874         \MessageBreak be the same. Added a new anchor%
12875       }%
12876       \phantomsection
12877     \fi
12878     \ifHy@bookmarksnumbered
12879       \let\numberline\Hy@numberline
12880       \let\booknumberline\Hy@numberline
12881       \let\partnumberline\Hy@numberline
12882       \let\chapternumberline\Hy@numberline
12883     \else
12884       \let\numberline\@gobble
12885       \let\booknumberline\@gobble
12886       \let\partnumberline\@gobble
12887       \let\chapternumberline\@gobble
12888     \fi
12889     \HyPsd@XeTeXBigCharstrue
12890     \pdfstringdef\Hy@tempa{#2}%
12891     \HyPsd@SanitizeForOutFile\Hy@tempa
12892     \if@filesw
12893       \stepcounter{bookmark@seq@number}%
12894       \@ifundefined{@outlinefile}{%
12895         }{%
12896           \protected@write\@outlinefile{}{%
12897             \protect\BOOKMARK
12898             [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12899             {\Hy@tempa}{\Hy@tempb}%
12900             \@percentchar\space\thebookmark@seq@number
12901           }%
12902         }%
12903       \fi
12904     \fi
12905   \endgroup
12906 }
12907 \newcounter{bookmark@seq@number}

12908 \begingroup
12909   \lccode'('= '{%
12910   \lccode'('= '{%
12911   \lccode'1=\z@
12912   \lccode'2=\z@
12913   \lccode'3=\z@
12914   \lccode'5=\z@
12915   \lccode'7=\z@

```

```

12916 \lccode'\#=\z@
12917 \lccode'\='=\z@
12918 \lccode'\{=\z@
12919 \lccode'\}=\z@
12920 \lowercase{%
12921 \endgroup
12922 \def\HyPsd@SanitizeForOutFile#1{%
12923 \@onelevel@sanitize\Hy@tempa
12924 \escapechar'\%
12925 \edef\Hy@tempa{%
12926 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12927 }%
12928 \edef\Hy@tempa{%
12929 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12930 }%
12931 }%
12932 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12933 #1%
12934 \ifx\#2\%
12935 \expandafter\ltx@gobble
12936 \else
12937 \expandafter\ltx@firstofone
12938 \fi
12939 {%
12940 \string\173%
12941 \HyPsd@SanitizeOut@BraceLeft#2\@nil
12942 }%
12943 }%
12944 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12945 #1%
12946 \ifx\#2\%
12947 \expandafter\ltx@gobble
12948 \else
12949 \expandafter\ltx@firstofone
12950 \fi
12951 {%
12952 \string\175%
12953 \HyPsd@SanitizeOut@BraceRight#2\@nil
12954 }%
12955 }%
12956 }

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

12957 \newcommand{\currentpdfbookmark}{%
12958 \pdfbookmark[\Hy@currentbookmarklevel]%
12959 }
12960 \newcommand{\subpdfbookmark}{%
12961 \@tempcnta\Hy@currentbookmarklevel
12962 \Hy@StepCount\@tempcnta
12963 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12964 }
12965 \newcommand{\belowpdfbookmark}[2]{%
12966 \@tempcnta\Hy@currentbookmarklevel
12967 \Hy@StepCount\@tempcnta
12968 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12969 \advance\@tempcnta by -1 %
12970 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%

```

12971 }

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.

```
12972 \renewcommand\pdfbookmark[3][0]{%
12973   \Hy@writebookmark{#{#2}{#3.#1}{#1}{toc}%
12974   \hyper@anchorstart{#3.#1}\hyper@anchorend
12975 }
12976 \def\BOOKMARK{%
12977   \ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
12978 }
12979 \def\@BOOKMARK[#1]{%
12980   \ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
12981 }
```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```
12982 \RequirePackage{rerunfilecheck}[2009/12/10]
12983 \def\Hy@OutlineRerunCheck{%
12984   \RerunFileCheck{\jobname.out}{%
12985     \immediate\closeout\@outlinefile
12986   }{%
12987     Rerun to get outlines right\MessageBreak
12988     or use package 'bookmark'%
12989   }%
12990 }
```

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.

```
12991 < *vtex >
12992 \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.

```
12993 \begingroup
12994   \catcode'\'=12 %
12995   \ifnum\Hy@VTeXversion<650 %
12996     \catcode'\ "=12 %
12997     \gdef\hv@pdf@char#1#2#3{%
12998       \char
12999       \ifcase'#1#2#3 %
13000         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13001         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13002         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13003         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13004         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13005         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13006         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
```

```

13007 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13008 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13009 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13010 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13011 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13012 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13013 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13014 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
13015 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13016 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13017 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13018 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13019 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13020 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13021 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13022 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13023 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13024 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13025 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13026 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13027 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13028 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
13029 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13030 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13031 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13032 \fi
13033 }%
13034 \else
13035 \gdef\hv@pdf@char{\char'}%
13036 \fi
13037 \endgroup

```

\@@BOOKMARK

```

13038 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13039 \expandafter\edef\csname @count@#3\endcsname{%
13040 \the\@serial@counter
13041 }%
13042 \edef\@mycount{\the\@serial@counter}%
13043 \Hy@StepCount\@serial@counter
13044 \edef\@parcount{%
13045 \expandafter\ifx\csname @count@#5\endcsname\relax
13046 0%
13047 \else
13048 \csname @count@#5\endcsname
13049 \fi
13050 }%
13051 \immediate\special{%
13052 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13053 s=\ifx#2-c\else o\fi,t=#4%
13054 }%
13055 }%

```

\ReadBookmarks

```

13056 \def\ReadBookmarks{%
13057 \begingroup
13058 \def\0{\hv@pdf@char 0}%
13059 \def\1{\hv@pdf@char 1}%

```

```

13060 \def\2{\hv@pdf@char 2}%
13061 \def\3{\hv@pdf@char 3}%
13062 \def\{({}%
13063 \def\})}%
13064 \def\do##1{%
13065   \ifnum\catcode'##1=\active
13066     \@makeother##1%
13067   \else
13068     \ifnum\catcode'##1=6 %
13069       \@makeother##1%
13070     \fi
13071   \fi
13072 }%
13073 \dospecials
13074 \Hy@safe@activetrue
13075 \InputIfFileExists{\jobname.out}{-}{-}%
13076 \endgroup
13077 \ifx\WriteBookmarks\relax
13078 \else
13079   \if@filesw
13080     \newwrite\@outlinefile
13081     \Hy@OutlineRerunCheck
13082     \immediate\openout\@outlinefile=\jobname.out\relax
13083     \ifHy@typexml
13084       \immediate\write\@outlinefile{<relaxxml>\relax}%
13085     \fi
13086   \fi
13087 \fi
13088 }

13089 </vtex>
13090 <!*vtex>
13091 \def\ReadBookmarks{%
13092   \begingroup
13093     \def\do##1{%
13094       \ifnum\catcode'##1=\active
13095         \@makeother##1%
13096       \else
13097         \ifnum\catcode'##1=6 %
13098           \@makeother##1%
13099         \fi
13100       \fi
13101     }%
13102     \dospecials
13103     \Hy@safe@activetrue
13104     \escapechar='\%
13105     \let\escapechar\@gobble %
13106     \def\@@BOOKMARK[##1][##2]##3##4##5{%
13107       \calc@bm@number{##5}%
13108     }%
13109     \InputIfFileExists{\jobname.out}{-}{-}%
13110     \ifx\WriteBookmarks\relax
13111       \global\let\WriteBookmarks\relax
13112     \fi
13113     \def\@@BOOKMARK[##1][##2]##3##4##5{%
13114       \def\Hy@temp{##4}%
13115     }%
13116     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%

```

```

13117 \Hy@OutlineName{\Hy@pstringName{%
13118   ##2\check@bm@number{##3}}%
13119 }{%
13120   \expandafter\strip@prefix\meaning\Hy@temp
13121 }%
13122 \pdfetex>
13123 \pdfmark{
13124   \pdfmark{%
13125     pdfmark=/OUT,%
13126     Count={##2\check@bm@number{##3}},%
13127     Dest={##3},%
13128     Title=\expandafter\strip@prefix\meaning\Hy@temp
13129   }%
13130 \pdfmark>
13131 \dviipdfm | xetex>
13132 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13133 \pdfmark@mark{
13134   outline \ifHy@DvipdfmxOutlineOpen
13135     [%
13136     \ifnum##21>\z@
13137     \else
13138     -%
13139     \fi
13140   ] %
13141   \fi
13142   ##1<<%
13143   /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13144   /A<<%
13145   /S/GoTo%
13146   /D(\Hy@pstringName)%
13147   >>%
13148   >>%
13149 }%
13150 \dviipdfm | xetex>
13151 }%
13152 {%
13153   \def\WriteBookmarks{0}%
13154   \InputIfFileExists{\jobname.out}{\relax}%
13155 }%
13156 {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}}%
13157 \ifx\WriteBookmarks\relax
13158 \else
13159   \if@filesw
13160     \newwrite\@outlinefile
13161     \Hy@OutlineRerunCheck
13162     \immediate\openout\@outlinefile=\jobname.out\relax
13163     \ifHy@typexml
13164       \immediate\write\@outlinefile{<relaxxml>\relax}%
13165     \fi
13166   \fi
13167 \fi
13168 \endgroup
13169 }
13170 \pdfetex>
13171 \def\Hy@OutlineName#1#2#3#4{%
13172   \pdfoutline goto name{#2}count#3{#4}%
13173 }

```

```

13174 </pdfTeX>
13175 \def\check@bm@number#1{%
13176   \expandafter\ifx\csname B_#1\endcsname\relax
13177     0%
13178   \else
13179     \csname B_#1\endcsname
13180   \fi
13181 }
13182 \def\calc@bm@number#1{%
13183   \@tempcnta=\check@bm@number{#1}\relax
13184   \advance\@tempcnta by 1 %
13185   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13186 }
13187 </!vTeX>

13188 \ifHy@implicit
13189 \else
13190   \expandafter\endinput
13191 \fi

13192 </outlines>
13193 <*outlines | hypertex>

13194 \newlength\Hy@SectionHShift
13195 \def\Hy@SectionAnchorHref#1{%
13196   \ifx\protect\@typeset@protect
13197     \Hy@@SectionAnchor{#1}%
13198   \fi
13199 }
13200 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
13201   \leavevmode
13202   \hbox to 0pt{%
13203     \kern-\Hy@SectionHShift
13204     \Hy@raisedlink{%
13205       \hyper@anchorstart{#1}\hyper@anchorend
13206     }%
13207     \hss
13208   }%
13209 }
13210 \let\H@old@ssect\@ssect
13211 \def\@ssect#1#2#3#4#5{%
13212   \Hy@MakeCurrentHrefAuto{section*}%
13213   \setlength{\Hy@SectionHShift}{#1}%
13214   \begingroup
13215     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13216     \toks\tw@\expandafter{%
13217       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13218       #5%
13219     }%
13220   \edef\x{\endgroup
13221     \the\toks@{\the\toks\tw@}%
13222   }\x
13223 }
13224 \let\H@old@schapter\@schapter
13225 \def\@schapter#1{%
13226   \begingroup
13227     \let\@mkboth\@gobbletwo
13228     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13229     \Hy@raisedlink{%

```

```

13230 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13231 }%
13232 \endgroup
13233 \H@old@schapter{#1}%
13234 }

```

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:

```

13235 \ltx@ifundefined{@chapter}{-}{%
13236 \let\Hy@org@chapter\@chapter
13237 \def\@chapter{%
13238 \def\Hy@next{%
13239 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13240 \Hy@raisedlink{%
13241 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13242 }%
13243 }%
13244 \ifnum\c@secnumdepth>\m@ne
13245 \ltx@ifundefined{if@mainmatter}%
13246 \iftrue{\csname if@mainmatter\endcsname}%
13247 \let\Hy@next\relax
13248 \fi
13249 \fi
13250 \Hy@next
13251 \Hy@org@chapter
13252 }%
13253 }

13254 \let\H@old@part\@part
13255 \begingroup\expandafter\expandafter\expandafter\endgroup
13256 \expandafter\ifx\csname chapter\endcsname\relax
13257 \let\Hy@secnum@part\z@
13258 \else
13259 \let\Hy@secnum@part\m@ne
13260 \fi
13261 \def\@part{%
13262 \ifnum\Hy@secnum@part>\c@secnumdepth
13263 \phantomsection
13264 \fi
13265 \H@old@part
13266 }

13267 \let\H@old@spart\@spart
13268 \def\@spart#1{%
13269 \Hy@MakeCurrentHrefAuto{part*}%
13270 \Hy@raisedlink{%
13271 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13272 }%
13273 \H@old@spart{#1}%
13274 }

13275 \let\H@old@sect\@sect
13276 \def\@sect#1#2#3#4#5#6[#7]#8{%
13277 \ifnum #2>\c@secnumdepth
13278 \expandafter\@firstoftwo
13279 \else
13280 \expandafter\@secondoftwo
13281 \fi
13282 {#%

```

```

13283 \Hy@MakeCurrentHrefAuto{section*}%
13284 \setlength{\Hy@SectionHShift}{#3}%
13285 \begingroup
13286 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13287 \toks\tw@\expandafter{%
13288 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13289 #8%
13290 }%
13291 \edef\x{\endgroup
13292 \the\toks@\the\toks\tw@}%
13293 }\x
13294 }{%
13295 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13296 }%
13297 }

13298 </outlines | hypertex>
13299 <*outlines>

13300 \expandafter\def\csname Parent-4\endcsname{}
13301 \expandafter\def\csname Parent-3\endcsname{}
13302 \expandafter\def\csname Parent-2\endcsname{}
13303 \expandafter\def\csname Parent-1\endcsname{}
13304 \expandafter\def\csname Parent0\endcsname{}
13305 \expandafter\def\csname Parent1\endcsname{}
13306 \expandafter\def\csname Parent2\endcsname{}
13307 \expandafter\def\csname Parent3\endcsname{}
13308 \expandafter\def\csname Parent4\endcsname{}

13309 </outlines>

```

49 Compatibility with koma-script classes

```

13310 <*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.

```

13311 \def\Hy@tempa{%
13312 \def\@addchap[##1]##2{%
13313 \typeout{##2}%
13314 \if@twoside
13315 \mkboth{##1}{}%
13316 \else
13317 \mkboth{}{##1}%
13318 \fi
13319 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13320 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13321 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13322 \Hy@raisedlink{%
13323 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13324 }%
13325 \if@twocolumn
13326 \@topnewpage[\@makeschapterhead{##2}]%
13327 \else
13328 \@makeschapterhead{##2}%
13329 \@afterheading

```

```

13330 \fi
13331 \addcontentsline{toc}{chapter}{##1}%
13332 }%
13333 }
13334 \@ifclassloaded{scrbook}{%
13335 \@ifclasslater{scrbook}{2001/01/01}{%
13336 \let\Hy@tempa\@empty
13337 }{}%
13338 }{%
13339 \@ifclassloaded{scrreprt}{%
13340 \@ifclasslater{scrreprt}{2001/01/01}{%
13341 \let\Hy@tempa\@empty
13342 }{}%
13343 }{%
13344 \let\Hy@tempa\@empty
13345 }%
13346 }%
13347 \Hy@tempa
13348 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13349 <*pd1enc>
13350 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

13351 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13352 \DeclareTextAccent{\'}{PD1}{\textacute}
13353 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
13354 \DeclareTextAccent{\~}{PD1}{\texttilde}
13355 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13356 \DeclareTextAccent{\r}{PD1}{\textring}
13357 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13358 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13359 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13360 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13361 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13362 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13363 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13364 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13365 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
13366 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13367 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13368 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13369 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13370 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13371 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13372 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13373 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13374 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13375 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13376 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13377 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}

```

```

13378 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13379 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13380 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13381 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13382 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13383 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13384 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13385 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13386 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13387 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13388 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13389 \DeclareTextCommand{\newtie}{PD1}[1]{%
13390   \TextSymbolUnavailable{\newtie{#1}}#1%
13391 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

13392 % U+0009 (CHARACTER TABULATION)
13393 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13394 % U+000A (LINE FEED)
13395 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13396 % U+000D (CARRIAGE RETURN)
13397 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

13398 % U+02D8 BREVE; breve
13399 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13400 % U+02C7 CARON; caron
13401 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13402 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13403 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
13404 % U+02D9 DOT ABOVE; dotaccent
13405 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13406 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13407 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13408 % U+02DB OGONEK; ogonek
13409 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13410 % U+02DA RING ABOVE; ring
13411 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13412 % U+02DC SMALL TILDE; ilde, *tilde
13413 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

13414 % U+0022 QUOTATION MARK; quotedbl
13415 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13416 % U+0023 NUMBER SIGN; numbersign
13417 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13418 % U+0024 DOLLAR SIGN; dollar
13419 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13420 % U+0025 PERCENT SIGN; percent
13421 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13422 % U+0026 AMPERSAND; ampersand
13423 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

```

13424 % U+0028 LEFT PARENTHESIS; parenleft
13425 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
13426 % U+0029 RIGHT PARENTHESIS; parenright
13427 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 13428 % U+002E FULL STOP; period
 13429 \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
 13430 % U+003C LESS-THAN SIGN; less
 13431 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13432 % U+003E GREATER-THAN SIGN; greater
 13433 \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
 13434 % U+005C REVERSE SOLIDUS; backslash
 13435 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13436 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13437 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13438 % U+005F LOW LINE; underscore
 13439 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13440 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13441 % U+0060 GRAVE ACCENT; grave
 13442 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13443 % U+0069 LATIN SMALL LETTER I; i
 13444 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13445 % U+007B LEFT CURLY BRACKET; braceleft
 13446 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13447 % U+007C VERTICAL LINE; *bar, verticalbar
 13448 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13449 % U+007D RIGHT CURLY BRACKET; braceright
 13450 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13451 % U+007E TILDE; asciitilde
 13452 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13453 % U+2022 BULLET; bullet
 13454 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022

13455 % U+2020 DAGGER; dagger
 13456 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13457 % U+2021 DOUBLE DAGGER; daggerdbl
 13458 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13459 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13460 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13461 % U+2014 EM DASH; emdash
 13462 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13463 % U+2013 EN DASH; endash
 13464 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13465 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13466 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13467 % U+2044 FRACTION SLASH; fraction
 13468 \DeclareTextCommand{\textfraction}{PD1}{\207}% U+2044
 13469 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 13470 \DeclareTextCommand{\guilleft}{PD1}{\210}% U+2039
 13471 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 13472 \DeclareTextCommand{\guilright}{PD1}{\211}% U+203A
 13473 % U+2212 MINUS SIGN; minus
 13474 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13475 % U+2030 PER MILLE SIGN; perthousand
 13476 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13477 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13478 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 13479 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13480 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 13481 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13482 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 13483 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13484 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 13485 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13486 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 13487 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13488 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 13489 % U+2122 TRADE MARK SIGN; trademark
 13490 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 13491 % U+FB01 LATIN SMALL LIGATURE FI; fi
 13492 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 13493 % U+FB02 LATIN SMALL LIGATURE FL; fl
 13494 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 13495 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 13496 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 13497 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 13498 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 13499 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 13500 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 13501 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13502 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 13503 \DeclareTextCommand{\IJ}{PD1}{\230}
 13504 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13505 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 13506 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 13507 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 13508 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 13509 \DeclareTextCommand{\l}{PD1}{\233}% U+0142

13510 % U+0153 LATIN SMALL LIGATURE OE; oe
 13511 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 13512 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 13513 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 13514 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13515 \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.

13516 % U+20AC EURO SIGN; *Euro, euro
 13517 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13518 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13519 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13520 % U+00A2 CENT SIGN; cent
 13521 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13522 % U+00A3 POUND SIGN; sterling
 13523 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13524 % U+00A4 CURRENCY SIGN; currency
 13525 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13526 % U+00A5 YEN SIGN; yen
 13527 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13528 % U+00A6 BROKEN BAR; brokenbar
 13529 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13530 % U+00A7 SECTION SIGN; section
 13531 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13532 % U+00A8 DIAERESIS; dieresis
 13533 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13534 % U+00A9 COPYRIGHT SIGN; copyright
 13535 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13536 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13537 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13538 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13539 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13540 % U+00AC NOT SIGN; logicalnot
 13541 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13542 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

13543 % U+00AE REGISTERED SIGN; registered
 13544 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13545 % U+00AF MACRON; *macron, overscore
 13546 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13547 % U+00B0 DEGREE SIGN; degree
 13548 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13549 % U+00B1 PLUS-MINUS SIGN; plusminus
 13550 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13551 % U+00B2 SUPERScript TWO; twosuperior
 13552 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13553 % U+00B3 SUPERScript THREE; threesuperior
 13554 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13555 % U+00B4 ACUTE ACCENT; acute
 13556 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13557 % U+00B5 MICRO SIGN; mu, mul
 13558 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13559 % U+00B6 PILCROW SIGN; paragraph
 13560 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13561 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13562 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7

13563 % U+00B8 CEDILLA; cedilla
 13564 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13565 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13566 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 13567 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13568 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 13569 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 13570 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 13571 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13572 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 13573 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13574 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 13575 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13576 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 13577 % U+00BF INVERTED QUESTION MARK; questiondown
 13578 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 13579 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13580 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 13581 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13582 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 13583 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13584 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 13585 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13586 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 13587 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13588 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
 13589 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13590 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
 13591 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13592 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
 13593 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 13594 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
 13595 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 13596 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
 13597 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 13598 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
 13599 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 13600 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
 13601 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 13602 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
 13603 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 13604 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
 13605 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 13606 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
 13607 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 13608 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
 13609 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 13610 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
 13611 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 13612 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
 13613 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
 13614 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 13615 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
 13616 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 13617 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
 13618 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute

13619 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13620 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13621 \DeclareTextCompositeCommand{\~}{PD1}{O}{\324}% U+00D4
13622 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13623 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13624 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13625 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13626 % U+00D7 MULTIPLICATION SIGN; multiply
13627 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13628 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13629 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13630 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13631 \DeclareTextCompositeCommand{\'}{PD1}{U}{\331}% U+00D9
13632 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13633 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13634 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13635 \DeclareTextCompositeCommand{\~}{PD1}{U}{\333}% U+00DB
13636 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13637 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13638 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13639 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13640 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13641 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13642 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13643 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13644 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13645 \DeclareTextCompositeCommand{\'}{PD1}{a}{\340}% U+00E0
13646 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13647 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13648 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13649 \DeclareTextCompositeCommand{\~}{PD1}{a}{\342}% U+00E2
13650 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13651 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13652 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13653 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13654 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13655 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13656 % U+00E6 LATIN SMALL LETTER AE; ae
13657 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13658 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13659 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13660 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13661 \DeclareTextCompositeCommand{\'}{PD1}{e}{\350}% U+00E8
13662 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13663 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13664 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13665 \DeclareTextCompositeCommand{\~}{PD1}{e}{\352}% U+00EA
13666 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13667 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13668 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13669 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13670 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13671 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13672 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13673 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13674 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13675 \DeclareTextCompositeCommand{\~}{PD1}{i}{\356}% U+00EE

13676 \DeclareTextCompositeCommand{\~}{PD1}{i}{\356}% U+00EE
 13677 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 13678 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
 13679 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
 13680 % U+00F0 LATIN SMALL LETTER ETH; eth
 13681 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 13682 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 13683 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
 13684 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 13685 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 13686 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 13687 \DeclareTextCompositeCommand{\`}{PD1}{o}{\363}% U+00F3
 13688 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 13689 \DeclareTextCompositeCommand{\~}{PD1}{o}{\364}% U+00F4
 13690 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 13691 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 13692 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13693 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
 13694 % U+00F7 DIVISION SIGN; divide
 13695 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 13696 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13697 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13698 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13699 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 13700 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13701 \DeclareTextCompositeCommand{\`}{PD1}{u}{\372}% U+00FA
 13702 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13703 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
 13704 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13705 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
 13706 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13707 \DeclareTextCompositeCommand{\`}{PD1}{y}{\375}% U+00FD
 13708 % U+00FE LATIN SMALL LETTER THORN; thorn
 13709 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13710 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13711 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
 13712 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13713 \DeclareTextCommand{\SS}{PD1}{SS}
 13714 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13715 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13716 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13717 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13718 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13719 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13720 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13721 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13722 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13723 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13724 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13725 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13726 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13727 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13728 \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).

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13729 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13730 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13731 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13732 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13733 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13734 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13735 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13736 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13737 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13738 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13739 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13740 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13741 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13742 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13743 \end{pdllenc}

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50.2 PU encoding

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13744 \newcommand{*puenc}
13745 \DeclareFontEncoding{PU}{}{}

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50.2.1 NFSS2 accents

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13746 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13747 \DeclareTextCommand{\'}{PU}[1]{\#1\83\000}% U+0300
13748 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13749 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
13750 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13751 \DeclareTextCommand{\^}{PU}[1]{\#1\83\002}% U+0302
13752 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
13753 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
13754 % U+0304 COMBINING MACRON; macroncmb
13755 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
13756 % U+0306 COMBINING BREVE; brevecmb
13757 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
13758 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306
13759 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13760 \DeclareTextCommand{\.}{PU}[1]{\#1\83\007}% U+0307
13761 % U+0308 COMBINING DIAERESIS; dieresiscmb
13762 \DeclareTextCommand{\"}{PU}[1]{\#1\83\010}% U+0308
13763 % U+030A COMBINING RING ABOVE; ringcmb
13764 \DeclareTextCommand{\r}{PU}[1]{\#1\83\012}% U+030A
13765 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13766 \DeclareTextCommand{\H}{PU}[1]{\#1\83\013}% U+030B
13767 % U+030C COMBINING CARON; caroncmb
13768 \DeclareTextCommand{\v}{PU}[1]{\#1\83\014}% U+030C
13769 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13770 \DeclareTextCommand{\G}{PU}[1]{\#1\83\017}% U+030F
13771 \DeclareTextCommand{\C}{PU}[1]{\#1\83\017}% U+030F
13772 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13773 \DeclareTextCommand{\newtie}{PU}[1]{\#1\83\021}% U+0311
13774 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
13775 \DeclareTextCommand{\d}{PU}[1]{\#1\83\043}% U+0323
13776 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13777 \DeclareTextCommand{\b}{PU}[1]{\#1\83\061}% U+0331

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13778 % U+0327 COMBINING CEDILLA; cedillacmb
 13779 \DeclareTextCommand{\c}{PU}[1]{\#1\83\047}% U+0327
 13780 % U+0328 COMBINING OGONEK; ogonekcmb
 13781 \DeclareTextCommand{\k}{PU}[1]{\#1\83\050}% U+0328
 13782 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinvertedddoublecmb
 13783 \DeclareTextCommand{\t}{PU}[1]{\#1\83\141}% U+0361
 13784 % U+20DD COMBINING ENCLOSING CIRCLE
 13785 \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.

13786 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
 13787 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
 13788 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
 13789 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13790 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
 13791 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
 13792 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
 13793 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
 13794 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
 13795 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
 13796 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
 13797 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
 13798 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
 13799 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
 13800 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
 13801 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
 13802 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
 13803 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
 13804 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
 13805 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
 13806 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
 13807 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
 13808 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
 13809 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
 13810 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
 13811 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
 13812 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
 13813 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
 13814 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
 13815 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
 13816 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
 13817 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
 13818 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
 13819 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
 13820 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
 13821 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
 13822 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
 13823 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

Accents for capitals (see encoding TS1)

13824 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{\#1}}
 13825 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{\#1}}
 13826 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'\{\#1}}
 13827 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{\#1}}
 13828 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\~{\#1}}
 13829 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{\#1}}
 13830 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{\#1}}

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13831 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13832 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13833 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13834 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13835 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13836 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13837 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13838 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

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50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

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13839 % U+0009 (CHARACTER TABULATION)
13840 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13841 % U+000A (LINE FEED)
13842 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13843 % U+000D (CARRIAGE RETURN)
13844 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

13845 % U+0022 QUOTATION MARK; quotedbl
13846 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13847 % U+0023 NUMBER SIGN; numbersign
13848 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13849 % U+0024 DOLLAR SIGN; dollar
13850 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
13851 % U+0025 PERCENT SIGN; percent
13852 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
13853 % U+0026 AMPERSAND; ampersand
13854 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
13855 % U+0027 APOSTROPHE; quotesingle
13856 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
13857 % U+0028 LEFT PARENTHESIS; parenleft
13858 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
13859 % U+0029 RIGHT PARENTHESIS; parenright
13860 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
13861 % U+002A ASTERISK; asterisk
13862 \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

13863 % U+003C LESS-THAN SIGN; less
13864 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

13865 % U+003E GREATER-THAN SIGN; greater
13866 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E

\80\077: U+003F QUESTION MARK; question
\80\100: U+0040 COMMERCIAL AT; at

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\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
 13867 % U+005C REVERSE SOLIDUS; backslash
 13868 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13869 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13870 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13871 % U+005F LOW LINE; underscore
 13872 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13873 % U+0060 GRAVE ACCENT; grave
 13874 \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
 13875 % U+0069 LATIN SMALL LETTER I; i
 13876 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 13877 \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
 13878 % U+007B LEFT CURLY BRACKET; braceleft
 13879 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13880 % U+007C VERTICAL LINE; *bar, verticalbar
 13881 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13882 % U+007D RIGHT CURLY BRACKET; braceright
 13883 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13884 % U+007E TILDE; asciitilde
 13885 \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
 13886 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13887 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13888 % U+00A2 CENT SIGN; cent
 13889 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13890 % U+00A3 POUND SIGN; sterling
 13891 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13892 % U+00A4 CURRENCY SIGN; currency
 13893 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13894 % U+00A5 YEN SIGN; yen
 13895 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13896 % U+00A6 BROKEN BAR; brokenbar
 13897 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13898 % U+00A7 SECTION SIGN; section
 13899 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13900 % U+00A8 DIAERESIS; dieresis
 13901 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13902 % U+00A9 COPYRIGHT SIGN; copyright
 13903 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13904 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13905 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA

13906 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
13907 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
13908 % U+00AC NOT SIGN; logicalnot
13909 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
13910 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
13911 % U+00AE REGISTERED SIGN; registered
13912 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
13913 % U+00AF MACRON; *macron, overscore
13914 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
13915 % U+00B0 DEGREE SIGN; degree
13916 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
13917 % U+00B1 PLUS-MINUS SIGN; plusminus
13918 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
13919 % U+00B2 SUPERSCRIPT TWO; twosuperior
13920 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
13921 % U+00B3 SUPERSCRIPT THREE; threesuperior
13922 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
13923 % U+00B4 ACUTE ACCENT; acute
13924 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
13925 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
13926 % U+00B5 MICRO SIGN; mu, mu1
13927 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
13928 % U+00B6 PILCROW SIGN; paragraph
13929 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
13930 % U+00B7 MIDDLE DOT; middot, *periodcentered
13931 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
13932 % U+00B8 CEDILLA; cedilla
13933 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
13934 % U+00B9 SUPERSCRIPT ONE; onesuperior
13935 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
13936 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13937 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
13938 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
13939 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
13940 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13941 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
13942 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13943 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
13944 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13945 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
13946 % U+00BF INVERTED QUESTION MARK; questiondown
13947 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
13948 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13949 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
13950 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13951 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
13952 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13953 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
13954 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13955 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
13956 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13957 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
13958 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13959 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5

13960 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13961 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13962 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 13963 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 13964 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 13965 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 13966 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 13967 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 13968 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 13969 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 13970 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 13971 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 13972 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 13973 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 13974 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 13975 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 13976 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 13977 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 13978 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 13979 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
 13980 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 13981 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
 13982 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 13983 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
 13984 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 13985 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 13986 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
 13987 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 13988 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
 13989 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
 13990 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
 13991 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 13992 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
 13993 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
 13994 % U+00D7 MULTIPLICATION SIGN; multiply
 13995 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
 13996 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
 13997 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
 13998 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
 13999 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 14000 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
 14001 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 14002 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
 14003 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
 14004 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
 14005 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
 14006 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
 14007 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
 14008 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
 14009 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
 14010 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
 14011 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
 14012 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
 14013 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 14014 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
 14015 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 14016 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex

14017 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
14018 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14019 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}% U+00E3
14020 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14021 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14022 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14023 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14024 % U+00E6 LATIN SMALL LETTER AE; ae
14025 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14026 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14027 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14028 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14029 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
14030 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14031 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14032 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14033 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14034 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14035 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14036 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14037 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
14038 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14039 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14040 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\355}% U+00ED
14041 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14042 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14043 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14044 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14045 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14046 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14047 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
14048 % U+00F0 LATIN SMALL LETTER ETH; eth
14049 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14050 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14051 \DeclareTextCompositeCommand{\-}{PU}{n}{\80\361}% U+00F1
14052 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14053 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14054 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14055 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
14056 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14057 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
14058 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14059 \DeclareTextCompositeCommand{\-}{PU}{o}{\80\365}% U+00F5
14060 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14061 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
14062 % U+00F7 DIVISION SIGN; divide
14063 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
14064 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14065 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
14066 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14067 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
14068 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14069 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
14070 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14071 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
14072 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14073 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC

14074 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14075 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 14076 % U+00FE LATIN SMALL LETTER THORN; thorn
 14077 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14078 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14079 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

14080 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14081 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14082 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14083 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14084 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14085 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14086 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14087 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14088 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14089 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14090 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14091 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14092 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14093 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 14094 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14095 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 14096 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 14097 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 14098 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 14099 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 14100 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 14101 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 14102 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 14103 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 14104 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 14105 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 14106 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 14107 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 14108 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 14109 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 14110 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 14111 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 14112 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 14113 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 14114 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
 14115 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 14116 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 14117 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 14118 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 14119 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 14120 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 14121 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 14122 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 14123 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 14124 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
 14125 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
 14126 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
 14127 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117

14128 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14129 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14130 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14131 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14132 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14133 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14134 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14135 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14136 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14137 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14138 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14139 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14140 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14141 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14142 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14143 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14144 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14145 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14146 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14147 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14148 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
14149 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14150 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14151 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14152 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14153 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
14154 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14155 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14156 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14157 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14158 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14159 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14160 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14161 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14162 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14163 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14164 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14165 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14166 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14167 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14168 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14169 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14170 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14171 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14172 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14173 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14174 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14175 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14176 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14177 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14178 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14179 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14180 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14181 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14182 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14183 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131

14184 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 14185 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 14186 % U+0133 LATIN SMALL LIGATURE IJ; ij
 14187 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 14188 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 14189 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 14190 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 14191 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 14192 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 14193 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 14194 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 14195 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 14196 \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.

14197 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 14198 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 14199 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 14200 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 14201 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 14202 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 14203 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 14204 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 14205 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14206 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14207 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14208 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14209 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14210 \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.

14211 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14212 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14213 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14214 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14215 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14216 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14217 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14218 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14219 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14220 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14221 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14222 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14223 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14224 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14225 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14226 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14227 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14228 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14229 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14230 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

14231 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14232 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14233 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14234 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14235 % U+014B LATIN SMALL LETTER ENG; eng
 14236 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14237 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14238 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 14239 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14240 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14241 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14242 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14243 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14244 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14245 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 14246 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14247 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 14248 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14249 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14250 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 14251 % U+0153 LATIN SMALL LIGATURE OE; oe
 14252 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 14253 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14254 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14255 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 14256 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 14257 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 14258 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 14259 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 14260 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 14261 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 14262 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 14263 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 14264 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 14265 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 14266 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 14267 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 14268 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 14269 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 14270 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 14271 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 14272 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 14273 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 14274 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 14275 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 14276 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 14277 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 14278 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 14279 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 14280 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 14281 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 14282 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162

14283 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 14284 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 14285 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 14286 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 14287 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 14288 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 14289 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 14290 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 14291 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 14292 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 14293 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 14294 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 14295 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 14296 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 14297 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 14298 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 14299 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 14300 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 14301 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 14302 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 14303 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 14304 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 14305 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 14306 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 14307 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 14308 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 14309 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblac-
 cute, Uhungarumlaut
 14310 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14311 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhun-
 garumlaut
 14312 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14313 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14314 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14315 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14316 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14317 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14318 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14319 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14320 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14321 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14322 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14323 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14324 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14325 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14326 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14327 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14328 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14329 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14330 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14331 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14332 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14333 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14334 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14335 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14336 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14337 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron

14338 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14339 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14340 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

14341 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14342 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14343 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14344 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14345 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
 14346 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14347 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14348 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14349 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
 14350 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14351 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14352 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14353 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14354 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
 14355 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14356 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14357 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14358 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
 14359 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14360 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14361 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14362 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14363 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 14364 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 14365 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 14366 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
 14367 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 14368 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 14369 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 14370 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
 14371 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 14372 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 14373 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 14374 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 14375 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 14376 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 14377 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 14378 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 14379 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 14380 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 14381 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 14382 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 14383 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 14384 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 14385 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 14386 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 14387 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 14388 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 14389 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
 14390 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
 14391 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut

14392 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
 14393 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
 cute, ostrokeacute
 14394 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 14395 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 14396 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 14397 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 14398 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 14399 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 14400 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 14401 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 14402 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 14403 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 14404 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 14405 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 14406 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14407 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14408 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 14409 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 14410 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 14411 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 14412 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 14413 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 14414 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 14415 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 14416 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 14417 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 14418 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 14419 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14420 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14421 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14422 % U+021F LATIN SMALL LETTER H WITH CARON
 14423 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14424 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14425 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14426 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14427 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14428 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14429 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14430 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14431 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14432 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14433 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14434 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14435 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14436 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14437 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14438 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14439 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14440 % U+0237 LATIN SMALL LETTER DOTLESS J
 14441 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14442 % U+02C7 CARON; caron
 14443 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14444 % U+02D8 BREVE; breve
 14445 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8

14446 % U+02D9 DOT ABOVE; dotaccent
 14447 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14448 % U+02DA RING ABOVE; ring
 14449 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14450 % U+02DB OGONEK; ogonek
 14451 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14452 % U+02DC SMALL TILDE; ilde, *tilde
 14453 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14454 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14455 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14456 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14457 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14458 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14459 % U+02F7 MODIFIER LETTER LOW TILDE
 14460 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14461 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14462 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14463 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14464 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14465 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14466 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14467 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14468 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14469 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14470 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14471 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14472 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14473 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14474 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14475 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 14476 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14477 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14478 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14479 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14480 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14481 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14482 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 14483 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 14484 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 14485 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 14486 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 14487 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14488 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 14489 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
 14490 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 14491 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14492 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14493 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14494 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14495 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14496 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393

14497 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
14498 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
14499 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
14500 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
14501 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14502 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14503 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14504 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14505 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14506 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14507 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14508 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14509 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14510 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14511 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14512 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14513 % U+039C GREEK CAPITAL LETTER MU; Mu
14514 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14515 % U+039D GREEK CAPITAL LETTER NU; Nu
14516 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14517 % U+039E GREEK CAPITAL LETTER XI; Xi
14518 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14519 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14520 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14521 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14522 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14523 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14524 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
14525 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14526 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14527 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14528 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14529 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14530 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14531 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14532 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14533 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14534 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14535 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14536 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14537 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14538 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14539 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14540 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14541 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14542 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
14543 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14544 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos
14545 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14546 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon
14547 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14548 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
14549 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14550 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
14551 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF

14552 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
 silondieresisto
 14553 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
 14554 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 14555 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
 14556 % U+03B2 GREEK SMALL LETTER BETA; beta
 14557 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 14558 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 14559 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 14560 % U+03B4 GREEK SMALL LETTER DELTA; delta
 14561 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 14562 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 14563 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 14564 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 14565 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 14566 % U+03B7 GREEK SMALL LETTER ETA; eta
 14567 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 14568 % U+03B8 GREEK SMALL LETTER THETA; theta
 14569 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 14570 % U+03B9 GREEK SMALL LETTER IOTA; iota
 14571 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
 14572 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 14573 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 14574 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 14575 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 14576 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 14577 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 14578 % U+03BD GREEK SMALL LETTER NU; nu
 14579 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
 14580 % U+03BE GREEK SMALL LETTER XI; xi
 14581 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 14582 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 14583 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 14584 % U+03C0 GREEK SMALL LETTER PI; pi
 14585 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 14586 % U+03C1 GREEK SMALL LETTER RHO; rho
 14587 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 14588 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 14589 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 14590 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 14591 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 14592 % U+03C4 GREEK SMALL LETTER TAU; tau
 14593 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 14594 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 14595 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 14596 % U+03C6 GREEK SMALL LETTER PHI; phi
 14597 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 14598 % U+03C7 GREEK SMALL LETTER CHI; chi
 14599 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 14600 % U+03C8 GREEK SMALL LETTER PSI; psi
 14601 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 14602 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 14603 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 14604 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 14605 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 14606 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis

14607 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 14608 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 14609 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 14610 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 14611 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 14612 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 14613 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 14614 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 14615 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
 14616 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
 14617 % U+03DB GREEK SMALL LETTER STIGMA
 14618 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
 14619 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14620 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14621 % U+03DD GREEK SMALL LETTER DIGAMMA
 14622 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14623 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14624 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14625 % U+03DF GREEK SMALL LETTER KOPPA
 14626 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14627 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14628 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14629 % U+03E1 GREEK SMALL LETTER SAMPI
 14630 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

14631 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 14632 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
 14633 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 14634 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 14635 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
 14636 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 14637 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 14638 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 14639 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
 14640 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 14641 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 14642 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 14643 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 14644 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyril-
 lic, *afii10055
 14645 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 14646 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 14647 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 14648 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
 14649 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 14650 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 14651 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 14652 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 14653 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 14654 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 14655 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 14656 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 14657 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 14658 \DeclareTextCompositeCommand{'}{PU}{\CYRK}{\84\014}% U+040C

14659 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 14660 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
 14661 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 14662 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 14663 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 14664 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
 14665 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
 14666 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
 14667 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
 14668 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
 14669 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
 14670 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
 14671 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
 14672 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
 14673 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
 14674 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
 14675 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
 14676 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
 14677 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
 14678 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
 14679 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
 14680 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
 14681 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
 14682 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
 14683 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
 14684 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
 14685 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
 14686 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
 14687 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
 14688 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
 14689 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
 14690 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
 14691 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
 14692 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
 14693 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
 14694 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
 14695 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
 14696 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
 14697 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
 14698 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
 14699 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
 14700 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
 14701 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
 14702 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
 14703 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
 14704 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
 14705 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
 14706 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
 14707 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
 14708 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
 14709 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
 14710 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
 14711 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
 14712 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
 14713 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
 14714 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
 14715 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042

14716 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14717 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14718 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14719 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14720 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14721 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14722 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14723 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14724 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14725 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14726 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14727 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14728 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14729 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14730 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14731 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14732 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14733 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14734 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14735 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14736 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14737 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14738 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14739 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14740 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14741 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14742 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14743 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14744 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
14745 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14746 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14747 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14748 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
14749 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14750 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14751 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
14752 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14753 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14754 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14755 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
14756 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14757 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
14758 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14759 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
14760 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14761 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
14762 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14763 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14764 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14765 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
14766 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14767 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
14768 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14769 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
14770 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14771 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
14772 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic

14773 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
14774 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14775 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
14776 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14777 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
14778 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14779 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
14780 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14781 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14782 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14783 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14784 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14785 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14786 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14787 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14788 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14789 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
14790 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14791 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14792 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14793 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
14794 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14795 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
14796 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14797 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14798 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14799 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
14800 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14801 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14802 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14803 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14804 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14805 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14806 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14807 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14808 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14809 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14810 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14811 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14812 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14813 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
14814 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14815 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14816 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14817 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14818 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14819 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14820 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14821 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14822 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14823 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14824 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14825 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14826 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14827 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14828 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E

14829 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14830 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14831 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14832 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14833 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14834 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14835 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14836 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14837 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14838 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14839 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14840 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14841 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14842 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14843 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14844 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14845 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14846 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14847 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14848 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14849 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14850 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14851 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14852 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14853 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14854 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
14855 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
14856 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
14857 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
lic
14858 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
14859 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
14860 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
14861 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
14862 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
14863 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
14864 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
14865 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
14866 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
14867 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
14868 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
14869 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
14870 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
14871 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
14872 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
14873 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
14874 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
14875 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; Izhitsadblgravecyrillic
14876 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
14877 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; izhitsadblgravecyrillic
14878 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
14879 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic

14880 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14881 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14882 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14883 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 14884 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14885 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14886 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14887 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 14888 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14889 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 14890 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14891 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14892 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14893 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14894 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14895 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14896 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14897 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14898 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14899 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14900 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14901 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14902 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14903 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14904 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14905 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14906 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14907 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14908 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14909 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14910 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14911 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14912 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14913 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 14914 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14915 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14916 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14917 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 14918 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14919 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic

14920 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
14921 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemid-
dlehookcyrillic
14922 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
14923 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemid-
dlehookcyrillic
14924 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
14925 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescen-
dercyrillic
14926 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
14927 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescen-
dercyrillic
14928 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
14929 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
dercyrillic
14930 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
14931 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
14932 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
cyrillic
14933 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
14934 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
14935 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
dercyrillic
14936 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
14937 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescenter-
cyrillic
14938 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
14939 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-
ticalstrokecyrillic
14940 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
14941 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
ticalstrokecyrillic
14942 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
14943 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
14944 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
14945 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
14946 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
14947 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
14948 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
14949 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
14950 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
14951 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
14952 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
14953 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
14954 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
14955 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
14956 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
14957 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
14958 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
14959 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
14960 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
14961 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
14962 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7

14963 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 14964 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 14965 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 14966 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 14967 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 14968 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 14969 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 14970 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 14971 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 14972 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 14973 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 14974 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 14975 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 14976 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
 14977 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 14978 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 14979 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 14980 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 14981 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 14982 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 14983 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 14984 \DeclareTextCommand{\cyr y hcrs}{PU}{\84\261}% U+04B1
 14985 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescendercyrillic
 14986 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 14987 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 14988 \DeclareTextCommand{\cyr h dsc}{PU}{\84\263}% U+04B3
 14989 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 14990 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 14991 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 14992 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 14993 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
 14994 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 14995 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 14996 \DeclareTextCommand{\cyr chrdsc}{PU}{\84\267}% U+04B7
 14997 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 14998 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 14999 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 15000 \DeclareTextCommand{\cyr chvcrs}{PU}{\84\271}% U+04B9
 15001 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 15002 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 15003 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 15004 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 15005 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic

15006 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 15007 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 15008 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 15009 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 15010 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 15011 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 15012 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 15013 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 15014 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 15015 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 15016 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 15017 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 15018 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 15019 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15020 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15021 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15022 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15023 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15024 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15025 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15026 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15027 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15028 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 15029 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15030 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15031 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 15032 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15033 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
 15034 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15035 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
 15036 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15037 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15038 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15039 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15040 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15041 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15042 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15043 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15044 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15045 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15046 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 15047 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15048 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 15049 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15050 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15051 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15052 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15053 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 15054 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15055 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic

15056 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15057 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15058 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15059 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afi10846, schwacyrillic
 15060 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15061 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
 siscyrillic
 15062 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 15063 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
 siscyrillic
 15064 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
 15065 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 15066 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
 15067 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 15068 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
 15069 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 15070 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
 15071 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 15072 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
 15073 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 15074 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15075 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15076 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15077 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15078 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
 15079 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 15080 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
 15081 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 15082 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
 15083 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 15084 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
 15085 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyri-
 lic
 15086 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
 15087 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 15088 \DeclareTextCompositeCommand{\"}{PU}{\cyro}{\84\347}% U+04E7
 15089 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 15090 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 15091 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 15092 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 15093 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERE-
 SIS; Obarreddieresiscyrillic
 15094 \DeclareTextCompositeCommand{\"}{PU}{\CYROTLD}{\84\352}% U+04EA
 15095 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarred-
 dieresiscyrillic
 15096 \DeclareTextCompositeCommand{\"}{PU}{\cyrotld}{\84\353}% U+04EB
 15097 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 15098 \DeclareTextCompositeCommand{\"}{PU}{\CYREREV}{\84\354}% U+04EC
 15099 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 15100 \DeclareTextCompositeCommand{\"}{PU}{\cyreref}{\84\355}% U+04ED
 15101 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 15102 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 15103 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

15104 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 15105 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udiereiscyrillic
 15106 \DeclareTextCompositeCommand{\"}{PU}{\CYRU}{\84\360}% U+04F0
 15107 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udiereiscyrillic
 15108 \DeclareTextCompositeCommand{\"}{PU}{\cyru}{\84\361}% U+04F1
 15109 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15110 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 15111 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15112 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15113 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15114 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
 15115 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 15116 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
 15117 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15118 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15119 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15120 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15121 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15122 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 15123 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15124 \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
 15125 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15126 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15127 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15128 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15129 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15130 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15131 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15132 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15133 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15134 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15135 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15136 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15137 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15138 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15139 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15140 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15141 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15142 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15143 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15144 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E

15145 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
15146 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
15147 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
15148 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
15149 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
15150 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
15151 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
15152 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
15153 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15154 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
15155 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15156 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15157 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15158 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15159 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15160 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
15161 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15162 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
15163 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15164 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
15165 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15166 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
15167 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15168 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15169 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15170 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15171 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15172 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15173 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15174 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15175 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15176 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15177 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15178 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15179 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15180 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15181 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15182 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15183 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15184 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15185 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15186 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15187 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15188 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15189 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15190 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15191 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15192 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15193 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15194 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15195 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15196 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15197 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15198 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15199 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15200 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15201 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute

15202 \DeclareTextCompositeCommand{'}{PU}{p}{\9036\125}% U+1E55
15203 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15204 \DeclareTextCompositeCommand{.}{PU}{P}{\9036\126}% U+1E56
15205 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15206 \DeclareTextCompositeCommand{.}{PU}{p}{\9036\127}% U+1E57
15207 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15208 \DeclareTextCompositeCommand{.}{PU}{R}{\9036\130}% U+1E58
15209 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15210 \DeclareTextCompositeCommand{.}{PU}{r}{\9036\131}% U+1E59
15211 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15212 \DeclareTextCompositeCommand{b}{PU}{R}{\9036\136}% U+1E5E
15213 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15214 \DeclareTextCompositeCommand{b}{PU}{r}{\9036\137}% U+1E5F
15215 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15216 \DeclareTextCompositeCommand{.}{PU}{S}{\9036\140}% U+1E60
15217 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15218 \DeclareTextCompositeCommand{.}{PU}{s}{\9036\141}% U+1E61
15219 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15220 \DeclareTextCompositeCommand{b}{PU}{T}{\9036\156}% U+1E6E
15221 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15222 \DeclareTextCompositeCommand{b}{PU}{t}{\9036\157}% U+1E6F
15223 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15224 \DeclareTextCompositeCommand{-}{PU}{V}{\9036\174}% U+1E7C
15225 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15226 \DeclareTextCompositeCommand{-}{PU}{v}{\9036\175}% U+1E7D
15227 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15228 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\200}% U+1E80
15229 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15230 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\201}% U+1E81
15231 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15232 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\202}% U+1E82
15233 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15234 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\203}% U+1E83
15235 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15236 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
15237 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15238 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
15239 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15240 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
15241 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15242 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
15243 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15244 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
15245 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15246 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
15247 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15248 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
15249 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15250 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
15251 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15252 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
15253 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15254 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
15255 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
15256 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
15257 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
15258 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91

15259 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15260 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15261 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15262 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15263 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15264 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15265 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15266 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15267 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15268 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15269 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15270 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15271 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15272 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15273 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15274 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15275 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15276 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15277 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15278 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15279 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15280 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15281 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15282 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15283 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15284 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15285 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 15286 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15287 % U+2013 EN DASH; endash
 15288 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15289 % U+2014 EM DASH; emdash
 15290 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15291 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15292 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15293 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15294 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15295 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15296 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15297 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15298 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15299 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbleft
 15300 \DeclareTextCommand{\textquotedbleft}{PU}{\9040\034}% U+201C
 15301 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedbtright
 15302 \DeclareTextCommand{\textquotedbtright}{PU}{\9040\035}% U+201D
 15303 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15304 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15305 % U+2020 DAGGER; dagger
 15306 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15307 % U+2021 DOUBLE DAGGER; daggerdbl
 15308 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15309 % U+2022 BULLET; bullet
 15310 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15311 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15312 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026

15313 % U+2030 PER MILLE SIGN; perthousand
 15314 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15315 % U+2031 PER TEN THOUSAND SIGN
 15316 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15317 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 singleleft
 15318 \DeclareTextCommand{\guilsingleleft}{PU}{\9040\071}% U+2039
 15319 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singlright
 15320 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 15321 % U+203B REFERENCE MARK; referencemark
 15322 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15323 % U+203D INTERROBANG
 15324 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15325 % U+2044 FRACTION SLASH; fraction
 15326 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15327 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15328 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15329 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15330 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15331 % U+2052 COMMERCIAL MINUS SIGN
 15332 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15333 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15334 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15335 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15336 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15337 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15338 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 15339 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15340 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15341 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15342 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15343 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15344 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15345 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15346 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15347 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15348 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15349 % U+207B SUPERSCRIPT MINUS
 15350 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15351 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15352 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 15353 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15354 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15355 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15356 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15357 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15358 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15359 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15360 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15361 % U+2081 SUBSCRIPT ONE; oneinferior
 15362 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15363 % U+2082 SUBSCRIPT TWO; twoinferior
 15364 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15365 % U+2083 SUBSCRIPT THREE; threeinferior

15366 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15367 % U+2084 SUBSCRIPT FOUR; fourinferior
 15368 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15369 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15370 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15371 % U+2086 SUBSCRIPT SIX; sixinferior
 15372 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15373 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15374 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15375 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15376 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15377 % U+2089 SUBSCRIPT NINE; nineinferior
 15378 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15379 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15380 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15381 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15382 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15383 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15384 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15385 % U+20A4 LIRA SIGN; afii08941, *lira
 15386 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15387 % U+20A6 NAIRA SIGN
 15388 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15389 % U+20A7 PESETA SIGN; peseta
 15390 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15391 % U+20A9 WON SIGN; won
 15392 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15393 % U+20AB DONG SIGN; dong
 15394 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15395 % U+20AC EURO SIGN; *Euro, euro
 15396 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15397 % U+20B1 PESO SIGN
 15398 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15399 % U+20B2 GUARANI SIGN
 15400 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15401 % U+2103 DEGREE CELSIUS; centigrade
 15402 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15403 % U+2116 NUMERO SIGN; *afii61352, numero
 15404 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15405 % U+2117 SOUND RECORDING COPYRIGHT
 15406 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15407 % U+211E PRESCRIPTION TAKE; prescription
 15408 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15409 % U+2120 SERVICE MARK
 15410 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15411 % U+2122 TRADE MARK SIGN; trademark
 15412 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15413 % U+2126 OHM SIGN; Ohm, Omega
 15414 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15415 % U+2127 INVERTED OHM SIGN
 15416 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15417 % U+212B ANGSTROM SIGN; angstrom
 15418 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B

15419 % U+212E ESTIMATED SYMBOL; estimated
15420 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
15421 % U+2135 ALEF SYMBOL; aleph
15422 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15423 % U+2190 LEFTWARDS ARROW; arrowleft
15424 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
15425 % U+2191 UPWARDS ARROW; arrowup
15426 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
15427 % U+2192 RIGHTWARDS ARROW; arrowright
15428 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
15429 % U+2193 DOWNWARDS ARROW; arrowdown
15430 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15431 % U+2212 MINUS SIGN; minus
15432 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
15433 % U+221A SQUARE ROOT; radical
15434 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15435 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
15436 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
15437 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
15438 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15439 % U+2422 BLANK SYMBOL
15440 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
15441 % U+2423 OPEN BOX; blank
15442 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15443 % U+2460 CIRCLED DIGIT ONE; onecircle
15444 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
15445 % U+2461 CIRCLED DIGIT TWO; twocircle
15446 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
15447 % U+2462 CIRCLED DIGIT THREE; threecircle
15448 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
15449 % U+2463 CIRCLED DIGIT FOUR; fourcircle
15450 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
15451 % U+2464 CIRCLED DIGIT FIVE; fivecircle
15452 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
15453 % U+2465 CIRCLED DIGIT SIX; sixcircle
15454 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
15455 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
15456 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
15457 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
15458 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
15459 % U+2468 CIRCLED DIGIT NINE; ninecircle
15460 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
15461 % U+2469 CIRCLED NUMBER TEN; tencircle
15462 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
15463 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
15464 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
15465 % U+246B CIRCLED NUMBER TWELVE; twelvencircle

15466 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
15467 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
15468 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
15469 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
15470 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
15471 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
15472 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
15473 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
15474 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
15475 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
15476 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
15477 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
15478 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
15479 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
15480 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
15481 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
15482 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
15483 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
15484 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
15485 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
15486 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
15487 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
15488 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
15489 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
15490 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
15491 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
15492 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
15493 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
15494 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
15495 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
15496 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15497 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15498 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15499 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15500 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15501 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15502 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15503 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15504 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15505 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15506 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15507 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
15508 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15509 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15510 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15511 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15512 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15513 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15514 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15515 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15516 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15517 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15518 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15519 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15520 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15521 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15522 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9

15523 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15524 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15525 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15526 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15527 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15528 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15529 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15530 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15531 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15532 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15533 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15534 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15535 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15536 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15537 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15538 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15539 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15540 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15541 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15542 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15543 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15544 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15545 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15546 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15547 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15548 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15549 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15550 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15551 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15552 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
15553 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
15554 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
15555 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
15556 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
15557 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
15558 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
15559 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
15560 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
15561 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
15562 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
15563 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
15564 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
15565 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
15566 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
15567 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
15568 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
15569 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
15570 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
15571 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
15572 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
15573 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
15574 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
15575 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
15576 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
15577 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
15578 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
15579 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle

15580 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15581 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15582 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15583 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15584 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15585 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15586 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15587 % U+24EA CIRCLED DIGIT ZERO
 15588 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15589 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15590 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15591 % U+25EF LARGE CIRCLE; largecircle
 15592 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15593 % U+266A EIGHTH NOTE; musicalnote
 15594 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15595 % U+26AD MARRIAGE SYMBOL
 15596 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15597 % U+26AE DIVORCE SYMBOL
 15598 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15599 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15600 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15601 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15602 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

15603 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15604 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15605 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15606 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15607 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15608 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 15609 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 15610 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 15611 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 15612 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 15613 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 15614 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 15615 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15616 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15617 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15618 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15619 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15620 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 15621 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

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15622 \(*puvnenc)
15623 \DeclareTextCommand{\abreve}{PU}{\81\003}
15624 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15625 \DeclareTextCommand{\dj}{PU}{\81\021}
15626 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15627 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15628 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15629 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15630 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15631 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15632 \DeclareTextCommand{\DJ}{PU}{\81\020}
15633 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15634 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15635 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15636 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15637 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15638 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15639 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15640 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15641 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15642 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15643 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15644 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15645 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
15646 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15647 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15648 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15649 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15650 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15651 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15652 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15653 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15654 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15655 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15656 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15657 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15658 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15659 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15660 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15661 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15662 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15663 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15664 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15665 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15666 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15667 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15668 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15669 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15670 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15671 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15672 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15673 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15674 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15675 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
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15676 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15677 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15678 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15679 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15680 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15681 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15682 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15683 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15684 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15685 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15686 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15687 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15688 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15689 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15690 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15691 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15692 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15693 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15694 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15695 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15696 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15697 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15698 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15699 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15700 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15701 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15702 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
15703 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15704 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15705 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15706 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15707 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15708 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15709 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15710 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15711 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15712 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15713 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15714 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15715 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15716 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15717 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15718 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15719 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15720 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15721 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15722 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15723 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15724 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15725 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15726 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15727 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15728 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15729 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15730 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15731 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15732 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}

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15733 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15734 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15735 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15736 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15737 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15738 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15739 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15740 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15741 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15742 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15743 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15744 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15745 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15746 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15747 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15748 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15749 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15750 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15751 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15752 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
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15754 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15755 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15756 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15757 </puvnenc>

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50.4 PU encoding, additions for Arabi

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15758 <*puarenc>
15759 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
    TER HAMZA
15760 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
    TER ALEF WITH MADDA ABOVE
15761 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
    TER ALEF WITH HAMZA ABOVE
15762 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
    TER WAW WITH HAMZA ABOVE
15763 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
    TER ALEF WITH HAMZA BELOW
15764 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
    TER YEH WITH HAMZA ABOVE
15765 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15766 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15767 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15768 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15769 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
    TER THEH
15770 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
    TER JEEM
15771 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15772 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15773 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15774 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15775 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15776 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN

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15777 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15778 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
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15779 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD
15780 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
15781 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
15782 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
15783 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
15784 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
15785 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
15786 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
15787 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
15788 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
15789 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
15790 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
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15791 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON
15792 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
15793 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
15794 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
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15795 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15796 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15797 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15798 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15799 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15800 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15801 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15802 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15803 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

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15804 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15805 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
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15806 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15807 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
15808 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15809 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

15810 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15811 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
15812 </puarenc>

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51 End of file hycheck.tex

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15813 <*check>
15814 \typeout{}
15815 \begin{document}
15816 \end{document}
15817 </check>

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