

Hypertext marks in \LaTeX

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1 Documentation overview for `hyperref`

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

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

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

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

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thumbpdf`” at Euro \TeX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

nameref.dtx “Section name references in \LaTeX ”

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3 File hyccheck.tex

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

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

`\checklatex` Optional argument: release date of \LaTeX .

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

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

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

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

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

`\HyC@checkPackage`

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

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

```

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

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

```

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

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

```

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

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

```

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

`\HyC@noValue`

```

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

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


```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
404 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (v \TeX driver, Unicode support).

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

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

From the view of \TeX a octal sequence consists of the command tokens $\backslash 0$ until $\backslash 3$ and two digits. For saving tokens $\backslash 0$, $\backslash 1$, $\backslash 2$, and $\backslash 3$ are directly used without a preceding $\backslash string$ 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\exTeX{e-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 T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. T_EX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

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

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

```

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 the following item takes into account, that makes makes things a little more complicate:

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

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

```
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 consists of the following tokens/catcodes:

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

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

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

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

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

```

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 \TeX 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 L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for inter-

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

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

```

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

```

6.3.4 PU encoding

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

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

```

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

```

6.4 Additional user commands

6.4.1 \texorpdfstring

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

```

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

```

6.4.2 Hooks for \pdfstringdef

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

```

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

```

```

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

```

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

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

```

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

```

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

```

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

```

`\HyPsd@DisableCommands`

```

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

```

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

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

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

```

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

```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

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

```

816 \begingroup

```

```

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

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

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

```

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

```



```

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

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

```

```

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

```

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

```

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

```

```

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

```

```

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

```

```

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

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

```

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

```

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

```

6.5.3 CJK patch

```

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

```

\HyPsd@CJKhook

```

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

```

6.5.4 CJK bookmarks

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

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

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

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

```

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

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

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

```

\HyPsd@CJK@Unicode

```

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

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

```

```

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

```



```

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

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

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

```

```

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

```

```

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

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

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

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

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

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

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

```

\HyPsd@add@accent

```

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

```

6.5.7 Unexpandable spaces

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

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

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

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

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

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

6.5.8 Marker for commands

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

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

6.5.9 \hspace fix

`\HyPsd@hspace`

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

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

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

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

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

6.5.10 Fix for AMS classes

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

```

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

```

6.5.11 Reference commands

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

\HyPsd@@autorefname

```

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

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

\HyPsd@DefCommand

\HyPsd@LetCommand

```

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

```



```

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

```

6.5.13 \ifnextchar

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

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

```

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

```

6.5.14 \@protected@testoptifnextchar

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

```

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

```

```

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

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

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

```

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

```

6.6.2 Protecting spaces

```

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

```

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

```

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

```

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

```

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

```

Remove mask.

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

```

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

```

```

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

```

6.6.3 Remove grouping braces

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

```

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

```

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

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

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

```

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

```

```

1699 \fi
1700 \else
1701 \def\Hy@temp@A{#1}%
1702 \HyPsd@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##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 **T**_E**X** does only allow nine parameters, so we need another macro to get more arguments.

```

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

```

\HyPsd@Char

```

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

```

```

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

```

6.6.9 Support for UTF-8 input encoding

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

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

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

```

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

```

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

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

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

```

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\cename @#1\endcsname{#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}{linktopage}[true]{%
2460   \Hy@boolkey{linktopage}{#1}%
2461   \ifHy@linktopage
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@linktopage
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}{vtexpdfmark}[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 \begingroup
3045 \edef\x##1##2{%
3046 \noexpand\ifx##2\relax
3047 \errmessage{No definitions for language #2' found!}%
3048 \noexpand\fi
3049 \endgroup
3050 \noexpand\define@key{Hyp}{#1}[]{%
3051 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3052 #3%
3053 }%
3054 }%

3055 \expandafter\x\csname extras#1\expandafter\endcsname
3056 \csname HyLang@#2\endcsname
3057 }

3058 \HyLang@DeclareLang{english}{english}{}
3059 \HyLang@DeclareLang{UKenglish}{english}{}
3060 \HyLang@DeclareLang{british}{english}{}
3061 \HyLang@DeclareLang{USenglish}{english}{}
3062 \HyLang@DeclareLang{american}{english}{}
3063 \HyLang@DeclareLang{german}{german}{}
3064 \HyLang@DeclareLang{austrian}{german}{}
3065 \HyLang@DeclareLang{ngerman}{german}{}
3066 \HyLang@DeclareLang{naustrian}{german}{}
3067 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3068 \HyLang@DeclareLang{brazil}{portuges}{}
3069 \HyLang@DeclareLang{brazilian}{portuges}{}
3070 \HyLang@DeclareLang{portuguese}{portuges}{}
3071 \HyLang@DeclareLang{spanish}{spanish}{}
3072 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3073 \HyLang@DeclareLang{french}{french}{}
3074 \HyLang@DeclareLang{frenchb}{french}{}
3075 \HyLang@DeclareLang{francais}{french}{}
3076 \HyLang@DeclareLang{acadian}{french}{}
3077 \HyLang@DeclareLang{canadien}{french}{}
3078 \HyLang@DeclareLang{italian}{italian}{}
3079 \HyLang@DeclareLang{magyar}{magyar}{}
3080 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3081 \define@key{Hyp}{vietnamese}[]{}%
3082 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3083 \Hy@AtEndOfPackage{%
3084 \ifundefined{T@PU}{}{}%
3085 \input{pvnenc.def}%
3086 }%
3087 }%
3088 }

3089 \define@key{Hyp}{vietnam}[]{}%
3090 \HyLang@addto\extravietnam\HyLang@vietnamese

```

```

3091 \Hy@AtEndOfPackage{%
3092   \@ifundefined{T@PU}{-}{%
3093     \input{puvnenc.def}%
3094   }%
3095 }%
3096 }

```

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

```

3097 \define@key{Hyp}{arabic}[]{%
3098   \Hy@AtEndOfPackage{%
3099     \@ifundefined{T@PU}{-}{%
3100       \input{puarenc.def}%
3101     }%
3102   }%
3103 }

```

13 Options to change appearance of links

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

```

3104 \define@key{Hyp}{colorlinks}[true]{%
3105   \Hy@boolkey{colorlinks}{#1}%
3106 }
3107 \define@key{Hyp}{ocgcolorlinks}[true]{%
3108   \Hy@boolkey{ocgcolorlinks}{#1}%
3109 }
3110 \Hy@AtBeginDocument{%
3111   \begingroup
3112     \@ifundefined{OBJ@OCG@view}{%
3113       \ifHy@ocgcolorlinks
3114         \Hy@Warning{%
3115           Driver does not support ‘ocgcolorlinks’,\MessageBreak
3116           using ‘colorlinks’ instead%
3117         }%
3118       \fi
3119     }{}%
3120   \endgroup
3121 }
3122 \define@key{Hyp}{frenchlinks}[true]{%
3123   \Hy@boolkey{frenchlinks}{#1}%
3124 }

```

14 Bookmarking

```

3125 \begingroup\expandafter\expandafter\expandafter\endgroup
3126 \expandafter\ifx\csname chapter\endcsname\relax
3127   \def\toclevel@part{0}%
3128 \else
3129   \def\toclevel@part{-1}%
3130 \fi
3131 \def\toclevel@chapter{0}
3132 \def\toclevel@section{1}
3133 \def\toclevel@subsection{2}
3134 \def\toclevel@subsubsection{3}
3135 \def\toclevel@paragraph{4}
3136 \def\toclevel@subparagraph{5}

```

```

3137 \def\toclevel@figure{0}
3138 \def\toclevel@table{0}
3139 \@ifpackageloaded{listings}{%
3140   \providecommand*\theHlstlisting{\thelstlisting}%
3141   \providecommand*\toclevel@lstlisting{0}%
3142 }{}
3143 \@ifpackageloaded{listing}{%
3144   \providecommand*\theHlisting{\thelisting}%
3145   \providecommand*\toclevel@listing{0}%
3146 }{}

3147 \define@key{Hyp}{bookmarks}[true]{%
3148   \Hy@boolkey{bookmarks}{#1}%
3149 }

3150 \define@key{Hyp}{bookmarksopen}[true]{%
3151   \Hy@boolkey{bookmarksopen}{#1}%
3152 }

```

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.

```

3153 \let\Hy@bookmarksdepth\c@tocdepth
3154 \define@key{Hyp}{bookmarksdepth}[]{%
3155   \begingroup
3156     \edef\x{#1}%
3157     \ifx\x\empty
3158       \global\let\Hy@bookmarksdepth\c@tocdepth
3159     \else
3160       \@ifundefined{toclevel@\x}{%
3161         \@onelevel@sanitize\x
3162         \edef\y{\expandafter\@car\x\@nil}%
3163         \ifcase 0\expandafter\ifx\y-1\fi
3164           \expandafter\ifnum\expandafter'\y>47 %
3165             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3166           \Hy@Warning{Unknown document division name (\x)}%
3167         \else
3168           \setbox\z@=\hbox{%
3169             \count@=\x
3170             \xdef\Hy@bookmarksdepth{\the\count@}%
3171           }%
3172         \fi
3173       }{%
3174         \setbox\z@=\hbox{%
3175           \count@=\csname toclevel@\x\endcsname
3176           \xdef\Hy@bookmarksdepth{\the\count@}%
3177         }%
3178       }%
3179     \fi
3180   \endgroup
3181 }

```

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

```

3182 \define@key{Hyp}{bookmarksopenlevel}{%
3183   \def\@bookmarksopenlevel{#1}%
3184 }
3185 \def\@bookmarksopenlevel{\maxdimen}
3186 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3187 \define@key{Hyp}{bookmarkstype}{%
3188   \def\Hy@bookmarkstype{#1}%
3189 }
3190 \def\Hy@bookmarkstype{toc}

```

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

```

3191 \define@key{Hyp}{bookmarksnumbered}[true]{%
3192   \Hy@boolkey{bookmarksnumbered}{#1}%
3193 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3194 \define@key{Hyp}{CJKbookmarks}[true]{%
3195   \Hy@boolkey{CJKbookmarks}{#1}%
3196 }
3197 \def\Hy@temp#1{%
3198   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3199 }
3200 \def\Hy@@temp#1#2#3{%
3201   \define@key{Hyp}{#2color}{%
3202     \HyColor@HyperrefColor{##1}#1%
3203   }%
3204   \def#1{#3}%
3205 }
3206 \Hy@temp{link}{red}
3207 \Hy@temp{anchor}{black}
3208 \Hy@temp{cite}{green}
3209 \Hy@temp{file}{cyan}
3210 \Hy@temp{url}{magenta}
3211 \Hy@temp{menu}{red}
3212 \Hy@temp{run}{\@filecolor}
3213 \define@key{Hyp}{pagecolor}{%
3214   \Hy@WarningPageColor
3215 }
3216 \def\Hy@WarningPageColor{%
3217   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3218   \global\let\Hy@WarningPageColor\relax
3219 }
3220 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3221 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3222 \let\@baseurl\@empty
3223 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3224 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3225 \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.

```

3226 \let\@pdfpagetransition\relax
3227 \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.

```

3228 \let\@pdfpageduration\relax
3229 \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.

```

3230 \newif\ifHy@useHidKey
3231 \Hy@useHidKeyfalse
3232 \define@key{Hyp}{pdfpagehidden}[true]{%
3233   \Hy@boolkey{pdfpagehidden}{#1}%
3234   \ifHy@pdfpagehidden
3235     \global\Hy@useHidKeytrue
3236   \fi
3237 }

```

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).

```

3238 \def\Hy@ColorList{cite,file,link,menu,run,url}
3239 \@for\Hy@temp:=\Hy@ColorList\do{%
3240   \edef\Hy@temp{%
3241     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3242       \noexpand\Hy@Color@HyperrefBorderColor
3243       {##1}%
3244       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3245       {hyperref}%
3246       {\Hy@temp bordercolor}%
3247     }%
3248   }%
3249   \Hy@temp
3250 }
3251 \define@key{Hyp}{pagebordercolor}{%
3252   \Hy@WarningPageBorderColor
3253 }
3254 \def\Hy@WarningPageBorderColor{%
3255   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3256   \global\let\Hy@WarningPageBorderColor\relax
3257 }
3258 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3259 \Hy@DefNameKey{pdfhighlight}{%
3260   \do{/I}{Invert}%
3261   \do{/N}{None}%
3262   \do{/O}{Outline}%
3263   \do{/P}{Push}%
3264 }
3265 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}

```

```

3266 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3267 \def\Hy@setpdfborder{%
3268   \ifx\@pdfborder\@empty
3269     \else
3270       /Border[\@pdfborder]%
3271     \fi
3272   \ifx\@pdfborderstyle\@empty
3273     \else
3274       /BS<<\@pdfborderstyle>>%
3275     \fi
3276 }
3277 \Hy@DefNameKey{pdfpagemode}{%
3278   \do{UseNone}{}%
3279   \do{UseOutlines}{}%
3280   \do{UseThumbs}{}%
3281   \do{FullScreen}{}%
3282   \do{UseOC}{PDF 1.5}%
3283   \do{UseAttachments}{PDF 1.6}%
3284 }
3285 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3286   \do{UseNone}{}%
3287   \do{UseOutlines}{}%
3288   \do{UseThumbs}{}%
3289   \do{FullScreen}{}%
3290   \do{UseOC}{PDF 1.5}%
3291   \do{UseAttachments}{PDF 1.6}%
3292 }
3293 \Hy@DefNameKey{pdfdirection}{%
3294   \do{L2R}{Left to right}%
3295   \do{R2L}{Right to left}%
3296 }
3297 \Hy@DefNameKey{pdfviewarea}{%
3298   \do{MediaBox}{}%
3299   \do{CropBox}{}%
3300   \do{BleedBox}{}%
3301   \do{TrimBox}{}%
3302   \do{ArtBox}{}%
3303 }
3304 \Hy@DefNameKey{pdfviewclip}{%
3305   \do{MediaBox}{}%
3306   \do{CropBox}{}%
3307   \do{BleedBox}{}%
3308   \do{TrimBox}{}%
3309   \do{ArtBox}{}%
3310 }
3311 \Hy@DefNameKey{pdfprintarea}{%
3312   \do{MediaBox}{}%
3313   \do{CropBox}{}%
3314   \do{BleedBox}{}%
3315   \do{TrimBox}{}%
3316   \do{ArtBox}{}%
3317 }
3318 \Hy@DefNameKey{pdfprintclip}{%
3319   \do{MediaBox}{}%
3320   \do{CropBox}{}%
3321   \do{BleedBox}{}%
3322   \do{TrimBox}{}%

```

```

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

```

```

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

```



```

3437     \else
3438         \Hy@Warning{%
3439             Unsupported value '#1'\MessageBreak
3440             for option 'pdftrapped'%
3441         }%
3442     \fi
3443     \def\@pdftrapped{}%
3444 \fi
3445 \fi
3446 \fi
3447 }
3448 \def\HyInfo@trapped@true{true}
3449 \def\HyInfo@trapped@false{false}
3450 \def\HyInfo@trapped@unknown{unknown}
3451 \def\HyInfo@TrappedUnsupported{%
3452     \ifx\@pdftrapped\@empty
3453     \else
3454         \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3455         \gdef\HyInfo@TrappedUnsupported{}%
3456     \fi
3457 }
3458 \define@key{Hyp}{pdfinfo}{%
3459     \kvsetkeys{pdfinfo}{#1}%
3460 }
3461 \def\Hy@temp#1{%
3462     \lowercase{\Hy@temp@A{#1}}{#1}%
3463 }
3464 \def\Hy@temp@A#1#2{%
3465     \define@key{pdfinfo}{#2}{%
3466         \hypersetup{pdf#1={##1}}%
3467     }%
3468 }
3469 \Hy@temp{Title}
3470 \Hy@temp{Author}
3471 \Hy@temp{Keywords}
3472 \Hy@temp{Subject}
3473 \Hy@temp{Creator}
3474 \Hy@temp{Producer}
3475 \Hy@temp{CreationDate}
3476 \Hy@temp{ModDate}
3477 \Hy@temp{Trapped}
3478 \newif\ifHyInfo@AddonUnsupported
3479 \kv@set@family@handler{pdfinfo}{%
3480     \HyInfo@AddonHandler{#1}{#2}%
3481 }
3482 \let\HyInfo@do\relax
3483 \def\HyInfo@AddonHandler#1#2{%
3484     \ifx\kv@value\relax
3485         \Hy@Warning{%
3486             Option 'pdfinfo': ignoring key '\kv@key' without value%
3487         }%
3488     \else
3489         \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3490         \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3491         \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3492             \ifHyInfo@AddonUnsupported
3493                 \Hy@Warning{%

```

```

3494     This driver does not support additional\MessageBreak
3495     information entries, therefore\MessageBreak
3496     ‘\kv@key’ is ignored%
3497 }%
3498 \else
3499 \define@key{pdfinfo}{\HyInfo@Key}{%
3500 \HyXeTeX@CheckUnicode
3501 \HyPsd@XeTeXBigCharstrue
3502 \HyPsd@PrerenderUnicode{##1}%
3503 \pdfstringdef\HyInfo@Value{##1}%
3504 \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3505 \HyInfo@Value
3506 }%
3507 \edef\HyInfo@AddonList{%
3508 \HyInfo@AddonList
3509 \HyInfo@do{\HyInfo@Key}%
3510 }%
3511 \kv@parse@normalized{%
3512 \HyInfo@Key={#2}%
3513 }{%
3514 \kv@processor@default{pdfinfo}%
3515 }%
3516 \fi
3517 \else
3518 \kv@parse@normalized{%
3519 \HyInfo@Key={#2}%
3520 }{%
3521 \kv@processor@default{pdfinfo}%
3522 }%
3523 \fi
3524 \fi
3525 }
3526 \def\HyInfo@GenerateAddons{%
3527 \ifHyInfo@AddonUnsupported
3528 \def\HyInfo@Addons{}%
3529 \else
3530 \begingroup
3531 \toks@{}%
3532 \def\HyInfo@do##1{%
3533 \EdefEscapeName\HyInfo@Key{##1}%
3534 \edef\x{%
3535 \toks@{%
3536 \the\toks@
3537 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3538 }%
3539 }%
3540 \x
3541 }%
3542 \HyInfo@AddonList
3543 \edef\x{\endgroup
3544 \def\noexpand\HyInfo@Addons{\the\toks@}%
3545 }%
3546 \x
3547 \fi
3548 }
3549 \def\HyInfo@AddonList{}
3550 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}

```

```

3551 \define@key{Hyp}{pdflinkmargin}{\setpdfinkmargin{#1}}
3552 \let\setpdfinkmargin\@gobble
3553 \def\calculate@pdfview#1 #2\{\%
3554 \def\@pdfview{#1}%
3555 \ifx\#2\%
3556 \def\@pdfviewparams{ -32768}%
3557 \else
3558 \def\@pdfviewparams{ #2}%
3559 \fi
3560 }
3561 \begingroup\expandafter\expandafter\expandafter\endgroup
3562 \expandafter\ifx\csname numexpr\endcsname\relax
3563 \def\Hy@number#1{%
3564 \expandafter\@firstofone\expandafter{\number#1}%
3565 }%
3566 \else
3567 \def\Hy@number#1{%
3568 \the\numexpr#1\relax
3569 }%
3570 \fi
3571 \define@key{Hyp}{pdfstartpage}{%
3572 \ifx\#1\%
3573 \def\@pdfstartpage{}%
3574 \else
3575 \edef\@pdfstartpage{\Hy@number{#1}}%
3576 \fi
3577 }%
3578 \define@key{Hyp}{pdfstartview}{%
3579 \ifx\#1\%
3580 \def\@pdfstartview{}%
3581 \else
3582 \hypercalcbpdef\@pdfstartview{ /#1 }%
3583 \fi
3584 }
3585 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3586 \define@key{Hyp}{pdftoolbar}[true]{%
3587 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3588 }
3589 \define@key{Hyp}{pdfmenubar}[true]{%
3590 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3591 }
3592 \define@key{Hyp}{pdfwindowui}[true]{%
3593 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3594 }
3595 \define@key{Hyp}{pdffitwindow}[true]{%
3596 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3597 }
3598 \define@key{Hyp}{pdfcenterwindow}[true]{%
3599 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3600 }
3601 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3602 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3603 }
3604 \define@key{Hyp}{pdfa}[true]{%
3605 \Hy@boolkey{pdfa}{#1}%
3606 }
3607 \define@key{Hyp}{pdfnewwindow}[true]{%

```

```

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

```

Default values:

```

3639 \def\@linkbordercolor{1 0 0}
3640 \def\@urlbordercolor{0 1 1}
3641 \def\@menubordercolor{1 0 0}
3642 \def\@filebordercolor{0 .5 .5}
3643 \def\@runbordercolor{0 .7 .7}
3644 \def\@citebordercolor{0 1 0}
3645 \def\@pdfhighlight{/I}
3646 \def\@pdftitle{}
3647 \def\@pdfauthor{}
3648 \let\@pdfproducer\relax
3649 \def\@pdfcreator{LaTeX with hyperref package}
3650 \def\@pdfcreationdate{}
3651 \def\@pdfmoddate{}
3652 \def\@pdfsubject{}
3653 \def\@pdfkeywords{}
3654 \def\@pdftrapped{}
3655 \def\@pdfpagescrop{}
3656 \def\@pdfstartview{/Fit }
3657 \def\@pdfstartpage{1}
3658 \def\@pdfprintpagerange{}
3659 \def\@pdflang{}
3660 \let\PDF@SetupDoc\@empty
3661 \let\PDF@FinishDoc\@empty
3662 \let\phantomsection\@empty
3663 \let\special@paper\@empty

```

```

3664 \def\HyperDestNameFilter#1{#1}
3665 \Hy@AtBeginDocument{%
3666   \begingroup
3667   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3668   \dimen@=\x\relax
3669   \ifdim\dimen@>\z@
3670   \else
3671     \dimen@=11in\relax
3672     \Hy@WarningNoLine{%
3673       Height of page (\expandafter\string\x) %
3674       is invalid (\the\x),\MessageBreak
3675       using 11in%
3676     }%
3677   \fi
3678   \dimen@=0.99626401\dimen@
3679   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3680 \endgroup
3681 }
3682 \def\HyInd@EncapChar{\|}
3683 \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.

```

3684 \let\hyper@normalise\ExecuteOptions
3685 \let\ExecuteOptions\hypersetup
3686 \Hy@RestoreCatcodes
3687 \InputIfFileExists{hyperref.cfg}{-}{}
3688 \Hy@SetCatcodes
3689 \let\ExecuteOptions\hyper@normalise
3690 \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`.

```

3691 \RequirePackage{kvoptions}[2009/07/21]
3692 \SetupKeyvalOptions{family=Hyp}
3693 \DeclareLocalOptions{%
3694   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3695 }

```

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

```

3696 \@ifpackageloaded{tex4ht}{%
3697   \@ifpackagewith{hyperref}{tex4ht}{-}{}%
3698   \PassOptionsToPackage{tex4ht}{hyperref}%
3699 }%
3700 {}

3701 \let\ReadBookmarks\relax
3702 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3703 \Hy@AtBeginDocument{%
3704   \ifHy@draft
3705     \let\hyper@@anchor\@gobble
3706     \gdef\hyper@link#1#2#3{#3}%
3707     \let\hyper@anchorstart\@gobble

```

```

3708 \let\hyper@anchorend\@empty
3709 \let\hyper@linkstart\@gobbletwo
3710 \let\hyper@linkend\@empty
3711 \def\hyper@linkurl#1#2{#1}%
3712 \def\hyper@linkfile#1#2#3{#1}%
3713 \def\hyper@link@{#1}#2#3{}%
3714 \def\Acrobatmenu#1#2{\leavevmode#2}%
3715 \let\PDF@SetupDoc\@empty
3716 \let\PDF@FinishDoc\@empty
3717 \let\@fifthoffive\@secondoftwo
3718 \let\@secondoffive\@secondoftwo
3719 \let\ReadBookmarks\relax
3720 \let\WriteBookmarks\relax
3721 \Hy@WarningNoLine{ draft mode on}%
3722 \fi
3723 \Hy@DisableOption{draft}%
3724 \Hy@DisableOption{nolinks}%
3725 \Hy@DisableOption{final}%
3726 }

```

15.1 PDF/A

```

3727 \Hy@DisableOption{pdfa}
3728 \ifHy@pdfa
3729 \setkeys{Hyp}{pdfversion=1.4}%
3730 \def\Hy@Acrobatmenu#1#2{%
3731 \leavevmode
3732 \begingroup
3733 \edef\x{#1}%
3734 \@onelevel@sanitize\x
3735 \ifx\x\Hy@NextPage
3736 \let\y=Y%
3737 \else
3738 \ifx\x\Hy@PrevPage
3739 \let\y=Y%
3740 \else
3741 \ifx\x\Hy@FirstPage
3742 \let\y=Y%
3743 \else
3744 \ifx\x\Hy@LastPage
3745 \let\y=Y%
3746 \else
3747 \let\y=N%
3748 \fi
3749 \fi
3750 \fi
3751 \fi
3752 \expandafter\endgroup
3753 \ifx\y Y%
3754 \else
3755 \PackageError{hyperref}{%
3756 PDF/A: Named action ‘#1’ is not permitted%
3757 }\@ehc
3758 {#2}%
3759 \expandafter\@gobble
3760 \fi
3761 }%

```

```

3762 \def\Hy@temp#1{%
3763   \expandafter\def\csname Hy@#1\endcsname{#1}%
3764   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3765 }%
3766 \Hy@temp{NextPage}%
3767 \Hy@temp{PrevPage}%
3768 \Hy@temp{FirstPage}%
3769 \Hy@temp{LastPage}%
3770 \else
3771 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3772 \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.

```

3773 \Hy@nextfalse
3774 \ltx@ifundefined{spanish@sh@"@sel}{-}{\Hy@nexttrue}
3775 \ltx@ifundefined{galician@sh@"@sel}{-}{\Hy@nexttrue}
3776 \ltx@ifundefined{estonian@sh@"@sel}{-}{\Hy@nexttrue}
3777 \ifHy@next
3778 \let\texttilde\~%
3779 \fi

3780 \ifHy@figures
3781 \Hy@Info{Hyper figures ON}%
3782 \else
3783 \Hy@Info{Hyper figures OFF}%
3784 \fi

3785 \ifHy@nesting
3786 \Hy@Info{Link nesting ON}%
3787 \else
3788 \Hy@Info{Link nesting OFF}%
3789 \fi

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

3795 \ifHy@plainpages
3796 \Hy@Info{Plain pages ON}%
3797 \else
3798 \Hy@Info{Plain pages OFF}%
3799 \fi

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

3805 \ifHy@typexml
3806 \Hy@AtEndOfPackage{%
3807   \RequirePackage{color}%
3808   \RequirePackage{nameref}%
3809 }%
3810 \fi
3811 \Hy@DisableOption{typexml}
3812 \ifHy@implicit
3813 \typeout{Implicit mode ON; LaTeX internals redefined}%

```

```

3814 \else
3815 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3816 \def\MaybeStopEarly{%
3817 \typeout{Hyperref stopped early}%
3818 \Hy@AtBeginDocument{%
3819 \PDF@FinishDoc
3820 \gdef\PDF@FinishDoc{}%
3821 }%
3822 \endinput
3823 }%
3824 \Hy@AtBeginDocument{%
3825 \let\autoref\ref
3826 \let\autopageref\pageref
3827 \ifx\@pdfpagemode\@empty
3828 \gdef\@pdfpagemode{UseNone}%
3829 \fi
3830 \global\Hy@backreffalse
3831 }%
3832 \Hy@AtEndOfPackage{%
3833 \global\let\ReadBookmarks\relax
3834 \global\let\WriteBookmarks\relax
3835 }%
3836 \fi
3837 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3838 \Hy@AtEndOfPackage{%
3839 \@ifpackageloaded{tex4ht}{%
3840 \def\Hy@driver{htex4ht}%
3841 \Hy@texhttrue
3842 }{}%

```

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.

```

3843 \ifx\Hy@driver\@empty
3844 \else
3845 \def\Hy@temp{hpdftex}%
3846 \ifpdf
3847 \ifx\Hy@driver\Hy@temp
3848 \else
3849 \Hy@WarningNoLine{%
3850 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3851 pdfTeX is running in PDF mode.\MessageBreak
3852 Forcing driver ‘\Hy@temp.def’%
3853 }%
3854 \let\Hy@driver\Hy@temp
3855 \fi
3856 \else
3857 \ifx\Hy@driver\Hy@temp
3858 \Hy@WarningNoLine{%
3859 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3860 pdfTeX is not running in PDF mode.\MessageBreak
3861 Using default driver%
3862 }%
3863 \let\Hy@driver\@empty
3864 \fi
3865 \fi

```



```

3866 \fi
3867 \ifx\Hy@driver\@empty
3868 \else
3869 \def\Hy@temp{hxtex}%
3870 \ifxetex
3871 \ifx\Hy@driver\Hy@temp
3872 \else
3873 \Hy@WarningNoLine{%
3874   Wrong driver '\Hy@driver.def';\MessageBreak
3875   XeTeX is running.\MessageBreak
3876   Forcing driver '\Hy@temp.def' for XeTeX%
3877 }%
3878 \let\Hy@driver\Hy@temp
3879 \fi
3880 \fi
3881 \fi
3882 \ifx\Hy@driver\@empty
3883 \else
3884 \def\Hy@temp{hvtexhtm}%
3885 \ifvtexhtml
3886 \ifx\Hy@driver\Hy@temp
3887 \else
3888 \Hy@WarningNoLine{%
3889   Wrong driver '\Hy@driver.def';\MessageBreak
3890   VTeX is running in HTML mode.\MessageBreak
3891   Forcing driver '\Hy@temp.def'%
3892 }%
3893 \let\Hy@driver\Hy@temp
3894 \fi
3895 \else
3896 \ifx\Hy@driver\Hy@temp
3897 \Hy@WarningNoLine{%
3898   Wrong driver '\Hy@driver.def';\MessageBreak
3899   VTeX is not running in HTML mode.\MessageBreak
3900   Using default driver%
3901 }%
3902 \let\Hy@driver\@empty
3903 \fi
3904 \fi
3905 \fi

```

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

```

3906 \ifx\Hy@driver\@empty
3907 \providecommand*{\Hy@defaultdriver}{hypertex}%
3908 \ifpdf
3909 \def\Hy@driver{hpdftex}%
3910 \else
3911 \ifxetex
3912 \def\Hy@driver{hxtex}%
3913 \else
3914 \ifvtexhtml
3915 \def\Hy@driver{hvtexhtm}%
3916 \def\MaybeStopEarly{%
3917   \typeout{Hyperref stopped early}%
3918   \Hy@AtBeginDocument{%
3919     \PDF@FinishDoc
3920     \gdef\PDF@FinishDoc{}%
3921   }%

```

```

3922     \endinput
3923   }%
3924   \else
3925     \ifvtexpdf
3926       \def\Hy@driver{hvtex}%
3927     \else
3928       \ifvtexps
3929         \def\Hy@driver{hvtex}%
3930       \else
3931         \let\Hy@driver\Hy@defaultdriver
3932       \fi
3933     \fi
3934   \fi
3935 \fi
3936 \fi
3937 \ifx\Hy@driver\Hy@defaultdriver
3938   \def\Hy@temp{hdviwind}%
3939   \ifx\Hy@temp\Hy@driver
3940     \setkeys{Hyp}{colorlinks}%
3941     \PassOptionsToPackage{dviwindo}{color}%
3942   \fi
3943 \fi
3944 \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3945 \else
3946   \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3947 \fi
3948 \input{\Hy@driver.def}%
3949 \let\@unprocessedoptions\relax
3950 \Hy@RestoreCatcodes
3951 }

```

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.

```

3952 \newif\ifHy@DvipdfmxOutlineOpen
3953 \ifxetex
3954   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3955   \else
3956     \Hy@DvipdfmxOutlineOpentrue
3957   \fi
3958 \fi
3959 \begingroup\expandafter\expandafter\expandafter\endgroup
3960 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3961 \else
3962   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3963     \Hy@DvipdfmxOutlineOpentrue
3964   \fi
3965 \fi
3966 \Hy@DisableOption{tex4ht}
3967 \Hy@DisableOption{pdftex}
3968 \Hy@DisableOption{nativepdf}
3969 \Hy@DisableOption{dvipdfm}
3970 \Hy@DisableOption{dvipdfmx}
3971 \Hy@DisableOption{dvipdfmx-outline-open}
3972 \Hy@DisableOption{pdfmark}
3973 \Hy@DisableOption{dvips}
3974 \Hy@DisableOption{hypertex}
3975 \Hy@DisableOption{vtex}

```

```

3976 \Hy@DisableOption{vtxpdfmark}
3977 \Hy@DisableOption{dviwindo}
3978 \Hy@DisableOption{dvipsone}
3979 \Hy@DisableOption{textures}
3980 \Hy@DisableOption{latex2html}
3981 \Hy@DisableOption{ps2pdf}
3982 \Hy@DisableOption{xetex}
3983 \Hy@AtEndOfPackage{%
3984   \Hy@DisableOption{pdfversion}%
3985 }

```

15.2.2 Bookmarks

```

3986 \def\WriteBookmarks{0}
3987 \def\@bookmarkopenstatus#1{%
3988   \ifHy@bookmarksopen

```

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

```

3989   \ifnum#1<\expandafter\@firstofone\expandafter
3990     {\number\@bookmarkopenlevel} % explicit space
3991   \else
3992     -%
3993   \fi
3994 \else
3995   -%
3996 \fi
3997 }
3998 \ifHy@bookmarks
3999   \Hy@Info{Bookmarks ON}%
4000   \ifx\@pdfpagemode\@empty
4001     \def\@pdfpagemode{UseOutlines}%
4002   \fi
4003 \else
4004   \def\@bookmarkopenstatus#1{%
4005     \Hy@Info{Bookmarks OFF}%
4006     \Hy@AtEndOfPackage{%
4007       \global\let\ReadBookmarks\relax
4008       \global\let\WriteBookmarks\relax
4009     }%
4010     \ifx\@pdfpagemode\@empty
4011       \def\@pdfpagemode{UseNone}%
4012     \fi
4013   \fi
4014 \Hy@DisableOption{bookmarks}

```

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

```

4015 \def\Hy@CatcodeWrapper#1{%
4016   \def\Hy@endWrap{%
4017     \def\TMP@EnsureCode##1##2{%
4018       \edef\Hy@endWrap{%
4019         \Hy@endWrap
4020         \catcode##1 \the\catcode##1\relax
4021       }%
4022       \catcode##1 ##2\relax
4023     }%
4024     \TMP@EnsureCode{10}{12}% ^^J
4025     \TMP@EnsureCode{33}{12}% !
4026     \TMP@EnsureCode{34}{12}% "
4027     \TMP@EnsureCode{36}{3}% $ (math)

```

```

4028 \TMP@EnsureCode{38}{4}% & (alignment)
4029 \TMP@EnsureCode{39}{12}% '
4030 \TMP@EnsureCode{40}{12}% (
4031 \TMP@EnsureCode{41}{12}% )
4032 \TMP@EnsureCode{42}{12}% *
4033 \TMP@EnsureCode{43}{12}% +
4034 \TMP@EnsureCode{44}{12}% ,
4035 \TMP@EnsureCode{45}{12}% -
4036 \TMP@EnsureCode{46}{12}% .
4037 \TMP@EnsureCode{47}{12}% /
4038 \TMP@EnsureCode{58}{12}% :
4039 \TMP@EnsureCode{59}{12}% ;
4040 \TMP@EnsureCode{60}{12}% <
4041 \TMP@EnsureCode{61}{12}% =
4042 \TMP@EnsureCode{62}{12}% >
4043 \TMP@EnsureCode{63}{12}% ?
4044 \TMP@EnsureCode{91}{12}% [
4045 \TMP@EnsureCode{93}{12}% ]
4046 \TMP@EnsureCode{94}{7}% ^ (superscript)
4047 \TMP@EnsureCode{95}{8}% _ (subscript)
4048 \TMP@EnsureCode{96}{12}% '
4049 \TMP@EnsureCode{124}{12}% |
4050 \TMP@EnsureCode{126}{13}% ~ (active)
4051 #1\relax
4052 \Hy@EndWrap
4053 }

```

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

```

4054 \Hy@AtBeginDocument{%
4055   \ifHy@ocgcolorlinks
4056     \setkeys{Hyp}{colorlinks}%
4057     \ifHy@pdfa
4058       \Hy@Warning{%
4059         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4060         using 'colorlinks' instead of 'ocgcolorlinks'%
4061       }%
4062       \Hy@ocgcolorlinksfalse
4063     \fi
4064   \fi
4065   \ifHy@ocgcolorlinks
4066   \else
4067     \Hy@DisableOption{ocgcolorlinks}%
4068   \fi
4069   \ifHy@colorlinks
4070     \def\@pdfborder{0 0 0}%
4071     \let\@pdfborderstyle\@empty
4072     \ifHy@typexml
4073     \else
4074       \Hy@CatcodeWrapper{%
4075         \RequirePackage{color}%
4076       }%
4077     \fi
4078     \def\Hy@colorlink#1{%
4079       \begingroup
4080       \HyColor@UseColor#1%
4081     }%
4082     \def\Hy@endcolorlink{\endgroup}%

```

```

4083 \Hy@Info{Link coloring ON}%
4084 \else
4085 \ifHy@frenchlinks
4086 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4087 \def\Hy@endcolorlink{\endgroup}%
4088 \Hy@Info{French linking ON}%
4089 \else
for grouping consistency:
4090 \def\Hy@colorlink#1{\begingroup}%
4091 \def\Hy@endcolorlink{\endgroup}%
4092 \Hy@Info{Link coloring OFF}%
4093 \fi
4094 \fi
4095 \Hy@DisableOption{colorlinks}%
4096 \Hy@DisableOption{frenchlinks}%
4097 \ifHy@texht
4098 \long\def\@firstoffive#1#2#3#4#5{#1}%
4099 \long\def\@secondoffive#1#2#3#4#5{#2}%
4100 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4101 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4102 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4103 \providecommand*\@safe@activestruet{}%
4104 \providecommand*\@safe@activesfalse{}%
4105 \def\T@ref#1{%
4106 \Hy@safe@activestruet
4107 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4108 \Hy@safe@activesfalse
4109 }%
4110 \def\T@pageref#1{%
4111 \Hy@safe@activestruet
4112 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4113 \Hy@safe@activesfalse
4114 }%
4115 \else
4116 \ifHy@typexml
4117 \else
4118 \Hy@CatcodeWrapper{%
4119 \RequirePackage{nameref}%
4120 }%
4121 \fi
4122 \fi
4123 \DeclareRobustCommand\ref{%
4124 \@ifstar\@refstar\T@ref
4125 }%
4126 \DeclareRobustCommand\pageref{%
4127 \@ifstar\@pagerefstar\T@pageref
4128 }%
4129 % \@ifclassloaded{memoir}{}%
4130 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4131 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4132 % }%
4133 % }\ltx@secondoftwo
4134 % {%
4135 % \DeclareRobustCommand*{\nameref}{%
4136 % \@ifstar\@mem@titlerefno link\@mem@titleref
4137 % }%
4138 % }{%

```

```

4139 \DeclareRobustCommand*{\nameref}{%
4140   \@ifstar\@namerefstar\T@nameref
4141 }%
4142 % }%
4143 }
4144 \Hy@AtBeginDocument{%
4145   \ifHy@texht
4146   \else
4147     \Hy@CatcodeWrapper{%
4148       \ReadBookmarks
4149     }%
4150   \fi
4151 }

4152 \ifHy@backref
4153   \RequirePackage{backref}%
4154 \else
4155   \let\Hy@backout\@gobble
4156 \fi
4157 \Hy@DisableOption{backref}
4158 \Hy@DisableOption{pagebackref}

4159 \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.

```

4160 \begingroup
4161   \endlinechar=-1 %
4162   \catcode'\^^A=14 %
4163   \catcode'\^^M\active
4164   \catcode'\%\active
4165   \catcode'\#\active
4166   \catcode'\_\active
4167   \catcode'\$\active
4168   \catcode'\&\active
4169   \gdef\hyper@normalise{^^A
4170     \begingroup
4171       \catcode'\^^M\active
4172       \def^^M{ }^^A
4173       \catcode'\%\active
4174       \let%\@percentchar
4175       \let%\@percentchar
4176       \catcode'\#\active
4177       \def#{\hyper@hash}^^A
4178       \def\#{\hyper@hash}^^A
4179       \@makeother\&^^A
4180       \edef&{\string&}^^A
4181       \edef&{\string&}^^A
4182       \edef\textunderscore{\string_}^^A
4183       \let_\textunderscore
4184       \catcode'\_\active
4185       \let_\textunderscore

```

```

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

4230 \def\hyperlink#1#2{%
4231 \hyper@@link{#1}{#2}%
4232 }

4233 \def\Hy@VerboseLinkStart#1#2{%
4234 \ifHy@verbose
4235 \begingroup
4236 \Hy@safe@activetrue
4237 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4238 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4239 \xdef\Hy@VerboseGlobalTemp{%
4240 \Hy@VerboseGlobalTemp, %
4241 line \the\inputlineno
4242 }%

```

```

4243 \endgroup
4244 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4245 \@onelevel@sanitize\Hy@VerboseLinkInfo
4246 \fi
4247 }

4248 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4249 \def\Hy@VerboseLinkStop{%
4250 \ifHy@verbose
4251 \begingroup
4252 \edef\x{\endgroup
4253 \write\m@ne{%
4254 Package 'hyperref' Info: %
4255 End of reference \Hy@VerboseLinkInfo.%
4256 }%
4257 }%
4258 \x
4259 \fi
4260 }

4261 \def\Hy@VerboseAnchor#1{%
4262 \ifHy@verbose
4263 \begingroup
4264 \Hy@safe@activetrue
4265 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4266 \endgroup
4267 \fi
4268 }

4269 \def\Hy@AllowHyphens{%
4270 \relax
4271 \ifhmode
4272 \penalty\@M
4273 \hskip\z@skip
4274 \fi
4275 }

4276 \DeclareRobustCommand*\href{%
4277 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4278 }
4279 \def\Hy@href#1{%
4280 \hyper@normalise\href@
4281 }
4282 \begingroup
4283 \catcode'\$=6 %
4284 \catcode'\#=12 %
4285 \gdef\href@#1{\expandafter\href@split$1##\}%
4286 \gdef\href@split$1#$2#$3\{\%
4287 \hyper@link{#1}{#2}%
4288 }%
4289 \endgroup

```

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

```

4290 \RequirePackage{url}
4291 \let\HyOrg@url\url
4292 \def\Hurl{\begingroup \Url}
4293 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4294 \def\nolinkurl@#1{\Hurl{#1}}
4295 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4296 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

```



```

4297 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4298 \providecommand\hyper@image[2]{#2}

4299 \def\hypertarget#1#2{%
4300   \ifHy@nesting
4301     \hyper@@anchor{#1}{#2}%
4302   \else
4303     \hyper@@anchor{#1}{\relax}#2%
4304   \fi
4305 }

```

`\hyperref` is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. `\hyperdef` sets up an anchor in the same way. They each have three parameters of category, linkname, and marked text, and `\hyperref` also has a first parameter of URL. If there is an optional first parameter to `\hyperdef`, it is the name of a \LaTeX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

4306 \DeclareRobustCommand*\hyperref{%
4307   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4308 }

4309 \def\Hy@babelnormalise#1[#2]{%
4310   \begingroup
4311     \Hy@safe@activetrue
4312     \edef\Hy@tempa{%
4313       \endgroup
4314       \noexpand#1[#2]}%
4315   }%
4316   \Hy@tempa
4317 }

4318 \def\@hyperref{\hyper@normalise\@hyperref}
4319 \def\@hyperref#1#2#3{%
4320   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4321   \expandafter\tryhyper@link\ref@one\{#1}%
4322 }

4323 \def\tryhyper@link#1\#2{%
4324   \hyper@@link{#2}{#1}%
4325 }

4326 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
4327 \def\@hyperdef#1#2#3{%, category, name, text
4328   \ifx\#1\%
4329     \def\Hy@AnchorName{#2}%
4330   \else
4331     \def\Hy@AnchorName{#1.#2}%
4332   \fi
4333   \ifHy@nesting
4334     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4335   \else
4336     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4337   \fi
4338 }

```

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

```

4339 \def\label@hyperref[#1]{%
4340   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4341 }%
4342 \def\label@@hyperref#1#2#3{%
4343   \ifx#1\relax

```

```

4344 \protect\G@refundefinedtrue
4345 \@latex@warning{%
4346   Hyper reference '#2' on page \thepage \space undefined%
4347 }%
4348 \hyper@@link{}{??}{#3}%
4349 \else
4350 \hyper@@link{\expandafter\@fifthoffive#1}%
4351 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4352 \fi
4353 }
4354 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4355                               % anchor text
4356 \@bsphack
4357 \ifx\\#2\\%
4358   \def\Hy@AnchorName{#3}%
4359 \else
4360   \def\Hy@AnchorName{#2.#3}%
4361 \fi
4362 \if@filesw
4363   \protected@write\@auxout{}{%
4364     \string\newlabel{#1}{\{ }\{ }\{\Hy@AnchorName\} }%
4365   }%
4366 \fi
4367 \@esphack
4368 \ifHy@nesting
4369   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4370 \else
4371   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4372 \fi
4373 }

```

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.

```

4374 \def\hyper@{@link{\let\Hy@reserved@a\relax
4375 \ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
4376 }
4377 \def\hyper@link@[#1]#2#3#4{%
4378 \begingroup
4379 \protected@edef\Hy@tempa{#2}%
4380 \Hy@safe@activetrue
4381 \edef\x{#3}%
4382 \ifx\Hy@tempa@empty
4383 \toks0{\hyper@link{#1}}%
4384 \else
4385 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4386 \fi
4387 \toks2{%
4388 \Hy@safe@activesfalse
4389 #4%
4390 }%
4391 \edef\Hy@tempa{\the\toks2}%
4392 \edef\x{\endgroup

```

```

4393 \ifx\Hy@tempa\@empty
4394 \noexpand\Hy@Warning{Suppressing empty link}%
4395 \else
4396 \the\toks0 {\x}{\the\toks2}%%
4397 \fi
4398 }%
4399 \x
4400 }

```

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.

```

4401 \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.

```

4402 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4403 }

```

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

```

4404 \def\@pdftempwordfile{file}%
4405 \def\@pdftempwordrun{run}%
4406 \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:

```

4407 \ifx\#6\%
4408 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4409 \else
4410 \ifx\#4\%
4411 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4412 \else

```

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

```

4413 \def\@pdftempa{#4}%
4414 \ifx\@pdftempa\@pdftempwordfile
4415 \expandafter\@hyper@linkfile#7\{#3}{#2}%
4416 \else

```

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

```

4417 \ifx\@pdftempa\@pdftempwordrun
4418 \ifHy@pdfa
4419 \PackageError{hyperref}{%
4420 PDF/A: Launch action is prohibited%
4421 }\@ehc

```

```

4422         \begingroup
4423         \leavevmode
4424         #2%
4425     \endgroup
4426 \else
4427     \expandafter\@hyper@launch#7\{\#3}\#2}%
4428 \fi
4429 \else

```

otherwise its a URL

```

4430     \hyper@linkurl{\#3}\#7\ifx\#2\\\else\hyper@hash#2\fi}%
4431 \fi
4432 \fi
4433 \fi
4434 \fi
4435 }

```

By default, turn run: into file:

```

4436 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4437 \hyper@linkurl{\#2}\#1%
4438 \Hy@linkfileprefix
4439 #1%
4440 \ifx\#3\\\%
4441 \else
4442     \hyper@hash
4443     #3%
4444 \fi
4445 }%
4446 }

```

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

```

4447 \def\@hyper@linkfile file:#1\#2#3{%
4448     %file url,link string, name
4449     \filename@parse{\#1}%
4450     \ifx\filename@ext\relax
4451     \edef\filename@ext{\XR@ext}%
4452 \fi
4453 \def\use@file{\filename@area\filename@base.\filename@ext}%
4454 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
4455     \hyper@linkfile{\#2}\use@file{\#3}%
4456 }{%
4457     \ifx\@baseurl\@empty
4458     \hyper@linkurl{\#2}\%
4459     \Hy@linkfileprefix\use@file\ifx\#3\\\else\hyper@hash#3\fi
4460     }%
4461 \else
4462     \hyper@linkurl{\#2}\use@file\ifx\#3\\\else\hyper@hash#3\fi}%
4463 \fi
4464 }%
4465 }

4466 \def\Hy@IfStringEndsWith#1#2{%
4467     \begingroup
4468     \edef\x{\#1}%
4469     \@onelevel@sanitize\x
4470     \edef\x{.\x$}%
4471     \edef\y{\#2}%
4472     \@onelevel@sanitize\y

```

```

4473 \edef\y{.\y$}%
4474 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4475 \endgroup
4476 \ifx\relax##2\relax
4477 \expandafter\ltx@secondoftwo
4478 \else
4479 \expandafter\ltx@firstoftwo
4480 \fi
4481 }%
4482 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4483 }

```

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.

```

4484 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4485 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4486 \ifx\#1\%
4487 #2\Hy@Warning{Ignoring empty anchor}%
4488 \else
4489 \def\anchor@spot{#2#3}%
4490 \let\put@me@back\@empty
4491 \ifx\relax#2\relax
4492 \else
4493 \ifHy@nesting
4494 \else
4495 \ifcat a\noexpand#2\relax
4496 \else
4497 \ifcat 0\noexpand#2 \relax
4498 \else
4499 % \typeout{Anchor start is not alphanumeric %
4500 % on input line\the\inputlineno%
4501 % }%
4502 \let\anchor@spot\@empty
4503 \def\put@me@back{#2#3}%
4504 \fi
4505 \fi
4506 \fi
4507 \fi
4508 \ifHy@activeanchor
4509 \anchor@spot
4510 \else
4511 \hyper@anchor{#1}%
4512 \fi
4513 \expandafter\put@me@back
4514 \fi
4515 \let\anchor@spot\@empty
4516 }

```

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.

```
4517 \let\htmladdimg\hyperimage
4518 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4519 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4520 \def\htmlref#1#2{% anchor text, label
4521   \label@hyperref[{#2}]{#1}%
4522 }
```

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.

```
4523 \def\@latextohtmlX{%
4524   \let\hhyperref\hyperref
4525   \def\hyperref##1##2##3##4{% anchor text for HTML
4526     % text to print before label in print
4527     % label
4528     % post-label text in print
4529     ##2\ref{##4}##3%
4530   }%
4531 }
```

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.

```
4532 \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
4533 \def\HyField@NewFlag#1#2{%
4534   \lowercase{\HyField@NewOption{#2}}%
4535   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4536 }
```

\HyField@NewFlagOnly

```
4537 \def\HyField@NewFlagOnly#1#2{%
4538   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4539 }
```

\HyField@NewOption #1: option name

```
4540 \def\HyField@NewOption#1{%
4541   \expandafter\newif\csname ifFld@#1\endcsname
4542   \define@key{Field}{#1}[true]{%
4543     \lowercase{\Field@boolkey{##1}}{#1}%
4544   }%
4545 }
```

\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

```
4546 \def\HyField@NewBitsetFlag#1#2#3#4{%
4547   \begingroup
4548   \count@=#4\relax
4549   \advance\count@\m@ne
4550   \def\x##1{%
4551     \endgroup
4552     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4553     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4554       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4555         (\number#4) #2%
4556       }%
4557     \else
4558       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4559         \csname HyField@#3@##1\endcsname
4560         /#2%
4561       }%
4562     \fi
4563   }%
4564   \expandafter\x\expandafter{\the\count@}%
4565 }
```

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

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

\HyField@@UseFlag

```
4569 \def\HyField@@UseFlag#1#2{%
4570   \bitsetSetValue{HyField@#2}{%
4571     \csname HyField@#2@#1\endcsname
4572   }{%
4573     \csname ifFld@#1\endcsname 1\else 0\fi
4574   }%
4575 }
```

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

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

```

\HyField@@SetFlag
4579 \def\HyField@@SetFlag#1#2{%
4580 \bitsetSetValue{HyField@#2}{%
4581 \csname HyField@#2@#1\endcsname
4582 }{1}%
4583 }

\HyField@PrintFlags
4584 \def\HyField@PrintFlags#1#2{%
4585 \ifHy@verbose
4586 \begingroup
4587 \let\Hy@temp\empty
4588 \let\MessageBreak\relax
4589 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4590 \bitsetGetSetBitList{HyField@#1}\do{%
4591 \edef\Hy@temp{%
4592 \Hy@temp
4593 \csname HyField@#1@\x\endcsname\MessageBreak
4594 }%
4595 }%
4596 \edef\x{\endgroup
4597 \noexpand\Hy@Info{%
4598 Field flags: %
4599 \expandafter\ifx\@car#1\@nil S\else/\fi
4600 #1 %
4601 \bitsetGetDec{HyField@#1} %
4602 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4603 \Hy@temp
4604 for #2%
4605 }%
4606 }\x
4607 \fi
4608 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4609 \HyField@NewFlag{Ff}{ReadOnly}{1}
4610 \HyField@NewFlag{Ff}{Required}{2}
4611 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4612 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4613 \HyField@NewFlag{Ff}{Radio}{16}
4614 \HyField@NewFlag{Ff}{Pushbutton}{17}
4615 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4616 \HyField@NewFlag{Ff}{Multiline}{13}
4617 \HyField@NewFlag{Ff}{Password}{14}
4618 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4619 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4620 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4621 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4622 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4623 \HyField@NewFlag{Ff}{Combo}{18}

```



```

4624 \HyField@NewFlag{Ff}{Edit}{19}
4625 \HyField@NewFlag{Ff}{Sort}{20}
4626 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4627 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4628 \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.

```

4629 \newif\ifFld@popdown
4630 \define@key{Field}{popdown}[true]{%
4631   \lowercase{\Field@boolkey{#1}}{popdown}%
4632 }

```

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.

```

4633 \HyField@NewFlag{F}{Invisible}{1}
4634 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4635 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4636 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4637 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4638 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4639 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4640 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4641 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4642 \ifHy@pdfa
4643   \def\HyField@PDFAFflagWarning#1#2{%
4644     \Hy@Warning{%
4645       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4646       be set to ‘#2’%
4647     }%
4648   }%
4649   \Fld@invisiblefalse
4650   \def\Fld@invisibletrue{%
4651     \HyField@PDFAFflagWarning{invisible}{false}%
4652   }%
4653   \Fld@hiddenfalse
4654   \def\Fld@hiddentrue{%
4655     \HyField@PDFAFflagWarning{hidden}{false}%
4656   }%
4657   \Fld@printtrue
4658   \def\Fld@printfalse{%
4659     \HyField@PDFAFflagWarning{print}{true}%
4660   }%
4661   \Fld@nozoomtrue
4662   \def\Fld@nozoomfalse{%
4663     \HyField@PDFAFflagWarning{nozoom}{true}%
4664   }%
4665   \Fld@norotatetrue
4666   \def\Fld@norotatefalse{%
4667     \HyField@PDFAFflagWarning{norotate}{true}%
4668   }%
4669   \Fld@noviewfalse
4670   \def\Fld@noviewtrue{%

```

```

4671 \HyField@PDFAFIWarning{noview}{false}%
4672 }%
4673 \fi

```

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

```

4674 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4675 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4676 \HyField@NewFlag{Submit}{GetMethod}{4}
4677 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4678 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4679 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4680 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4681 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4682 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4683 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4684 \HyField@NewFlag{Submit}{ExclFKey}{12}
4685 \HyField@NewFlag{Submit}{EmbedForm}{14}

4686 \define@key{Field}{export}{%
4687 \lowercase{\def\Hy@temp{#1}}%
4688 \@ifundefined{Fld@export@\Hy@temp}{%
4689 \onelevel@sanitize\Hy@temp
4690 \PackageError{hyperref}{%
4691 Unknown export format '\Hy@temp'.\MessageBreak
4692 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4693 }\@ehc
4694 }{%
4695 \let\Fld@export\Hy@temp
4696 }%
4697 }

4698 \def\Fld@export{fdf}
4699 \@namedef{Fld@export@fdf}{0}%
4700 \@namedef{Fld@export@html}{1}%
4701 \@namedef{Fld@export@xfdf}{2}%
4702 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4703 \def\HyField@FlagsSubmit{%
4704 \bitsetReset{HyField@Submit}%
4705 \ifcase\@nameuse{Fld@export@\Fld@export} %
4706 % FDF
4707 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4708 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4709 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4710 \HyField@UseFlag{Submit}{IncludeAnnotations}%
4711 \HyField@UseFlag{Submit}{CanonicalFormat}%
4712 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4713 \HyField@UseFlag{Submit}{ExclFKey}%
4714 \HyField@UseFlag{Submit}{EmbedForm}%
4715 \or % HTML
4716 \HyField@SetFlag{Submit}{ExportFormat}%
4717 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4718 \HyField@UseFlag{Submit}{GetMethod}%
4719 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4720 \HyField@UseFlag{Submit}{CanonicalFormat}%
4721 \or % XFDF

```

```

4722 \HyField@SetFlag{Submit}{XFDF}%
4723 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4724 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4725 \HyField@UseFlag{Submit}{CanonicalFormat}%
4726 \or % PDF
4727 \HyField@SetFlag{Submit}{SubmitPDF}%
4728 \HyField@UseFlag{Submit}{GetMethod}%
4729 \fi
4730 \HyField@PrintFlags{Submit}{submit button field}%
4731 \bitsetIsEmpty{HyField@Submit}{%
4732 \def\Fld@submitflags{%
4733 }{%
4734 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4735 }%
4736 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4737 \def\HyField@FlagsAnnot#1{%
4738 \bitsetReset{HyField@F}%
4739 \HyField@UseFlag{F}{Invisible}%
4740 \HyField@UseFlag{F}{Hidden}%
4741 \HyField@UseFlag{F}{Print}%
4742 \HyField@UseFlag{F}{NoZoom}%
4743 \HyField@UseFlag{F}{NoRotate}%
4744 \HyField@UseFlag{F}{NoView}%
4745 \HyField@UseFlag{F}{Locked}%
4746 \HyField@UseFlag{F}{ToggleNoView}%
4747 \HyField@UseFlag{F}{LockedContents}%
4748 \HyField@PrintFlags{F}{#1}%
4749 \bitsetIsEmpty{HyField@F}{%
4750 \def\Fld@annotflags{%
4751 }{%
4752 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4753 }%
4754 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4755 \def\HyField@FlagsPushButton{%
4756 \HyField@FlagsAnnot{push button field}%
4757 \bitsetReset{HyField@Ff}%
4758 \HyField@UseFlag{Ff}{ReadOnly}%
4759 \HyField@UseFlag{Ff}{Required}%
4760 \HyField@UseFlag{Ff}{NoExport}%
4761 \HyField@SetFlag{Ff}{Pushbutton}%
4762 \HyField@PrintFlags{Ff}{push button field}%
4763 \bitsetIsEmpty{HyField@Ff}{%
4764 \def\Fld@flags{%
4765 }{%
4766 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4767 }%
4768 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

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

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4782 \def\HyField@FlagsRadioButton{%
4783   \HyField@FlagsAnnot{radio button field}%
4784   \bitsetReset{HyField@Ff}%
4785   \HyField@UseFlag{Ff}{ReadOnly}%
4786   \HyField@UseFlag{Ff}{Required}%
4787   \HyField@UseFlag{Ff}{NoExport}%
4788   \HyField@UseFlag{Ff}{NoToggleToOff}%
4789   \HyField@SetFlag{Ff}{Radio}%
4790   \HyField@UseFlag{Ff}{RadiosInUnison}%
4791   \HyField@PrintFlags{Ff}{radio button field}%
4792   \bitsetIsEmpty{HyField@Ff}{%
4793     \def\Fld@flags{%
4794     }{%
4795     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4796   }%
4797 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4798 \def\HyField@FlagsText{%
4799   \HyField@FlagsAnnot{text field}%
4800   \bitsetReset{HyField@Ff}%
4801   \HyField@UseFlag{Ff}{ReadOnly}%
4802   \HyField@UseFlag{Ff}{Required}%
4803   \HyField@UseFlag{Ff}{NoExport}%
4804   \HyField@UseFlag{Ff}{Multiline}%
4805   \HyField@UseFlag{Ff}{Password}%
4806   \HyField@UseFlag{Ff}{FileSelect}%
4807   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4808   \HyField@UseFlag{Ff}{DoNotScroll}%
4809   \ifFld@comb
4810     \ifcase0\ifFld@multiline
4811       \else\ifFld@password
4812       \else\ifFld@fileselect
4813       \else 1\fi\fi\fi\relax
```

```

4814 \PackageError{hyperref}{%
4815   Field option 'comb' cannot used together with\MessageBreak
4816   'multiline', 'password', or 'fileselect'%
4817 } \@ehc
4818 \else
4819 \HyField@UseFlag{Ff}{Comb}%
4820 \fi
4821 \fi
4822 \HyField@UseFlag{Ff}{RichText}%
4823 \HyField@PrintFlags{Ff}{text field}%
4824 \bitsetIsEmpty{HyField@Ff}{%
4825 \def\Fld@flags{%
4826 }{%
4827 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4828 }%
4829 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4830 \def\HyField@FlagsChoice{%
4831 \HyField@FlagsAnnot{choice field}%
4832 \bitsetReset{HyField@Ff}%
4833 \HyField@UseFlag{Ff}{ReadOnly}%
4834 \HyField@UseFlag{Ff}{Required}%
4835 \HyField@UseFlag{Ff}{NoExport}%
4836 \HyField@UseFlag{Ff}{Combo}%
4837 \ifFld@combo
4838 \HyField@UseFlag{Ff}{Edit}%
4839 \fi
4840 \HyField@UseFlag{Ff}{Sort}%
4841 \HyField@UseFlag{Ff}{MultiSelect}%
4842 \ifFld@combo
4843 \ifFld@edit
4844 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4845 \fi
4846 \fi
4847 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4848 \HyField@PrintFlags{Ff}{choice field}%
4849 \bitsetIsEmpty{HyField@Ff}{%
4850 \def\Fld@flags{%
4851 }{%
4852 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4853 }%
4854 }

```

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.

```

4855 \def\HyField@PDFChoices#1{%
4856 \begingroup
4857 \gdef\Fld@choices{%
4858 \def\HyTmp@optlist{%
4859 \let\HyTmp@optitem\relax

```

```

4860 \count@=0 %
4861 \kv@parse{#1}{%
4862   \Hy@pdfstringdef\kv@key\kv@key
4863   \ifx\kv@value\relax
4864     \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4865       \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4866     \else
4867       \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4868     \fi
4869   \else
4870     \Hy@pdfstringdef\kv@value\kv@value
4871     \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4872   \fi
4873   \edef\HyTmp@optlist{%
4874     \HyTmp@optlist
4875     \HyTmp@optitem{\the\count@}{\kv@key}0%
4876   }%
4877   \advance\count@ by 1 %
4878   \@gobbletwo
4879 }%
4880 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4881 \ifFld@multiselect
4882   \HyField@@PDFChoices{DV}\Fld@default
4883   \HyField@@PDFChoices{V}\Fld@value
4884 \else
4885   \ifx\Fld@default\relax
4886   \else
4887     \pdfstringdef\Hy@gtemp\Fld@default
4888     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4889   \fi
4890   \ifx\Fld@value\relax
4891   \else
4892     \pdfstringdef\Hy@gtemp\Fld@value
4893     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4894   \fi
4895 \fi
4896 \endgroup
4897 }

```

\HyField@@PDFChoices

```

4898 \def\HyField@@PDFChoices#1#2{%
4899   \ifx#2\relax
4900   \else
4901     \count@=0 %
4902     \def\HyTmp@optitem##1##2##3{%
4903       \def\HyTmp@key{##2}%
4904       \ifx\HyTmp@key\Hy@gtemp
4905         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4906           \HyTmp@optlist
4907           \HyTmp@optitem{##1}{##2}1%
4908         }%
4909         \let\HyTmp@found=Y%
4910       \else
4911         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4912           \HyTmp@optlist
4913           \HyTmp@optitem{##1}{##2}##3%
4914         }%

```

```

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

```

19.3 Forms

\HyField@SetKeys

```

4959 \def\HyField@SetKeys{%
4960 \setkeys{Field}%
4961 }

4962 \newif\ifFld@checked
4963 \newif\ifFld@disabled
4964 \Fld@checkedfalse
4965 \Fld@disabledfalse
4966 \newcount\Fld@menulength

```

```

4967 \newdimen\Fld@Width
4968 \newdimen\Fld@charsize
4969 \Fld@charsize=10\p@
4970 \def\Fld@maxlen{0}
4971 \def\Fld@align{0}
4972 \def\Fld@color{0 0 0 rg}
4973 \def\Fld@bcolor{1 1 1}
4974 \def\Fld@bordercolor{1 0 0}
4975 \def\Fld@bordersep{1\p@}
4976 \def\Fld@borderwidth{1}
4977 \def\Fld@borderstyle{S}
4978 \def\Fld@cbsymbol{4}
4979 \def\Fld@radiosymbol{H}
4980 \def\Fld@rotation{0}
4981 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4982 \def\endForm{\@endForm}
4983 \newif\ifForm@html
4984 \Form@htmlfalse
4985 \def\Form@boolkey#1#2{%
4986   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4987 }
4988 \define@key{Form}{action}{%
4989   \hyper@normalise\Hy@DefFormAction{#1}%
4990 }
4991 \def\Hy@DefFormAction{\def\Form@action}
4992 \def\enc@html{html}
4993 \define@key{Form}{encoding}{%
4994   \def\Hy@tempa{#1}%
4995   \ifx\Hy@tempa\enc@html
4996     \Form@htmltrue
4997     \def\Fld@export{html}%
4998   \else
4999     \Hy@Warning{%
5000       Form 'encoding' key with \MessageBreak
5001       unknown value '#1'%
5002     }%
5003     \Form@htmlfalse
5004   \fi
5005 }
5006 \define@key{Form}{method}{%
5007   \lowercase{\def\Hy@temp{#1}}%
5008   \@ifundefined{Form@method@\Hy@temp}{%
5009     \@onelevel@sanitize\Hy@temp
5010     \PackageError{hyperref}{%
5011       Unknown method '\Hy@temp'\MessageBreak
5012       Known values are 'post' and 'get'%
5013     }\@ehc
5014   }{%
5015     \let\Form@method\Hy@temp
5016     \ifcase\@nameuse{Form@method@\Hy@temp} %
5017       \Fld@getmethodfalse
5018     \else
5019       \Fld@getmethodtrue
5020     \fi
5021   }%
5022 }
5023 \def\Form@method{}

```



```

5024 \@namedef{Form@method@post}{0}
5025 \@namedef{Form@method@get}{1}
5026 \def\Field@boolkey#1#2{%
5027   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5028 }
5029 \newtoks\Field@toks
5030 \Field@toks={ }%
5031 \def\Field@addtoks#1#2{%
5032   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5033   \@processme
5034 }
5035 \def\Fld@checkequals#1=#2=#3\{\{%
5036   \def\@currDisplay{#1}%
5037   \ifx\#2\%
5038     \def\@currValue{#1}%
5039   \else
5040     \def\@currValue{#2}%
5041   \fi
5042 }
5043 \define@key{Field}{loc}{%
5044   \def\Fld@loc{#1}%
5045 }
5046 \define@key{Field}{checked}[true]{%
5047   \lowercase{\Field@boolkey{#1}}{checked}%
5048 }
5049 \define@key{Field}{disabled}[true]{%
5050   \lowercase{\Field@boolkey{#1}}{disabled}%
5051 }
5052 \define@key{Field}{accesskey}{%
5053   \Field@addtoks{accesskey}{#1}%
5054 }
5055 \define@key{Field}{tabkey}{%
5056   \Field@addtoks{tabkey}{#1}%
5057 }
5058 \define@key{Field}{name}{%
5059   \def\Fld@name{#1}%
5060 }
5061 \define@key{Field}{width}{%
5062   \def\Fld@width{#1}%
5063   \Field@Width#1\setbox0=\hbox{m}%
5064 }
5065 \define@key{Field}{maxlen}{%
5066   \def\Fld@maxlen{#1}%
5067 }
5068 \define@key{Field}{menulength}{%
5069   \Fld@menulength=#1\relax
5070 }
5071 \define@key{Field}{height}{%
5072   \def\Fld@height{#1}%
5073 }
5074 \define@key{Field}{charsize}{%
5075   \Fld@charsize#1%
5076 }
5077 \define@key{Field}{borderwidth}{%
5078   \def\Fld@borderwidth{#1}%
5079 }
5080 \define@key{Field}{borderstyle}{%

```

```

5081 \def\Fld@borderstyle{#1}%
5082 }
5083 \define@key{Field}{bordersep}{%
5084 \def\Fld@bordersep{#1}%
5085 }
5086 \define@key{Field}{default}{%
5087 \def\Fld@default{#1}%
5088 }
5089 \define@key{Field}{align}{%
5090 \def\Fld@align{#1}%
5091 }
5092 \define@key{Field}{value}{%
5093 \def\Fld@value{#1}%
5094 }
5095 \define@key{Field}{checkboxsymbol}{%
5096 \Fld@DingDef\Fld@cbsymbol{#1}%
5097 }
5098 \define@key{Field}{radiosymbol}{%
5099 \Fld@DingDef\Fld@radiosymbol{#1}%
5100 }
5101 \def\Fld@DingDef#1#2{%
5102 \def\Fld@temp{}%
5103 \Fld@@DingDef#2\ding{ }\@nil
5104 \let#1\Fld@temp
5105 }
5106 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5107 \expandafter\def\expandafter\Fld@temp\expandafter{%
5108 \Fld@temp
5109 #1%
5110 }%
5111 \ifx\\#3\\%
5112 \expandafter\@gobble
5113 \else
5114 \begingroup
5115 \lccode'0=#2\relax
5116 \lowercase{\endgroup
5117 \expandafter\def\expandafter\Fld@temp\expandafter{%
5118 \Fld@temp
5119 0%
5120 }%
5121 }%
5122 \expandafter\@firstofone
5123 \fi
5124 {%
5125 \Fld@@DingDef#3\@nil
5126 }%
5127 }

5128 \define@key{Field}{rotation}{%
5129 \def\Fld@rotation{#1}%
5130 }

5131 \define@key{Field}{backgroundcolor}{%
5132 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5133 }
5134 \define@key{Field}{bordercolor}{%
5135 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5136 }
5137 \define@key{Field}{color}{%

```

```

5138 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5139 }

5140 \def\Fld@onclick@code{}
5141 \def\Fld@format@code{}
5142 \def\Fld@validate@code{}
5143 \def\Fld@calculate@code{}
5144 \def\Fld@keystroke@code{}
5145 \def\Fld@onfocus@code{}
5146 \def\Fld@onblur@code{}
5147 \def\Fld@onmousedown@code{}
5148 \def\Fld@onmouseup@code{}
5149 \def\Fld@onenter@code{}
5150 \def\Fld@onexit@code{}
5151 \def\Hy@temp#1{%
5152   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5153 }
5154 \def\Hy@@temp#1#2{%
5155   \ifHy@pdfa
5156     \define@key{Field}{#2}{%
5157       \PackageError{hyperref}{%
5158         PDF/A: Additional action ‘#2’ is prohibited%
5159       }\@ehc
5160     }%
5161   \else
5162     \define@key{Field}{#2}{%
5163       \def#1{##1}%
5164     }%
5165   \fi
5166 }
5167 \Hy@temp{keystroke}
5168 \Hy@temp{format}
5169 \Hy@temp{validate}
5170 \Hy@temp{calculate}
5171 \Hy@temp{onfocus}
5172 \Hy@temp{onblur}
5173 \Hy@temp{onenter}
5174 \Hy@temp{onexit}
5175 \def\Hy@temp#1{%
5176   \define@key{Field}{#1}{%
5177     \Field@addtoks{#1}{##1}%
5178   }%
5179 }
5180 \Hy@temp{onselect}
5181 \Hy@temp{onchange}
5182 \Hy@temp{ondblclick}
5183 \Hy@temp{onmousedown}
5184 \Hy@temp{onmouseup}
5185 \Hy@temp{onmouseover}
5186 \Hy@temp{onmousemove}
5187 \Hy@temp{onmouseout}
5188 \Hy@temp{onkeypress}
5189 \Hy@temp{onkeydown}
5190 \Hy@temp{onkeyup}
5191 \ifHy@pdfa
5192   \define@key{Field}{onclick}{%
5193     \PackageError{hyperref}{%
5194       PDF/A: Action ‘onclick’ is prohibited%

```

```

5195   }\@ehc
5196 }%
5197 \else
5198 \define@key{Field}{onclick}{%
5199   \def\Fld@onclick@code{#1}%
5200   \Field@addtoks{onclick}{#1}%
5201 }%
5202 \fi

5203 \DeclareRobustCommand\TextField{%
5204   \@ifnextchar[{\@TextField}{\@TextField[]}%
5205 }
5206 \DeclareRobustCommand\ChoiceMenu{%
5207   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5208 }
5209 \DeclareRobustCommand\CheckBox{%
5210   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5211 }
5212 \DeclareRobustCommand\PushButton{%
5213   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5214 }
5215 \DeclareRobustCommand\Gauge{%
5216   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5217 }
5218 \DeclareRobustCommand\Submit{%
5219   \@ifnextchar[{\@Submit}{\@Submit[]}%
5220 }
5221 \DeclareRobustCommand\Reset{%
5222   \@ifnextchar[{\@Reset}{\@Reset[]}%
5223 }
5224 \def\LayoutTextField#1#2{% label, field
5225   #1 #2%
5226 }
5227 \def\LayoutChoiceField#1#2{% label, field
5228   #1 #2%
5229 }
5230 \def\LayoutCheckField#1#2{% label, field
5231   #1 #2%
5232 }
5233 \def\LayoutPushButtonField#1{% button
5234   #1%
5235 }
5236 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5237 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5238 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5239 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5240 \def\MakeButtonField#1{%
5241   \sbox0{%
5242     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5243   }%
5244   \@tempdima\ht0 %
5245   \advance\@tempdima by \Fld@borderwidth bp %
5246   \advance\@tempdima by \Fld@borderwidth bp %
5247   \ht0\@tempdima
5248   \@tempdima\dp0 %
5249   \advance\@tempdima by \Fld@borderwidth bp %
5250   \advance\@tempdima by \Fld@borderwidth bp %
5251   \dp0\@tempdima

```

```

5252 \box0\relax
5253 }
5254 \def\DefaultHeightofSubmit{14pt}
5255 \def\DefaultWidthofSubmit{2cm}
5256 \def\DefaultHeightofReset{14pt}
5257 \def\DefaultWidthofReset{2cm}
5258 \def\DefaultHeightofCheckBox{\baselineskip}
5259 \def\DefaultWidthofCheckBox{\baselineskip}
5260 \def\DefaultHeightofChoiceMenu{\baselineskip}
5261 \def\DefaultWidthofChoiceMenu{\baselineskip}
5262 \def\DefaultHeightofText{\baselineskip}
5263 \def\DefaultHeightofTextMultiline{4\baselineskip}
5264 \def\DefaultWidthofText{3cm}
5265 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5266 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5267 \def\DefaultOptionsofPushButton{print}
5268 \def\DefaultOptionsofCheckBox{print}
5269 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5270 \def\DefaultOptionsofListBox{print}
5271 \def\DefaultOptionsofComboBox{print,edit,sort}
5272 \def\DefaultOptionsofPopdownBox{print}
5273 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5274 \ifHy@figures
5275 \Hy@Info{Hyper figures ON}%
5276 \else
5277 \Hy@Info{Hyper figures OFF}%
5278 \fi
5279 \ifHy@nesting
5280 \Hy@Info{Link nesting ON}%
5281 \else
5282 \Hy@Info{Link nesting OFF}%
5283 \fi
5284 \ifHy@hyperindex
5285 \Hy@Info{Hyper index ON}%
5286 \else
5287 \Hy@Info{Hyper index OFF}%
5288 \fi
5289 \ifHy@backref
5290 \Hy@Info{backreferencing ON}%
5291 \else
5292 \Hy@Info{backreferencing OFF}%
5293 \fi
5294 \ifHy@colorlinks
5295 \Hy@Info{Link coloring ON}%
5296 \else
5297 \Hy@Info{Link coloring OFF}%
5298 \fi
5299 \ifHy@ocgcolorlinks
5300 \Hy@Info{Link coloring with OCG ON}%
5301 \else
5302 \Hy@Info{Link coloring with OCG OFF}%
5303 \fi

```

```

5304 \ifHy@pdfa
5305 \Hy@Info{PDF/A mode ON}%
5306 \else
5307 \Hy@Info{PDF/A mode OFF}%
5308 \fi

```

21 Low-level utility macros

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

```

5309 \edef\hyper@hash{\string#}
5310 \edef\hyper@tilde{\string~}
5311 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5312 \def\@currentHref{Doc-Start}
5313 \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.

```

5314 \Hy@AtBeginDocument{%
5315 \Hy@pdfstringtrue
5316 \PDF@SetupDoc
5317 \let\PDF@SetupDoc\@empty
5318 \Hy@DisableOption{pdfpagescrop}%
5319 \Hy@DisableOption{pdfpagemode}%
5320 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5321 \Hy@DisableOption{pdfdirection}%
5322 \Hy@DisableOption{pdfviewarea}%
5323 \Hy@DisableOption{pdfviewclip}%
5324 \Hy@DisableOption{pdfprintarea}%
5325 \Hy@DisableOption{pdfprintclip}%
5326 \Hy@DisableOption{pdfprintscaling}%
5327 \Hy@DisableOption{pdfduplex}%
5328 \Hy@DisableOption{pdfpicktraybypdfsize}%
5329 \Hy@DisableOption{pdfprintpagerange}%
5330 \Hy@DisableOption{pdfnumcopies}%
5331 \Hy@DisableOption{pdfstartview}%
5332 \Hy@DisableOption{pdfstartpage}%
5333 \Hy@DisableOption{pdftoolbar}%
5334 \Hy@DisableOption{pdfmenubar}%
5335 \Hy@DisableOption{pdfwindowui}%
5336 \Hy@DisableOption{pdfitwindow}%
5337 \Hy@DisableOption{pdfcenterwindow}%
5338 \Hy@DisableOption{pdfdisplaydoctitle}%
5339 \Hy@DisableOption{pdfpagelayout}%
5340 \Hy@DisableOption{pdflang}%
5341 \Hy@DisableOption{baseurl}%
5342 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5343 \Hy@pdfstringfalse
5344 }

```

Ignore star from referencing macros:

```

5345 \LetLtxMacro\NoHy@OrgRef\ref
5346 \DeclareRobustCommand*\ref{%
5347 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5348 }
5349 \LetLtxMacro\NoHy@OrgPageRef\pageref
5350 \DeclareRobustCommand*\pageref{%

```

```

5351 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5352 }

```

22 Localized nullifying of package

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

```

5353 \def\NoHyper{%
5354   \def\hyper@link@{##1}##2##3##4{##4}%
5355   \def\hyper@@anchor##1{%
5356     \global\let\hyper@livelink\hyper@link
5357     \gdef\hyper@link##1##2##3{##3}%
5358     \def\hyper@anchor##1{%
5359       \def\hyper@anchorstart##1{%
5360         \let\hyper@anchorend\@empty
5361         \def\hyper@linkstart##1##2{%
5362           \let\hyper@linkend\@empty
5363           \def\hyper@linkurl##1##2{##1}%
5364           \def\hyper@linkfile##1##2##3{##1}%
5365           \def\hyper@link@{##1}##2##3{%
5366             \let\Hy@backout\@gobble
5367           }
5368           \def\stop@hyper{%
5369             \def\hyper@link@{##1}##2##3##4{##4}%
5370             \let\Hy@backout\@gobble
5371             \def\hyper@@anchor##1{%
5372               \def\hyper@link##1##2##3{##3}%
5373               \def\hyper@anchor##1{%
5374                 \def\hyper@anchorstart##1{%
5375                   \let\hyper@anchorend\@empty
5376                   \def\hyper@linkstart##1##2{%
5377                     \let\hyper@linkend\@empty
5378                     \def\hyper@linkurl##1##2{##1}%
5379                     \def\hyper@linkfile##1##2##3{##1}%
5380                     \def\hyper@link@{##1}##2##3{%
5381                       }
5382                   \def\endNoHyper{%
5383                     \global\let\hyper@link\hyper@livelink
5384                   }
5385                 }

```

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:

```

5386 \*nohyperref
5387 \RequirePackage{letltxmacro}[2008/06/13]
5388 \let\hyper@@anchor\@gobble

```

```

5389 \def\hyper@link#1#2#3{#3}%
5390 \let\hyper@anchorstart\@gobble
5391 \let\hyper@anchorend\@empty
5392 \let\hyper@linkstart\@gobbletwo
5393 \let\hyper@linkend\@empty
5394 \def\hyper@linkurl#1#2{#1}%
5395 \def\hyper@linkfile#1#2#3{#1}%
5396 \def\hyper@link@{#1}#2#3{#1}%
5397 \let\PDF@SetupDoc\@empty
5398 \let\PDF@FinishDoc\@empty
5399 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5400 \def\Acrobatmenu#1#2{\leavevmode#2}
5401 \let\pdfstringdefDisableCommands\@gobbletwo
5402 \let\texorpdfstring\@firstoftwo
5403 \let\pdfbookmark\@undefined
5404 \newcommand\pdfbookmark[3]{}{}
5405 \let\phantomsection\@empty
5406 \let\hypersetup\@gobble
5407 \let\hyperbaseurl\@gobble
5408 \let\href\@gobble
5409 \let\hyperdef\@gobbletwo
5410 \let\hyperlink\@gobble
5411 \let\hypertarget\@gobble
5412 \def\hyperref{%
5413   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5414 }
5415 \long\def\@gobbleopt[#1]{}
5416 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5417 \LetLtxMacro\NoHy@OrgRef\ref
5418 \DeclareRobustCommand*\ref{%
5419   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5420 }
5421 \LetLtxMacro\NoHy@OrgPageRef\pageref
5422 \DeclareRobustCommand*\pageref{%
5423   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5424 }
5425 \</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}`

```

5426 <*package>
5427 \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.

```

5428 \if@filesw
5429   \ifHy@typexml
5430     \immediate\closeout\@mainaux
5431     \immediate\openout\@mainaux\jobname.aux\relax

```



```

5432 \immediate\write\@auxout{<relaxxml>\relax}%
5433 \fi
5434 \immediate\write\@auxout{%
5435 \string\providecommand\string\HyperFirstAtBeginDocument{%
5436 \string\AtBeginDocument}^^J%
5437 \string\HyperFirstAtBeginDocument{%
5438 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5439 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5440 \string\gdef\string\contentsline%
5441 \string#1\string#2\string#3\string#4{%
5442 \string\oldcontentsline%
5443 {\string#1}{\string#2}{\string#3}}^^J%
5444 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5445 \string\gdef\string\newlabel\string#1\string#2{%
5446 \string\newlabelxx{\string#1}\string#2}^^J%
5447 \string\gdef\string\newlabelxx%
5448 \string#1\string#2\string#3\string#4\string#5\string#6{%
5449 \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.

```

5450 \string\AtEndDocument{%
5451 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5452 \string\let\string\contentsline\string\oldcontentsline^^J%
5453 \string\let\string\newlabel\string\oldnewlabel^^J%
5454 \string\fi%
5455 }^^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.

```

5456 \string\fi%
5457 }^^J%
5458 \string\global\string\let\string\hyper@last\relax^^J%
5459 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5460 }%
5461 \fi
5462 \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.

```

5463 \ifx\hyper@last\@undefined
5464 \def\@starttoc#1{%
5465 \begingroup
5466 \makeatletter
5467 \IfFileExists{\jobname.#1}{%
5468 \Hy@WarningNoLine{%
5469 old #1 file detected, not used; run LaTeX again%
5470 }%
5471 }{%
5472 \if@files
5473 \expandafter\newwrite\csname tf@#1\endcsname
5474 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5475 \fi
5476 \@nobreakfalse
5477 \endgroup

```

```

5478 }%
5479 \def\newlabel#1#2{\@newlabel{#1}{#2}{-}{-}{-}}%
5480 \fi
5481 }

```

25 Title strings

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

```

5482 \ifHy@usetitle
5483 \let\HyOrg@title\title
5484 \let\HyOrg@author\author
5485 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5486 \def\Hy@scanopttitle[#1]{%
5487 \gdef\Hy@title{#1}%
5488 \HyOrg@title{#1}}%
5489 }%
5490 \def\Hy@scantitle#1{%
5491 \gdef\Hy@title{#1}%
5492 \HyOrg@title{#1}%
5493 }%
5494 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5495 \def\Hy@scanoptauthor[#1]{%
5496 \gdef\Hy@author{#1}%
5497 \HyOrg@author{#1}}%
5498 }%
5499 \def\Hy@scanauthor#1{%
5500 \gdef\Hy@author{#1}%
5501 \HyOrg@author{#1}%
5502 }%

```

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

```

5503 \begingroup
5504 \def\process@me#1\@nil#2{%
5505 \expandafter\let\expandafter\x\csname @#2\endcsname
5506 \edef\y{\expandafter\strip@prefix\meaning\x}%
5507 \def\c##1#1##2\@nil{%
5508 \ifx\\##1\\%
5509 \else
5510 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5511 \expandafter{\x}%
5512 \fi
5513 }%
5514 \expandafter\c\y\relax#1\@nil
5515 }%
5516 \expandafter\process@me\string\@latex@\@nil{title}%
5517 \expandafter\process@me\string\@latex@\@nil{author}%
5518 \endgroup
5519 \fi
5520 \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.

```

5521 \def\Hy@UseMaketitleString#1{%
5522   \ltx@ifundefined{Hy@#1}{-}{%
5523     \begingroup
5524     \let\Hy@saved@hook\pdfstringdefPreHook
5525     \pdfstringdefDisableCommands{%
5526       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
5527       \let\newline\\%
5528     }%
5529     \expandafter\ifx\csname @pdf#1\endcsname\@empty
5530       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5531         \csname Hy@#1\endcsname\@empty
5532       }%
5533     \fi
5534     \global\let\pdfstringdefPreHook\Hy@saved@hook
5535   \endgroup
5536 }%
5537 }
5538 \def\Hy@newline@title#1{ #1}
5539 \def\Hy@newline@author#1{, #1}
5540 \def\Hy@UseMaketitleInfos{%
5541   \Hy@UseMaketitleString{title}%
5542   \Hy@UseMaketitleString{author}%
5543 }

```

26 Page numbers

This stuff is done by Heiko Oberdick.

27 Every page

```

5544 \RequirePackage{atbegshi}[2007/09/09]
5545 \def\Hy@EveryPageHook{}
5546 \def\Hy@EveryPageBoxHook{}
5547 \def\Hy@FirstPageHook{}
5548 \AtBeginShipout{%
5549   \Hy@EveryPageHook
5550   \ifx\Hy@EveryPageBoxHook\@empty
5551     \else
5552       \setbox\AtBeginShipoutBox=\vbox{%
5553         \offinterlineskip
5554         \Hy@EveryPageBoxHook
5555         \box\AtBeginShipoutBox
5556       }%
5557   \fi
5558 }
5559 \AtBeginShipoutFirst{%
5560   \Hy@FirstPageHook
5561 }
5562 \g@addto@macro\Hy@FirstPageHook{%
5563   \PDF@FinishDoc
5564   \gdef\PDF@FinishDoc{}%

```

5565 }

27.1 PDF /PageLabels

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

```
5566 \ifHy@pagelabels
5567 \begingroup\expandafter\expandafter\expandafter\endgroup
5568 \expandafter\ifx\csname thepage\endcsname\relax
5569 \Hy@pagelabelsfalse
5570 \Hy@WarningNoLine{%
5571   Option 'pdfpagelabels' is turned off\MessageBreak
5572   because \string\thepage\space is undefined%
5573 }%
5574 \csname fi\endcsname
5575 \csname iffalse\expandafter\endcsname
5576 \fi
```

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

```
5577 \def\thispdfpagelabel#1{%
5578   \gdef\HyPL@thisLabel{#1}%
5579 }%
5580 \global\let\HyPL@thisLabel\relax
```

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

```
5581 \def\HyPL@Labels{}%
```

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

```
5582 \newcount\Hy@abspage
5583 \Hy@abspage=0 %
```

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

```
5584 \def\HyPL@LastType{init}%
5585 \def\HyPL@LastNumber{0}%
5586 \def\HyPL@LastPrefix{}%
```

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

```
5587 \def\HyPL@arabic{D}%
5588 \def\HyPL@Roman{R}%
5589 \def\HyPL@roman{r}%
5590 \def\HyPL@Alph{A}%
5591 \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.

```
5592 \def\HyPL@EveryPage{%
5593   \begingroup
5594   \ifx\HyPL@thisLabel\relax
5595     \let\HyPL@page\thepage
5596   \else
5597     \let\HyPL@page\HyPL@thisLabel
5598   \global\let\HyPL@thisLabel\relax
5599   \fi
5600   \let\HyPL@Type\relax
5601   \ifnum\the\c@page>0 %
5602     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5603   \fi
```

```

5604 \let\Hy@temp Y%
5605 \ifx\HyPL@Type\HyPL@LastType
5606 \else
5607 \let\Hy@temp N%
5608 \fi
5609 \ifx\HyPL@Type\relax
5610 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5611 \else
5612 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5613 \fi
5614 \ifx\HyPL@Prefix\HyPL@LastPrefix
5615 \else
5616 \let\Hy@temp N%
5617 \fi
5618 \if Y\Hy@temp
5619 \advance\c@page by -1 %
5620 \ifnum\HyPL@LastNumber=\the\c@page\relax
5621 \else
5622 \let\Hy@temp N%
5623 \fi
5624 \Hy@StepCount\c@page
5625 \fi
5626 \if N\Hy@temp
5627 \ifx\HyPL@Type\relax
5628 \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
5629 \else
5630 \HyPL@storePageLabel{%
5631 \ifx\HyPL@Prefix\@empty
5632 \else
5633 /P(\HyPL@Prefix)%
5634 \fi
5635 /S/\csname HyPL\HyPL@Type\endcsname
5636 \ifnum\the\c@page=1 %
5637 \else
5638 \space/St \the\c@page
5639 \fi
5640 }%
5641 \fi
5642 \fi
5643 \xdef\HyPL@LastNumber{\the\c@page}%
5644 \global\let\HyPL@LastType\HyPL@Type
5645 \global\let\HyPL@LastPrefix\HyPL@Prefix
5646 \endgroup
5647 \Hy@GlobalStepCount\Hy@abspage
5648 }%

```

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

```

5649 \def\HyPL@CheckThePage#1\@nil{%
5650 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5651 }%

```

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

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

```

5652 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%

```

```

5653 \def\Hy@tempa{#4}%
5654 \def\Hy@tempb{\csname\endcsname\c@page}%
5655 \ifx\Hy@tempa\Hy@tempb
5656   \expandafter\ifx\csname HyPL#3\endcsname\relax
5657   \else
5658     \def\HyPL@Type{#3}%
5659     \def\HyPL@Prefix{#2}%
5660   \fi
5661 \else
5662   \begingroup
5663   \let\Hy@next\endgroup
5664   \let\HyPL@found\@undefined
5665   \def\arabic{\HyPL@Format{arabic}}%
5666   \def\Roman{\HyPL@Format{Roman}}%
5667   \def\roman{\HyPL@Format{roman}}%
5668   \def\Alph{\HyPL@Format{Alph}}%
5669   \def\alph{\HyPL@Format{alph}}%
5670   \protected@edef\Hy@temp{#1}%
5671   \ifx\HyPL@found\relax
5672     \toks@{\expandafter{\Hy@temp}}%
5673     \edef\Hy@next{\endgroup
5674       \noexpand\HyPL@@@CheckThePage\the\toks@
5675       \noexpand\HyPL@found\relax\noexpand\@nil
5676     }%
5677   \fi
5678   \Hy@next
5679 \fi
5680 }%

```

`\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`.

```

5681 \def\HyPL@Format#1#2{%
5682   \ifx\HyPL@found\@undefined
5683     \expandafter\ifx\csname c@#2\endcsname\c@page
5684       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5685     \else
5686       \expandafter\noexpand\csname#1\endcsname{#2}%
5687     \fi
5688   \else
5689     \expandafter\noexpand\csname#1\endcsname{#2}%
5690   \fi
5691 }%

```

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

```

5692 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5693   \def\Hy@tempa{#3}%
5694   \def\Hy@tempb{\HyPL@found\relax}%
5695   \ifx\Hy@tempa\Hy@tempb
5696     \def\HyPL@Type{#2}%
5697     \def\HyPL@Prefix{#1}%
5698   \fi
5699 }%

```

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

```

5700 \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`.

```
5701 \def\HyPL@Useless{0<</S/D>>}%
5702 \@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.

```
5703 \def\HyPL@SetPageLabels{%
5704   \@onelevel@sanitize\HyPL@Labels
5705   \ifx\HyPL@Labels\@empty
5706   \else
5707     \ifx\HyPL@Labels\HyPL@Useless
5708     \else
5709       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5710     \fi
5711   \fi
5712 }%
```

```
5713 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5714 \fi
```

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

```
5715 \Hy@DisableOption{pdfpagelabels}
5716 \</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`

```
5717 <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.

```
5718 <*vTeX>
5719 \providecommand*{\XR@ext}{pdf}
5720 \edef\Hy@VTeXversion{%
5721   \ifx\VTeXversion\@undefined
5722     \z@
5723   \else
5724     \ifx\VTeXversion\relax
5725       \z@
5726     \else
5727       \VTeXversion
5728     \fi
5729   \fi
5730 }
5731 \begingroup
5732 \ifnum\Hy@VTeXversion<660 %
5733   \gdef\Hy@PutCatalog#1{%
5734     \Hy@WarningNoLine{%
5735       VTeX 6.59g or above required for pdfpagelabels%
5736     }%
5737   }%
```

```

5738 \else
5739 \gdef\Hy@PutCatalog#1{%
5740 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5741 }%
5742 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5743 \ifx\#2\%
5744 \else
5745 \immediate\special{!pdfpagelabels #2}%
5746 \fi
5747 }%
5748 \fi
5749 \endgroup
5750 \</vtex>

5751 \<*pdfTeX | vtex>

```

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

```

5752 \ifHy@pagelabels
5753 \def\HyPL@StorePageLabel#1{%
5754 \toks@ \expandafter{\HyPL@Labels}%
5755 \xdef\HyPL@Labels{%
5756 \the\toks@
5757 \the\Hy@absPage<<#1>>%
5758 }%
5759 }%

```

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.

```

5760 \RequirePackage{atveryend}[2009/12/07]%
5761 \AtVeryEndDocument{%
5762 \HyPL@SetPageLabels
5763 }%

5764 \fi
5765 \</pdfTeX | vtex>

```

27.1.2 xetex

```

5766 \<*xetex>
5767 \HyPsd@LoadUnicode
5768 \Hy@unicodetrue
5769 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5770 \else
5771 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5772 \fi
5773 \HyPsd@LoadStringEncoding
5774 \define@key{Hyp}{unicode}[true]{%
5775 \Hy@boolkey{unicode}{#1}%
5776 \ifHy@unicode
5777 \else
5778 \Hy@Warning{%
5779 XeTeX driver only supports ‘unicode=true’.\MessageBreak
5780 Ignoring option setting ‘unicode=false’%
5781 }%
5782 \Hy@unicodetrue
5783 \fi
5784 }

```



```

5785 \define@key{Hyp}{pdfencoding}{%
5786   \edef\HyPsd@temp{#1}%
5787   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5788     \let\HyPsd@pdfencoding\HyPsd@temp
5789   \else
5790     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5791       \let\HyPsd@pdfencoding\HyPsd@temp
5792     \else
5793       \Hy@Warning{%
5794         XeTeX driver only supports\MessageBreak
5795         'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5796         setting 'pdfencoding=\HyPsd@temp'%
5797       }%
5798     \fi
5799   \fi
5800 }
5801 \let\HyXeTeX@CheckUnicode\relax
5802 \xetex

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5803 \pdfmarkbase
5804 \begingroup
5805 \ifundefined{headerps@out}{-}{%
5806   \toks@\expandafter{\Hy@FirstPageHook}%
5807   \xdef\Hy@FirstPageHook{%
5808     \noexpand\headerps@out{%
5809       systemdict /pdfmark known%
5810       {%
5811         userdict /?pdfmark systemdict /exec get put%
5812       }{%
5813         userdict /?pdfmark systemdict /pop get put %
5814         userdict /pdfmark systemdict /cleartomark get put%
5815       }%
5816       ifelse%
5817     }%
5818     \the\toks@
5819   }%
5820 }%
5821 \endgroup
5822 \pdfmarkbase

```

\Hy@PutCatalog

```

5823 \dvipdfm | xetex\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5824 \pdfmarkbase
5825 \def\Hy@PutCatalog#1{%
5826   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog}\string} << #1 >>}}%
5827 }
5828 \pdfmarkbase

```

\Hy@pagelabels

```

5829 \pdfmarkbase | dvipdfm | xetex
5830 \ifHy@pagelabels

```

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

```

5831 \def\HyPL@StorePageLabel#1{%
5832   \if@files
5833     \begingroup
5834     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}}%

```

```

5835 \immediate\write\@mainaux{%
5836 \string\HyPL@Entry{\Hy@tempa}%
5837 }%
5838 \endgroup
5839 \fi
5840 }%

```

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.

```

5841 \Hy@AtBeginDocument{%
5842 \if@filesw
5843 \immediate\write\@mainaux{%
5844 \string\providecommand\string*\string\HyPL@Entry[1]{}%
5845 }%
5846 \fi
5847 \ifx\HyPL@Labels\@empty
5848 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5849 \else
5850 \HyPL@SetPageLabels
5851 \fi
5852 \let\HyPL@Entry\@gobble
5853 }%

```

`\HyPL@Entry`

```

5854 \def\HyPL@Entry#1{%
5855 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5856 \HyPL@Labels
5857 #1%
5858 }%
5859 }%

5860 \fi
5861 </pdfmarkbase | dvipdfm | xetex>

5862 <*package>

5863 \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

```

5864 \def\Hy@CounterExists#1{%
5865   \begingroup\expandafter\expandafter\expandafter\endgroup
5866   \expandafter\ifx\csname c@#1\endcsname\relax
5867     \expandafter\@gobble
5868   \else
5869     \begingroup\expandafter\expandafter\expandafter\endgroup
5870     \expandafter\ifx\csname the#1\endcsname\relax
5871       \expandafter\expandafter\expandafter\@gobble
5872     \else
5873       \expandafter\expandafter\expandafter\@firstofone
5874     \fi
5875   \fi
5876 }
5877 \Hy@CounterExists{section}{%
5878   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5879 }
5880 \Hy@CounterExists{part}{%
5881   \newcommand\theHpart{\arabic{part}}}%
5882 }
5883 \ltx@ifundefined{thechapter}{%
5884   \newcommand\theHsection   {\arabic{section}}}%
5885   \newcommand\theHfigure    {\arabic{figure}}}%
5886   \newcommand\theHtable     {\arabic{table}}}%
5887 }{%
5888   \newcommand\theHchapter   {\arabic{chapter}}}%
5889   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
5890   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
5891   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
5892 }
5893 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5894 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5895 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5896 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5897 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
5898 \newcommand\theHthm         {\theHsection.\arabic{thm}}

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration
starts at 0 for every list! But \item occurs inside \trivlist, so check if its a real \item
before incrementing counters.

5899 \let\H@item\item
5900 \newcounter{Item}
5901 \def\theHItem{\arabic{Item}}
5902 \def\item{%
5903   \@hyper@itemfalse
5904   \if@nmbbrlist\@hyper@itemtrue\fi
5905   \H@item
5906 }

5907 \newcommand\theHenumi      {\theHItem}
5908 \newcommand\theHenumii     {\theHItem}
5909 \newcommand\theHenumiii    {\theHItem}
5910 \newcommand\theHenumiv     {\theHItem}
5911 \newcommand\theHHfootnote  {\arabic{Hfootnote}}
5912 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5913 \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.

```
5914 \let\H@refstepcounter\refstepcounter
5915 \edef\name@of@eq{equation}%
5916 \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.

```
5917 \newif\if@hyper@item
5918 \newif\if@skiphyperref
5919 \@hyper@itemfalse
5920 \@skiphyperreffalse
5921 \def\refstepcounter#1{%
5922   \ifHy@pdfstring
5923   \else
5924     \H@refstepcounter{#1}%
5925     \edef\This@name{#1}%
5926     \ifx\This@name\name@of@slide
5927     \else
5928       \if@skiphyperref
5929       \else
5930         \if@hyper@item
5931         \stepcounter{Item}%
5932         \hyper@refstepcounter{Item}%
5933         \@hyper@itemfalse
5934       \else
5935         \hyper@refstepcounter{#1}%
5936       \fi
5937     \fi
5938   \fi
5939 \fi
5940 }
```

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

```
5941 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
5942 \def\hyper@refstepcounter#1{%
5943   \edef\This@name{#1}%
5944   \ifx\This@name\name@of@eq
5945     \@ifundefined{theHequation}{%
5946       \make@stripped@name{theequation}%
5947       \let\theHequation\newname
5948     }{}%
5949   \fi
5950   \@ifundefined{theH#1}{%
5951     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5952   }{}%
5953   \hyper@makecurrent{#1}%
5954   \ifmeasuring@
5955   \else
5956     \Hy@raisedlink{%
5957       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5958     }%
5959   \fi
5960 }
```

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`.

```

5961 \begingroup\expandafter\expandafter\expandafter\endgroup
5962 \expandafter\ifx\csname chapter\endcsname\relax
5963   \def\Hy@chapterstring{section}%
5964 \else
5965   \def\Hy@chapterstring{chapter}%
5966 \fi
5967 \def\Hy@appendixstring{appendix}
5968 \def\Hy@chapapp{\Hy@chapterstring}
5969 \let\HyOrg@appendix\appendix
5970 \def\appendix{%
5971   \ltx@ifundefined{chapter}%
5972     {\gdef\theHsection{\Alph{section}}}%
5973     {\gdef\theHchapter{\Alph{chapter}}}%
5974   \xdef\Hy@chapapp{\Hy@appendixstring}%
5975   \HyOrg@appendix
5976 }

```

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

```

5977 \def\hyper@makecurrent#1{%
5978   \begingroup
5979     \edef\Hy@param{#1}%
5980     \ifx\Hy@param\Hy@chapterstring
5981       \let\Hy@param\Hy@chapapp
5982     \fi
5983     \ifHy@hypertextnames
5984       \let\@number\@firstofone
5985       \ifundefined{latin@Alph}{-}{%
5986         \ifx\@Alph\greek@Alph
5987           \def\@Alph{Alph\@arabic}%
5988         \fi
5989       }%
5990       \ifx\@Alph\@Alph@bul
5991         \def\@Alph{Alph\@arabic}%
5992       \fi
5993       \ifx\@alph\@alph@bul
5994         \def\@alph{alph\@arabic}%
5995       \fi
5996       \ifHy@naturalnames
5997         \let\textlatin\@firstofone
5998         \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
5999       \else
6000         \xdef\HyperGlobalCurrentHref{%
6001           \csname
6002             the%
6003             \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6004             #1%
6005           \endcsname
6006         }%
6007       \fi
6008       \xdef\HyperGlobalCurrentHref{%

```

```

6009     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6010   }%
6011 \else
6012   \Hy@GlobalStepCount\Hy@linkcounter
6013   \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6014 \fi
6015 \endgroup
6016 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6017 \ifHy@localanchorname
6018   \let\@currentHref\HyperLocalCurrentHref
6019 \else
6020   \global\let\@currentHref\HyperGlobalCurrentHref
6021 \fi
6022 }

```

`\Hy@MakeCurrentHref`

```

6023 \def\Hy@MakeCurrentHref#1{%
6024   \edef\HyperLocalCurrentHref{#1}%
6025   \@onelevel@sanitize\HyperLocalCurrentHref
6026   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6027   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6028   \ifHy@localanchorname
6029     \let\@currentHref\HyperLocalCurrentHref
6030   \else
6031     \global\let\@currentHref\HyperGlobalCurrentHref
6032   \fi
6033 }

```

`\Hy@MakeCurrentHrefAuto`

```

6034 \def\Hy@MakeCurrentHrefAuto#1{%
6035   \Hy@GlobalStepCount\Hy@linkcounter
6036   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6037 }

```

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

```

6038 \def\@currentHlabel{\@currentHref}

6039 \@ifpackageloaded{fancyvrb}{%
6040   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
6041   \def\FV@StepLineNo{%
6042     \FV@SetLineNo
6043     \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6044     \FV@StepLineNo
6045   }%
6046 }%
6047 }{-}

```

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

```
6048 \Hy@AtBeginDocument{%
6049 \ifclassloaded{revtex4}{%
6050 \@namedef{ver@lastpage.sty}{1994/06/25}%
6051 }{}%
6052 \ifpackageloaded{lastpage}{%
6053 \ifHy@pageanchor
6054 \else
6055 \Hy@WarningNoLine{%
6056 The \string\pageref{LastPage} link doesn't work\MessageBreak
6057 with disabled option 'pageanchor'%
6058 }%
6059 \fi
6060 \def\lastpage@putlabel{%
6061 \addtocounter{page}{-1}%
6062 \if@filesw
6063 \begingroup
6064 \let\@number\@firstofone
6065 \ifHy@pageanchor
6066 \ifHy@hypertextnames
6067 \ifHy@plainpages
6068 \def\Hy@temp{\arabic{page}}%
6069 \else
6070 \Hy@unicodefalse
6071 \pdfstringdef\Hy@temp{\thepage}%
6072 \fi
6073 \else
6074 \def\Hy@temp{\the\Hy@pagecounter}%
6075 \fi
6076 \fi
6077 \immediate\write\@auxout{%
6078 \string\newlabel
6079 {LastPage}{}{\thepage}{}{%
6080 \ifHy@pageanchor page.\Hy@temp\fi}{}%
6081 }%
6082 \endgroup
6083 \fi
6084 \addtocounter{page}{1}%
6085 }%
6086 \ifclassloaded{revtex4}{%
6087 \begingroup
6088 \toks@{\expandafter{\lastpage@putlabel}}%
6089 \edef\x{\endgroup
6090 \def\noexpand\lastpage@putlabel{%
6091 \noexpand\stepcounter{page}%
6092 \the\toks@
6093 \noexpand\addtocounter{page}\noexpand\m@ne
6094 }%
6095 }%
6096 \x
6097 }{}%
6098 }{}%
6099 }
6100 </package>
6101 <*check>
6102 \checkpackage{lastpage}[1994/06/25]
6103 \checkcommand\def\lastpage@putlabel{%
```

```

6104 \addtocounter{page}{-1}%
6105 \immediate\write\@auxout{%
6106   \string\newlabel{LastPage}{\thepage}}%
6107 }%
6108 \addtocounter{page}{1}%
6109 }
6110 </check>
6111 <*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.

```

6112 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
6113 \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:

```

6114 \@ifpackageloaded{titlesec}{%
6115   \def\ttl@Hy@steplink#1{%
6116     \Hy@MakeCurrentHrefAuto{#1*}%
6117     \edef\ttl@Hy@saveanchor{%
6118       \noexpand\Hy@raisedlink{%
6119         \noexpand\hyper@anchorstart{\@currentHref}%
6120         \noexpand\hyper@anchorend
6121         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6122         \noexpand\ttl@Hy@PatchSaveWrite
6123       }%
6124     }%
6125   }%
6126   \def\ttl@Hy@PatchSaveWrite{%
6127     \begingroup
6128     \toks@{\expandafter{\ttl@savewrite}}%
6129     \edef\x{\endgroup
6130       \def\noexpand\ttl@savewrite{%
6131         \let\noexpand\@currentHref
6132         \noexpand\ttl@Hy@SavedCurrentHref
6133         \the\toks@
6134       }%
6135     }%
6136     \x
6137   }%
6138   \def\ttl@Hy@refstepcounter#1{%
6139     \let\ttl@b\Hy@raisedlink
6140     \def\Hy@raisedlink##1{%
6141       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6142     }%
6143     \refstepcounter{#1}%
6144     \let\Hy@raisedlink\ttl@b
6145   }%
6146 }{}

```


Package titletoc support:

```
6147 \@ifpackageloaded{titletoc}{%
6148   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6149 }{}
```

32 Package varioref support

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

```
6150 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
6151 \@ifpackageloaded{varioref}{%
6152   \def\vref@pagenum#1#2{%
6153     \@ifundefined{r@#2}{%
6154       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6155     }{}%
6156     \edef#1{\getpagerefnumber{#2}}%
6157   }%
6158 }
```

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

```
6159 \@ifpackageloaded{longtable}{%
6160   \begingroup
6161     \def\y{\LT@array}%
6162     \@ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%
6163     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6164       \expandafter\endgroup
6165       \expandafter\def\y[#1]#2{%
6166         \H@refstepcounter{#1}%
6167         \hyper@makecurrent{table}%
6168         \let\Hy@LT@currentHref\@currentHref
6169         #2\@sharp###4%
6170       }%
6171     }%
6172   \expandafter\expandafter\expandafter\x\y{#1}{#2}\@nil
```

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

```
6173   \begingroup
6174     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
6175       \endgroup
6176       \def\LT@start{%
6177         #1%
6178         \let\@currentHref\Hy@LT@currentHref
6179         \Hy@raisedlink{%
6180           \hyper@anchorstart{\@currentHref}\hyper@anchorend
6181         }%
6182         \ifvoid\LT@firsthead\copy
6183         #2%
6184       }%
```

```

6185 }%
6186 \expandafter\x\LT@start\@nil
6187 }{}

```

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.

```

6188 \let\new@refstepcounter\refstepcounter
6189 \let\H@equation\equation
6190 \let\H@endequation\endequation

6191 \@ifpackageloaded{amsmath}{%
6192   \long\def\Hy@temp{%
6193     \incr@eqnum
6194     \mathdisplay@push
6195     \st@rredfalse \global\@eqnswtrue
6196     \mathdisplay{equation}%
6197   }%
6198   \ifx\Hy@temp\equation
6199     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6200       \csname iftrue\endcsname
6201   \else
6202     \long\def\equation{%
6203       \mathdisplay@push
6204       \st@rredfalse \global\@eqnswtrue
6205       \mathdisplay{equation}%
6206       \incr@eqnum
6207     }%
6208   \fi
6209 \fi
6210 }{%
6211 \def\equation{%
6212   \let\refstepcounter\H@refstepcounter
6213   \H@equation
6214   \@ifundefined{theHequation}{%
6215     \make@stripped@name{\theequation}%
6216     \let\theHequation\newname
6217   }{}%
6218   \hyper@makecurrent{equation}%
6219   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6220   \let\refstepcounter\new@refstepcounter
6221 }%
6222 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6223 }

```

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.

```

6224 \newif\if@eqnstar
6225 \@eqnstarfalse

```

```

6226 \let\H@eqnarray\eqnarray
6227 \let\H@endeqnarray\endeqnarray
6228 \def\eqnarray{%
6229   \let\Hy@reserved@a\relax
6230   \def\@currentHref{}%
6231   \H@eqnarray
6232   \if@eqnstar
6233   \else
6234     \ifx\\ \@currentHref\\%
6235     \else
6236       \ifundefined{theHequation}{%
6237         \make@stripped@name{\theequation}%
6238         \let\theHequation\newname
6239       }{}%
6240       \hyper@makecurrent{equation}%
6241       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6242     \fi
6243   \fi
6244 }
6245 \def\endeqnarray{%
6246   \H@endeqnarray
6247 }

```

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.

```

6248 \@namedef{eqnarray*}{%
6249   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6250 }
6251 \@namedef{endeqnarray*}{%
6252   \nonumber\endeqnarray\@eqnstarfalse
6253 }

```

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

```

6254 \ltx@ifundefined{subeqnarray}{}{}%
6255 \let\H@subeqnarray\subeqnarray
6256 \let\H@endsubeqnarray\endsubeqnarray
6257 \def\subeqnarray{%
6258   \let\Hy@reserved@a\relax
6259   \H@subeqnarray
6260   \ifundefined{theHequation}{%
6261     \make@stripped@name{\theequation}%
6262     \let\theHequation\newname
6263   }{}%
6264   \hyper@makecurrent{equation}%
6265   \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6266 }%
6267 \def\endsubeqnarray{%
6268   \H@endsubeqnarray
6269 }%
6270 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6271 }

```

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

```

6272 \def\make@stripped@name#1{%
6273   \begingroup
6274   \escapechar\m@ne
6275   \global\let\newname\@empty
6276   \protected@edef\Hy@tempa{#1}%

```

```

6277 \edef\@tempb{%
6278   \noexpand\@tfor\noexpand\Hy@tempa:=%
6279   \expandafter\strip@prefix\meaning\Hy@tempa
6280 }%
6281 \@tempb\do{%
6282   \if\Hy@tempa\else
6283   \if}\Hy@tempa\else
6284     \xdef\newname{\newname\Hy@tempa}%
6285   \fi
6286   \fi
6287 }%
6288 \endgroup
6289 }

```

Support for amsmath's subequations:

```

6290 \begingroup\expandafter\expandafter\expandafter\endgroup
6291 \expandafter\ifx\csname subequations\endcsname\relax
6292 \else
6293   \let\HyOrg@subequations\subequations
6294   \def\subequations{%
6295     \stepcounter{equation}%
6296     \protected@edef\theHparentequation{%
6297       \ifundefined{theHequation}\theequation\theHequation
6298     }%
6299     \addtocounter{equation}{-1}%
6300     \HyOrg@subequations
6301     \def\theHequation{\theHparentequation\alph{equation}}%
6302     \ignorespaces
6303   }%
6304 \fi

```

Support for package amsthm (Daniel Müllner):

```

6305 \ifpackageloaded{amsthm}{%
6306   \def\@thm#1#2#3{%
6307     \ifhmode
6308       \unskip\unskip\par
6309     \fi
6310     \normalfont
6311     \trivlist
6312     \let\thmheadnl\relax
6313     \let\thm@swap\@gobble
6314     \thm@notefont{\fontseries\mddefault\upshape}%
6315     \thm@headpunct{.}% add period after heading
6316     \thm@headsep 5\p@ plus\p@ minus\p@\relax
6317     \thm@space@setup
6318     #1% style overrides
6319     \@topsep \thm@preskip           % used by thm head
6320     \@topsepadd \thm@postskip       % used by \endparentv
6321     \def\dth@counter{#2}%
6322     \ifx\@empty\dth@counter
6323       \def\@tempa{%
6324         \@oparg{\@begintheorem{#3}{}}[]%
6325       }%
6326     \else
6327       \H@refstepcounter{#2}%
6328       \hyper@makecurrent{#2}%
6329       \let\Hy@dth@currentHref\@currentHref
6330       \def\@tempa{%

```

```

6331 \Oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
6332 }%
6333 \fi
6334 \@tempa
6335 }%
6336 \dth@everypar={%
6337 \@minipagefalse
6338 \global\@newlistfalse
6339 \@noparitemfalse
6340 \if@inlabel
6341 \global\@inlabelfalse
6342 \begingroup
6343 \setbox\z@\lastbox
6344 \ifvoid\z@
6345 \kern-\itemindent
6346 \fi
6347 \endgroup
6348 \ifx\@empty\dth@counter
6349 \else
6350 \Hy@raisedlink{%
6351 \hyper@anchorstart{%
6352 \ltx@ifundefined{Hy@dth@currentHref}%
6353 \@currentHref\Hy@dth@currentHref
6354 }\hyper@anchorend
6355 }%
6356 \fi
6357 \unhbox\@labels
6358 \fi
6359 \if@nobreak
6360 \@nobreakfalse \clubpenalty\@M
6361 \else
6362 \clubpenalty\@clubpenalty \everypar{}%
6363 \fi
6364 }%
6365 }{}

```

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.

```

6366 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6367 \ifHy@hyperfootnotes
6368 \newcounter{Hfootnote}%
6369 \let\H@@footnotetext\@footnotetext
6370 \let\H@@footnotemark\@footnotemark
6371 \def\@xfootnotenext[#1]{%
6372 \begingroup
6373 \csname c@\@mpfn\endcsname #1\relax
6374 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6375 \endgroup
6376 \ifx\@footnotetext\@mpfootnotetext
6377 \expandafter\H@@mpfootnotetext
6378 \else

```

```

6379 \expandafter\H@@footnotetext
6380 \fi
6381 }%
6382 \def\@xfootnotemark[#1]{%
6383 \begingroup
6384 \c@footnote #1\relax
6385 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6386 \endgroup
6387 \H@@footnotemark
6388 }%
6389 \let\H@@mpfootnotetext\@mpfootnotetext
6390 \long\def\@mpfootnotetext#1{%
6391 \H@@mpfootnotetext{%
6392 \ifHy@nesting
6393 \expandafter\hyper@@anchor\expandafter{%
6394 \Hy@footnote@currentHref
6395 }{#1}%
6396 \else
6397 \Hy@raisedlink{%
6398 \expandafter\hyper@@anchor\expandafter{%
6399 \Hy@footnote@currentHref
6400 }{\relax}%
6401 }#1%
6402 \fi
6403 }%
6404 }%
6405 \long\def\@footnotetext#1{%
6406 \H@@footnotetext{%
6407 \ifHy@nesting
6408 \expandafter\hyper@@anchor\expandafter{%
6409 \Hy@footnote@currentHref
6410 }{#1}%
6411 \else
6412 \Hy@raisedlink{%
6413 \expandafter\hyper@@anchor\expandafter{%
6414 \Hy@footnote@currentHref
6415 }{\relax}%
6416 }%
6417 \let\@currentHref\Hy@footnote@currentHref
6418 \let\@currentlabelname\@empty
6419 #1%
6420 \fi
6421 }%
6422 }%

```

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.

```

6423 \def\@footnotemark{%
6424 \leavevmode
6425 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6426 \stepcounter{Hfootnote}%
6427 \global\let\Hy@saved@currentHref\@currentHref
6428 \hyper@makecurrent{Hfootnote}%
6429 \global\let\Hy@footnote@currentHref\@currentHref
6430 \global\let\@currentHref\Hy@saved@currentHref
6431 \hyper@linkstart{link}{\Hy@footnote@currentHref}%

```

```

6432 \makefnmark
6433 \hyper@linkend
6434 \ifhmode\spacefactor\@x@sf\fi
6435 \relax
6436 }%

```

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

```

6437 \ifpackageloaded{longtable}{%
6438 \CheckCommand*{\LT@p@ftntext}[1]{%
6439 \edef\@tempa{%
6440 \the\LT@p@ftn
6441 \noexpand\footnotetext[\the\c@footnote]%
6442 }%
6443 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6444 }%
6445 \long\def\LT@p@ftntext#1{%
6446 \edef\@tempa{%
6447 \the\LT@p@ftn
6448 \begingroup
6449 \noexpand\c@footnote=\the\c@footnote\relax
6450 \noexpand\protected@xdef
6451 \noexpand\@thefnmark{\noexpand\thempfn}%
6452 \noexpand\protected@xdef\noexpand\@thefnmark{%
6453 \noexpand\thempfn
6454 }%
6455 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6456 \expandafter{%
6457 \Hy@footnote@currentHref
6458 }%
6459 }%
6460 \global\LT@p@ftn\expandafter{%
6461 \@tempa{#1}%
6462 \endgroup
6463 }%
6464 }%
6465 \long\def\Hy@LT@footnotetext#1#2{%
6466 \H@@@footnotetext{%
6467 \ifHy@nesting
6468 \hyper@@@anchor{#1}{#2}%
6469 \else
6470 \Hy@raisedlink{%
6471 \hyper@@@anchor{#1}{\relax}%
6472 }%
6473 \def\@currentHref{#1}%
6474 \let\@currentlabelname\@empty
6475 #2%
6476 \fi
6477 }%
6478 }%
6479 }{}%

```

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

```

6480 \ifpackageloaded{fancyvrb}{%
6481 \def\V@@@footnotetext{%
6482 \insert\footins\bgroup

```

```

6483 \csname reset@font\endcsname
6484 \footnotesize
6485 \interlinepenalty\interfootnotelinepenalty
6486 \splittopskip\footnotesep
6487 \splitmaxdepth\dp\strutbox
6488 \floatingpenalty \@MM
6489 \hsize\columnwidth
6490 \@parboxrestore
6491 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6492 \@makefnfntext{}%
6493 \rule{\z@}{\footnotesep}%
6494 \bgroup
6495 \aftergroup\V@@@footnotetext
6496 \Hy@raisedlink{%
6497   \expandafter\hyper@@anchor\expandafter{%
6498     \Hy@footnote@currentHref
6499   }\relax}%
6500 }%
6501 \let\@currentHref\Hy@footnote@currentHref
6502 \let\@currentlabelname\@empty
6503 \ignorespaces
6504 }%
6505 }{}%

```

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

```

6506 \def\Hy@temp#1{%
6507   \begingroup
6508     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6509   \endgroup
6510   \@footnotemark
6511 }%
6512 \ifx\Hy@temp\footref
6513   \def\footref#1{%
6514     \begingroup
6515       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6516     \endgroup
6517     \H@@@footnotemark
6518   }%
6519 \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.

```

6520 \let\HyOrg@maketitle\maketitle
6521 \def\maketitle{%
6522   \let\Hy@saved@footnotemark\@footnotemark
6523   \let\Hy@saved@footnotetext\@footnotetext
6524   \let\@footnotemark\H@@@footnotemark
6525   \let\@footnotetext\H@@@footnotetext
6526   \@ifnextchar[\Hy@maketitle@optarg{% ]
6527     \HyOrg@maketitle
6528     \Hy@maketitle@end
6529   }%
6530 }%
6531 \def\Hy@maketitle@optarg[#1]{%
6532   \HyOrg@maketitle[{#1}]%
6533   \Hy@maketitle@end
6534 }%

```



```

6535 \def\Hy@maketitle@end{%
6536   \ifx\@footnotemark\H@@footnotemark
6537     \let\@footnotemark\Hy@saved@footnotemark
6538   \fi
6539   \ifx\@footnotetext\H@@footnotetext
6540     \let\@footnotetext\Hy@saved@footnotetext
6541   \fi
6542 }%

```

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

```

6543 \def\realfootnote{%
6544   \ifnextchar[\@xfootnote{%
6545     \stepcounter{\@mpfn}%
6546     \protected@xdef\@thefnmark{\thempfn}%
6547     \H@@@footnotemark\H@@@footnotetext
6548   }%
6549 }%

6550 \fi
6551 \Hy@DisableOption{hyperfootnotes}

6552 \</package>
6553 \<*check>
6554 \checklatex
6555 \checkcommand\def\@xfootnotenext[#1]{%
6556   \begingroup
6557     \csname c@\@mpfn\endcsname #1\relax
6558     \unrestored@protected@xdef\@thefnmark{\thempfn}%
6559   \endgroup
6560   \@footnotetext
6561 }
6562 \checkcommand\def\@xfootnotemark[#1]{%
6563   \begingroup
6564     \c@footnote #1\relax
6565     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6566   \endgroup
6567   \@footnotemark
6568 }
6569 \checkcommand\def\@footnotemark{%
6570   \leavevmode
6571   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6572   \@makefnmark
6573   \ifhmode\spacefactor\@x@sf\fi
6574   \relax
6575 }
6576 \</check>
6577 \<*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.

```

6578 \def\caption{%
6579   \ifx\@capttype\@undefined
6580     \@latex@error{\noexpand\caption outside float}\@ehd
6581     \expandafter\@gobble
6582   \else

```

```

6583 \H@refstepcounter\@capttype
6584 \let\Hy@tempa\@caption
6585 \@ifundefined{float@caption}{%
6586 }{%
6587 \expandafter\ifx\csname @float@c@\@capttype\endcsname
6588 \float@caption
6589 \let\Hy@tempa\Hy@float@caption
6590 \fi
6591 }%
6592 \expandafter\@firstofone
6593 \fi
6594 {\@dblarg{\Hy@tempa\@capttype}}}%
6595 }
6596 \long\def\@caption#1[#2]#3{%
6597 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6598 \csname iftrue\endcsname
6599 \global\let\@currentHref\hc@currentHref
6600 \else
6601 \hyper@makecurrent{\@capttype}%
6602 \fi
6603 \@ifundefined{NR@gettitle}{%
6604 \def\@currentlabelname{#2}%
6605 }{%
6606 \NR@gettitle{#2}%
6607 }%
6608 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6609 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6610 }%
6611 \begingroup
6612 \@parboxrestore
6613 \if@minipage
6614 \@setminipage
6615 \fi
6616 \normalsize
6617 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6618 \csname iftrue\endcsname
6619 \global\@capstartfalse
6620 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6621 \else
6622 \@makecaption{\csname fnum@#1\endcsname}{%
6623 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6624 \ifHy@nesting
6625 \expandafter\hyper@@@anchor\expandafter{\@currentHref}{#3}%
6626 \else
6627 \Hy@raisedlink{%
6628 \expandafter\hyper@@@anchor\expandafter{%
6629 \@currentHref
6630 }{\relax}%
6631 }%
6632 #3%
6633 \fi
6634 }%
6635 \fi
6636 \par
6637 \endgroup
6638 }

```

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.

```

6639 \let\Hy@float@caption\@caption
6640 \ifpackageloaded{float}{%
6641   \def\Hy@float@caption{%
6642     \ifx\Hy@float@currentHref\@undefined
6643       \hyper@makecurrent{\@captive}%
6644       \global\let\Hy@float@currentHref\@currentHref
6645     \else
6646       \let\@currentHref\Hy@float@currentHref
6647     \fi
6648     \float@caption
6649   }%
6650 \let\HyOrg@float@makebox\float@makebox
6651 \renewcommand{\float@makebox}[1]{%
6652   \HyOrg@float@makebox{%
6653     #1\relax
6654     \ifx\Hy@float@currentHref\@undefined
6655     \else
6656       \expandafter\hyper@@anchor\expandafter{%
6657         \Hy@float@currentHref
6658       }\relax}%
6659     \global\let\Hy@float@currentHref\@undefined
6660   \fi
6661   }%
6662 }%
6663 }{}

6664 \end{package}
6665 \check
6666 \checklatex[1999/06/01 - 2000/06/01]
6667 \checkcommand\def\caption{%
6668   \ifx\@captive\@undefined
6669     \latexerror{\noexpand\caption outside float}\@ehd
6670     \expandafter\@gobble
6671   \else
6672     \refstepcounter{\@captive}
6673     \expandafter\@firstofone
6674   \fi
6675   {\@dblarg{\@caption\@captive}}%
6676 }
6677 \checkcommand\long\def\@caption#1[#2]#3{%
6678   \par
6679   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6680     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6681   }%
6682   \begingroup
6683     \@parboxrestore
6684     \if@minipage
6685       \setminipage
6686     \fi
6687     \normalsize
6688     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6689   \endgroup
6690 }
6691 \end{check}
6692 \end{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.

```

6693 \def\hyper@natlinkstart#1{%
6694   \Hy@backout{#1}%
6695   \hyper@linkstart{cite}{cite.#1}%
6696   \def\hyper@nat@current{#1}%
6697 }
6698 \def\hyper@natlinkend{%
6699   \hyper@linkend
6700 }
6701 \def\hyper@natlinkbreak#1#2{%
6702   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6703 }
6704 \def\hyper@natanchorstart#1{%
6705   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6706 }
6707 \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.

```

6708 \ltx@ifundefined{NAT@parse}{%
6709   \providecommand*\@extra@binfo{}%
6710   \providecommand*\@extra@b@citeb{}%
6711   \def\bibcite#1#2{%
6712     \@newl@bel{b}{#1\@extra@binfo}{%
6713       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6714     }%
6715   }%
6716   \gdef\@extra@binfo{}%

```

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

```

6717 \let\Hy@bibcite\bibcite
6718 \begingroup
6719   \@ifundefined{bbl@cite@choice}{}{%
6720     \g@addto@macro\bbl@cite@choice{%
6721       \let\bibcite\Hy@bibcite
6722     }%
6723   }%
6724 \endgroup

```

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

```

6725 \providecommand*\@BIBLABEL{\@biblabel}%
6726 \def\@bibitem[#1]#2{%
6727   \@skiphyperreftrue
6728   \H@item[%
6729     \ifx\Hy@raisedlink\@empty

```

```

6730 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6731 \@BIBLABEL{#1}%
6732 \hyper@anchorend
6733 \else
6734 \Hy@raisedlink{%
6735 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6736 }%
6737 \@BIBLABEL{#1}%
6738 \fi
6739 \hfill
6740 ]%
6741 \@skiphyperreffalse
6742 \if@filesw
6743 \begingroup
6744 \let\protect\noexpand
6745 \immediate\write\@auxout{%
6746 \string\bibcite{#2}{#1}%
6747 }%
6748 \endgroup
6749 \fi
6750 \ignorespaces
6751 }%

```

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

```

6752 \def\@bibitem#1{%
6753 \@skiphyperrefftrue\H@item\@skiphyperreffalse
6754 \Hy@raisedlink{%
6755 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6756 }%
6757 \if@filesw
6758 \begingroup
6759 \let\protect\noexpand
6760 \immediate\write\@auxout{%
6761 \string\bibcite{#1}{\the\value{\@listctr}}}%
6762 }%
6763 \endgroup
6764 \fi
6765 \ignorespaces
6766 }%
6767 }{}

6768 \</package>
6769 \< *check>
6770 \checklatex
6771 \checkcommand\def\@lbibitem[#1]#2{%
6772 \item[\@biblabel{#1}\hfill]%
6773 \if@filesw
6774 {%
6775 \let\protect\noexpand
6776 \immediate\write\@auxout{%
6777 \string\bibcite{#2}{#1}%
6778 }%
6779 }%
6780 \fi
6781 \ignorespaces
6782 }
6783 \checkcommand\def\@bibitem#1{%

```

```

6784 \item
6785 \if@filesw
6786 \immediate\write\@auxout{%
6787 \string\bibcite{#1}{\the\value{\@listctr}}}%
6788 }%
6789 \fi
6790 \ignorespaces
6791 }
6792 \end{check}
6793 \end{package}

```

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

```

6794 \ifclassloaded{revtex}{%
6795 \Hy@Info{*** compatibility with revtex **** }%
6796 \def\revtex@checking#1#2{%
6797 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6798 \expandafter\def\csname b@#1\endcsname{#2}%
6799 \@SetMaxRnhefLabel{#1}%
6800 \expandafter\let\csname b@#1\endcsname\T@temp
6801 }%

```

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

```

6802 \@ifundefined{@CITE}{\def@CITE{\@cite}}{}%
6803 \providecommand*\@extra@b@citeb{}%
6804 \def\CITE[#1]#2{%
6805 \let\@citea\@empty
6806 \leavevmode
6807 \unskip
6808 $\sim$%
6809 \scriptstyle
6810 \@CITE{%
6811 \@for\@citeb:=#2\do{%
6812 \@citea
6813 \def\@citea{,\penalty\@m\ }%
6814 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6815 \if@filesw
6816 \immediate\write\@auxout{\string\citation{\@citeb}}%
6817 \fi
6818 \@ifundefined{b@\@citeb\extra@b@citeb}{%
6819 \mbox{\reset@font\bfseries ?}%
6820 \G@refundefinedtrue
6821 \@latex@warning{%
6822 Citation '\@citeb' on page \thepage \space undefined%
6823 }%
6824 }{%
6825 {\csname b@\@citeb\extra@b@citeb\endcsname}%
6826 }%
6827 }%
6828 }{#1}%
6829 }$%
6830 }%

```

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.

```

6831 \def\citex[#1]#2{%

```

```

6832 \let\@citea\@empty
6833 \@cite{%
6834   \@for\@citeb:=#2\do{%
6835     \@citea
6836     \def\@citea{,\penalty\@m\ }%
6837     \edef\@citeb{\expandafter\@firstofone\@citeb}%
6838     \if@filesw
6839       \immediate\write\@auxout{\string\citation{\@citeb}}%
6840     \fi
6841     \ifundefined{b@\@citeb\@extra@b@citeb}{%
6842       \mbox{\reset@font\bfseries ?}%
6843       \G@refundefinedtrue
6844       \@latex@warning{%
6845         Citation '\@citeb' on page \thepage \space undefined%
6846       }%
6847     }{%
6848       \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6849     }%
6850   }%
6851 }{\#1}%
6852 }%
6853 }{}

```

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 pdfTeX, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

6854 \ifpackageloaded{harvard}{%
6855   \Hy@AtBeginDocument{%
6856     \Hy@Info{*** compatibility with harvard **** }%
6857     \Hy@raiselinksfalse
6858     \def\harvardcite#1#2#3#4{%
6859       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
6860       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
6861       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
6862       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6863     }%
6864     \def\HAR@citetoaux#1{%
6865       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6866       \ifHy@backref
6867         \ifx\@empty\@currentlabel
6868           \else
6869             \@bsphack
6870             \if@filesw
6871               \protected@write\@auxout{}{%
6872                 \string\@writefile{brf}{%
6873                   \string\backcite{#1}{%
6874                     {\thepage}{\@currentlabel}{\@currentHref}%
6875                   }%
6876                 }%
6877             }%
6878           \fi

```

```

6879     \@esphack
6880     \fi
6881   \fi
6882 }%
6883 \def\harvarditem{%
6884   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6885 }%
6886 \def\@harvarditem[#1]#2#3#4#5\par{%
6887   \item[]%
6888   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6889   \if@filesw
6890     \begingroup
6891       \def\protect##1{\string ##1\space}%
6892       \ifthenelse{\equal{#1}{\null}}{%
6893         {\def\next{{#4}{#2}{#2}{#3}}}%
6894         {\def\next{{#4}{#2}{#1}{#3}}}%
6895       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6896     \endgroup
6897   \fi
6898   \protect\hspace*{-\labelwidth}%
6899   \protect\hspace*{-\labelsep}%
6900   \ignorespaces
6901   #5%
6902   \ifHy@backref
6903     \newblock
6904     \backref{\csname br@#4\endcsname}%
6905   \fi
6906   \par
6907 }%

```

\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:

```

6908   \long\def\HAR@checkcitations#1#2#3#4{%
6909     \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6910     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6911       \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6912       \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6913         \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6914         \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6915           \else
6916             \@tempswatrue
6917           \fi
6918         \else
6919           \@tempswatrue
6920         \fi
6921       \else
6922         \@tempswatrue
6923       \fi
6924     }%
6925   }%
6926 }{}

```

37.2 Package chicago

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


```

6927 \@ifpackageloaded{chicago}{%
\citeN
6928 \def\citeN{%
6929 \def\@citesep{-1000}%
6930 \def\@cite##1##2{##1}%
6931 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
6932 \@citedata@opt
6933 }%

\shortciteN
6934 \def\shortciteN{%
6935 \def\@citesep{-1000}%
6936 \def\@cite##1##2{##1}%
6937 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
6938 \@citedata@opt
6939 }%

\@citedata@opt
6940 \def\@citedata@opt{%
6941 \let\@cite@opt\@empty
6942 \@ifnextchar [{%
6943 \@tempwattrue
6944 \@citedatax@opt
6945 }{%
6946 \@tempwafalse
6947 \@citedatax[]%
6948 }%
6949 }%

\@citedatax@opt
6950 \def\@citedatax@opt[#1]{%
6951 \def\@cite@opt{, #1}%
6952 \@citedatax[{#1}]%
6953 }%

6954 }{}

```

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.

```

6955 \def\Hy@EveryPageAnchor{%
6956 \Hy@DistillerDestFix
6957 \ifHy@pageanchor
6958 \ifHy@hypertextnames
6959 \ifHy@plainpages
6960 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6961 \else
6962 \begingroup
6963 \let\@number\@firstofone

```

```

6964     \Hy@unicodedefalse
6965     \pdfstringdef\@the@H@page{\thepage}%
6966     \endgroup
6967     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6968     \fi
6969   \else
6970     \Hy@GlobalStepCount\Hy@pagecounter
6971     \def\Hy@TempPageAnchor{%
6972       \hyper@@anchor{page.\the\Hy@pagecounter}%
6973     }%
6974     \fi
6975     \vbox to 0pt{%
6976       \kern\voffset
6977       \kern\topmargin
6978       \kern-1bp\relax
6979       \hbox to 0pt{%
6980         \kern\hoffset
6981         \kern\ifodd\value{page}%
6982           \oddsidemargin
6983         \else
6984           \evensidemargin
6985         \fi
6986         \kern-1bp\relax
6987         \Hy@TempPageAnchor
6988       \hss
6989     }%
6990     \vss
6991   }%
6992 \fi
6993 }
6994 \g@addto@macro\Hy@EveryPageBoxHook{%
6995   \Hy@EveryPageAnchor
6996 }

```

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.

```

6997 \def\addcontentsline#1#2#3{% toc extension, type, tag
6998   \begingroup
6999   \let\label\@gobble
7000   \ifx\@currentHref\@empty
7001     \Hy@Warning{%
7002       No destination for bookmark of \string\addcontentsline,%
7003       \MessageBreak destination is added%
7004     }%
7005     \phantomsection
7006   \fi
7007   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7008     \begingroup
7009     \def\Hy@tempa{#1}%
7010     \ifx\Hy@tempa\Hy@bookmarkstype
7011       \Hy@WarningNoLine{%
7012         bookmark level for unknown #2 defaults to 0%
7013       }%

```

```

7014     \else
7015         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7016     \fi
7017 \endgroup
7018 \expandafter\gdef\csname toclevel@#2\endcsname{0}%
7019 \fi
7020 \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
7021 \Hy@writebookmark{\csname the#2\endcsname}%
7022     {#3}%
7023     {\@currentHref}%
7024     {\Hy@toclevel}%
7025     {#1}%
7026 \ifHy@verbose
7027     \begingroup
7028         \def\Hy@tempa{#3}%
7029         \@onelevel@sanitize\Hy@tempa
7030         \let\temp@online\on@line
7031         \let\on@line\@empty
7032         \Hy@Info{%
7033             bookmark\temp@online:\MessageBreak
7034             thecounter {\csname the#2\endcsname}\MessageBreak
7035             text {\Hy@tempa}\MessageBreak
7036             reference {\@currentHref}\MessageBreak
7037             toclevel {\Hy@toclevel}\MessageBreak
7038             type {#1}%
7039         }%
7040     \endgroup
7041 \fi
7042 \addtocontents{#1}{%
7043     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7044 }%
7045 \endgroup
7046 }
7047 \def\contentsline#1#2#3#4{%
7048     \ifx\\#4\\%
7049         \csname l@#1\endcsname{#2}{#3}%
7050     \else
7051         \ifcase\Hy@linktoc % none
7052             \csname l@#1\endcsname{#2}{#3}%
7053         \or % section
7054             \csname l@#1\endcsname{%
7055                 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7056             }{#3}%
7057         \or % page
7058             \csname l@#1\endcsname{{#2}}{%
7059                 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7060             }%
7061         \else % all
7062             \csname l@#1\endcsname{%
7063                 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7064             }{%
7065                 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7066             }%
7067         \fi
7068     \fi
7069 }
7070 \end{package}

```

```

7071 <*check>
7072 \checklatex
7073 \checkcommand\def\addcontentsline#1#2#3{%
7074   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
7075 }
7076 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7077 </check>
7078 <*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.

```

7079 \let\H@definecounter\@definecounter
7080 \def\@definecounter#1{%
7081   \H@definecounter{#1}%
7082   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7083 }

```

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.

```

7084 \let\H@newctr\@newctr
7085 \def\@newctr#1[#2]{%
7086   \H@newctr#1[{#2}]%
7087   \expandafter\def\csname theH#1\endcsname{%
7088     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7089   }%
7090 }

```

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.

```

7091 \ifpackageloaded{amsmath}{%
7092   \def\Hy@make@anchor{%
7093     \Hy@MakeCurrentHrefAuto{AMS}%
7094     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7095   }%
7096   \def\Hy@make@df@tag@@#1{%
7097     \gdef\df@tag{%
7098       \maketag@@@{\Hy@make@anchor#1}%
7099       \def\@currentlabel{#1}%
7100     }%
7101   }%
7102   \def\Hy@make@df@tag@@@#1{%
7103     \gdef\df@tag{%
7104       \tagform@{\Hy@make@anchor#1}%
7105       \toks@{\xp{\p@equation{#1}}}%
7106       \edef\@currentlabel{\the\toks@}%
7107     }%
7108   }%

```

```

7109 \let\HyOrg@make@df@tag@@\make@df@tag@@
7110 \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
7111 \let\make@df@tag@@\Hy@make@df@tag@@
7112 \let\make@df@tag@@@ \Hy@make@df@tag@@@
7113 }{}

```

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

```

7114 \ifpackagewith{hyperref}{pdfTeX}{%
7115   \let\H@seteqlabel\@seteqlabel
7116   \def\@seteqlabel#1{%
7117     \H@seteqlabel{#1}%
7118     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7119     \Hy@raisedlink{%
7120       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7121     }%
7122   }%
7123 }{}

```

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.

```

7124 \let\HyOrg@addtoreset\@addtoreset
7125 \def\@addtoreset#1#2{%
7126   \HyOrg@addtoreset{#1}{#2}%
7127   \expandafter\xdef\csname theH#1\endcsname{%
7128     \expandafter\noexpand
7129     \csname the\@ifundefined{theH#2}{H#2}\endcsname
7130     .\noexpand\the\noexpand\value{#1}%
7131   }%
7132 }

```

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

```

7133 </package>
7134 <*check>
7135 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7136 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7137   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7138     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7139       \@addtoreset{#2}{#3}%
7140       \exp\xdef\csname the#2\endcsname{%
7141         \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7142       }%
7143     }%
7144   }%

```

```

7145 }%
7146 </check>
7147 <*package>
7148 \Ifpackageloaded{amsmath}{%
7149   \Ifpackagelater{amsmath}{1999/12/14}{%
7150     \renewcommand*{\numberwithin}{3}[\arabic]{%
7151       \Ifundefined{c@#2}{\@nocounterr{#2}}{%
7152         \Ifundefined{c@#3}{\@nocnterr{#3}}{%
7153           \HyOrg@addtoreset{#2}{#3}%
7154           \@xp\xdef\csname the#2\endcsname{%
7155             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7156           }%
7157           \@xp\xdef\csname theH#2\endcsname{%
7158             \@xp\@nx
7159             \csname the\Ifundefined{theH#3}{H#3}\endcsname
7160             .\@nx#1{#2}%
7161           }%
7162         }%
7163       }%
7164     }%
7165   }{%
7166     \Hy@WarningNoLine{%
7167       \string\numberwithin\space of package ‘amsmath’ %
7168       only fixed\MessageBreak
7169       for version 2000/06/06 v2.12 or newer%
7170     }%
7171   }%
7172 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7173 \ifHy@figures
7174   \let\Hy@Gin@setfile\Gin@setfile
7175   \def\Gin@setfile#1#2#3{%
7176     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7177   }%
7178 \fi
7179 \Hy@DisableOption{hyperfigures}

```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the | feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the | specifier for something like boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

This section is poor stuff; it’s open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

7180 \ifHy@hyperindex
7181   \def\HyInd@ParenLeft{({}%
7182   \def\HyInd@ParenRight{)}}%

```

```

7183 \def\hyperindexformat#1#2{%
7184   \let\HyOrg@hyperpage\hyperpage
7185   \let\hyperpage\@firstofone
7186   #1{\HyOrg@hyperpage{#2}}}%
7187   \let\hyperpage\HyOrg@hyperpage
7188 }%
7189 \Hy@nextfalse
7190 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7191 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7192 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7193 \begingroup
7194   \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7195   \lccode'\|/\|=\relax
7196 \lowercase\endgroup
7197 \ifHy@next
7198   \let\HyInd@org@wrindex\@wrindex
7199   \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
7200   \def\HyInd@@wrindex#1#2|#3|#4\{\%
7201     \ifx\|#3\%
7202       \HyInd@org@wrindex{#1}{#2|hyperpage}%
7203     \else
7204       \HyInd@@@wrindex{#1}{#2}#3\%
7205     \fi
7206   }%
7207   \def\HyInd@@@wrindex#1#2#3#4\{\%
7208   \def\Hy@temp@A{#3}%
7209   \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7210     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7211     \relax
7212     \HyInd@org@wrindex{#1}{%
7213       #2|hyperindexformat{/#3#4}%
7214     }%
7215   \else
7216     \ifx\|#4\%
7217       \ifx\Hy@temp@A\HyInd@ParenRight
7218         \HyInd@org@wrindex{#1}{#2|#3}%
7219       \else
7220         \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7221       \fi
7222     \else
7223       \HyInd@org@wrindex{#1}{%
7224         #2|#3hyperindexformat{/#4}%
7225       }%
7226     \fi
7227   \fi
7228 }%
7229 \else
7230   \def\@wrindex#1{\@@wrindex#1||\}%
7231   \def\@@wrindex#1|#2|#3\{\%
7232   \if@files
7233     \ifx\|#2\%
7234       \protected@write\@indexfile{\%
7235         \string\indexentry{#1|hyperpage}{\thepage}%
7236       }%
7237     \else
7238       \HyInd@@@wrindex{#1}#2\%
7239     \fi

```

```

7240 \fi
7241 \endgroup
7242 \@esphack
7243 }%
7244 \def\HyInd@@@wrindex#1#2#3\{\{%
7245 \def\Hy@temp@A{#2}%
7246 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7247 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7248 \relax
7249 \protected@write\@indexfile{\}{\%
7250 \string\indexentry{\%
7251 #1|hyperindexformat{/#2#3}%
7252 }\{thepage}%
7253 }%
7254 \else
7255 \ifx\#3\%
7256 \ifx\Hy@temp@A\HyInd@ParenRight
7257 \protected@write\@indexfile{\}{\%
7258 \string\indexentry{#1|#2}\{thepage}%
7259 }%
7260 \else
7261 \protected@write\@indexfile{\}{\%
7262 \string\indexentry{#1|#2hyperpage}\{thepage}%
7263 }%
7264 \fi
7265 \else
7266 \protected@write\@indexfile{\}{\%
7267 \string\indexentry{\%
7268 #1|#2hyperindexformat{/#3}%
7269 }\{thepage}%
7270 }%
7271 \fi
7272 \fi
7273 }%
7274 \fi
7275 }%
7276 \fi
7277 \Hy@DisableOption{hyperindex}
7278 \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.

```
7279 \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.

```

7280 \def\hyperpage#1{\%
7281 \HyInd@hyperpage#1\nohyperpage}\@nil
7282 }
7283 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{\%
7284 \HyInd@@@hyperpage{#1}%
7285 #2%
7286 \def\Hy@temp{#3}%
7287 \ifx\Hy@temp\@empty
7288 \else
7289 \Hy@ReturnAfterFi{\%
7290 \HyInd@hyperpage#3\@nil

```



```

7291 }%
7292 \fi
7293 }
7294 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7295 \def\@hyperpage#1--#2--#3\{%
7296 \ifx\#2\%
7297 \commahyperpage{#1}%
7298 \else
7299 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7300 \fi
7301 }
7302 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7303 \def\@commahyperpage#1, #2,#3\{%
7304 \ifx\#2\%
7305 \HyInd@pagelink{#1}%
7306 \else
7307 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7308 \fi
7309 }

```

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

```

7310 \def\HyInd@pagelink#1{%
7311 \begingroup
7312 \toks@={}%
7313 \HyInd@removespaces#1 \@nil
7314 \endgroup
7315 }
7316 \def\HyInd@removespaces#1 #2\@nil{%
7317 \toks@=\expandafter{\the\toks@#1}%
7318 \ifx\#2\%
7319 \edef\x{\the\toks@}%
7320 \ifx\x\@empty
7321 \else
7322 \hyperlink{page.\the\toks@}{\the\toks@}%
7323 \fi
7324 \else
7325 \Hy@ReturnAfterFi{%
7326 \HyInd@removespaces#2\@nil
7327 }%
7328 \fi
7329 }

```

44 Compatibility with foiltex

```

7330 \@ifclassloaded{foils}{%
7331 \providecommand*\ext@table{lot}%
7332 \providecommand*\ext@figure{lof}%
7333 }{}

```

45 Compatibility with seminar slide package

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

```

7334 \@ifclassloaded{seminar}{%
7335 \Hy@seminarslidetrue\newcommand\theHslide{\arabic{slide}}%

```

```

7336 }{%
7337   \Hy@seminarslidesfalse
7338 }
7339 \@ifpackageloaded{slidesec}{%
7340   \newcommand\theHslidesection {\arabic{slidesection}}%
7341   \newcommand\theHslidesubsection{%
7342     \theHslidesection.\arabic{slidesubsection}%
7343   }%
7344   \def\slide@heading[#1]#2{%
7345     \H@refstepcounter{slidesection}%
7346     \@addtoreset{slidesubsection}{slidesection}%
7347     \addtocontents{los}{%
7348       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7349       {\@SCTR}{\slideheading.\theslidesection}%
7350     }%
7351     \def\Hy@tempa{#2}%
7352     \ifx\Hy@tempa\@empty
7353     \else
7354       {%
7355         \edef\@currentlabel{%
7356           \csname p@slidesection\endcsname\theslidesection
7357         }%
7358         \makeslideheading{#2}%
7359       }%
7360     \fi
7361     \gdef\theslideheading{#1}%
7362     \gdef\theslidesubheading{}%
7363     \ifHy@bookmarksnumbered
7364       \def\Hy@slidetitle{\theslidesection\space #1}%
7365     \else
7366       \def\Hy@slidetitle{#1}%
7367     \fi
7368     \ifHy@hypertexnames
7369       \ifHy@naturalnames
7370         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7371         \Hy@writebookmark
7372           {\theslidesection}%
7373           {\Hy@slidetitle}%
7374           {slideheading.\theslidesection}%
7375           {1}%
7376           {toc}%
7377       \else
7378         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7379         \Hy@writebookmark
7380           {\theslidesection}%
7381           {\Hy@slidetitle}%
7382           {slideheading.\theHslidesection}%
7383           {1}%
7384           {toc}%
7385       \fi
7386     \else
7387       \Hy@GlobalStepCount\Hy@linkcounter
7388       \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7389       \Hy@writebookmark
7390         {\theslidesection}%
7391         {\Hy@slidetitle}%
7392         {slideheading.\the\Hy@linkcounter}%

```

```

7393 {1}%
7394 {toc}%
7395 \fi
7396 }%
7397 \def\slide@subheading[#1]#2{%
7398 \H@refstepcounter{slidesubsection}%
7399 \addtocontents{los}{%
7400 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7401 {\@SCTR}{slideheading.\theslidesubsection}%
7402 }%
7403 \def\Hy@tempa{#2}%
7404 \ifx\Hy@tempa\@empty
7405 \else
7406 {%
7407 \edef\@currentlabel{%
7408 \csname p@slidesubsection\endcsname\theslidesubsection
7409 }%
7410 \makeslidesubheading{#2}%
7411 }%
7412 \fi
7413 \gdef\theslidesubheading{#1}%
7414 \ifHy@bookmarksnumbered
7415 \def\Hy@slidetitle{\theslidesubsection\space #1}%
7416 \else
7417 \def\Hy@slidetitle{#1}%
7418 \fi
7419 \ifHy@hypertextnames
7420 \ifHy@naturalnames
7421 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7422 \Hy@writebookmark
7423 {\theslidesubsection}%
7424 {\Hy@slidetitle}%
7425 {slideheading.\theslidesubsection}%
7426 {2}%
7427 {toc}%
7428 \else
7429 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7430 \Hy@writebookmark
7431 {\theslidesubsection}%
7432 {\Hy@slidetitle}%
7433 {slideheading.\theHslidesubsection}%
7434 {2}%
7435 {toc}%
7436 \fi
7437 \else
7438 \Hy@GlobalStepCount\Hy@linkcounter
7439 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7440 \Hy@writebookmark
7441 {\theslidesubsection}%
7442 {\Hy@slidetitle}%
7443 {slideheading.\the\Hy@linkcounter}%
7444 {1}%
7445 {toc}%
7446 \fi
7447 }%
7448 \providecommand*{\listslidenam}{List of Slides}%
7449 \def\listofslides{%

```

```

7450 \section*{%
7451 \listslidenam
7452 \@mkboth{%
7453 \expandafter\MakeUppercase\listslidenam
7454 }{%
7455 \expandafter\MakeUppercase\listslidenam
7456 }%
7457 }%
7458 \def\l@slide##1##2##3##4{%
7459 \slide@undottedcline{%
7460 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7461 }{%
7462 }%
7463 \let\l@subslide\l@slide
7464 \@startlos
7465 }%
7466 \def\slide@contents{%
7467 \def\l@slide##1##2##3##4{%
7468 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7469 }%
7470 \let\l@subslide\@gobblefour
7471 \@startlos
7472 }%
7473 \def\Slide@contents{%
7474 \def\l@slide##1##2##3##4{%
7475 \ifcase\lslide@flag
7476 \message{##1 ** \the\c@slidesection}%
7477 \ifnum##1>\c@slidesection
7478 \def\lslide@flag{1}%
7479 {%
7480 \large
7481 \slide@ccline{%
7482 \slidenumberline{$\Rightarrow\bullet$}%
7483 {\hyperlink{##4}{##2}}}%
7484 }{##3}%
7485 }%
7486 \else
7487 {%
7488 \large
7489 \slide@ccline{%
7490 \slidenumberline{$\surd\;\bullet$}%
7491 {\hyperlink{##4}{##2}}}%
7492 }{##3}%
7493 }%
7494 \fi
7495 \or
7496 \def\lslide@flag{2}%
7497 {%
7498 \large
7499 \slide@ccline{%
7500 \slidenumberline{$\bullet$}%
7501 {\hyperlink{##4}{##2}}}%
7502 }{##3}%
7503 }%
7504 \or
7505 {%
7506 \large

```

```

7507      \slide@cline{%
7508      \slidenumberline{${\bullet}$}%
7509      {\hyperlink{##4}{##2}}}%
7510      }{##3}%
7511      }%
7512      \fi
7513      }%
7514      \def\l@subslide##1##2##3##4{%
7515      \ifnum\lslide@flag=1 %
7516      \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
7517      \fi
7518      }%
7519      \def\lslide@flag{0}%
7520      \@startlos
7521      }%
7522      }{}

```

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.)

```

7523 \ifHy@texht
7524   \expandafter\endinput
7525 \fi
7526 \let\real@setref\@setref
7527 \def\@setref#1#2#3{% csname, extract group, refname
7528   \ifx#1\relax
7529     \protect\G@refundefinedtrue
7530     \nfss@text{\reset@font\bfseries ??}%
7531     \@latex@warning{%
7532       Reference ‘#3’ on page \thepage \space undefined%
7533     }%
7534   \else
7535     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7536   \fi
7537 }

```

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

```

7538 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7539   \begingroup
7540   \toks0={\hyper@@link{#5}{#4}}%
7541   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7542   \edef\x{\endgroup
7543     \the\toks0 {\the\toks1 }%
7544   }%
7545   \x
7546 }
7547 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7548   \ifx#1\relax
7549     \protect\G@refundefinedtrue
7550     \nfss@text{\reset@font\bfseries ??}%
7551     \@latex@warning{%
7552       Reference ‘#3’ on page \thepage \space undefined%
7553     }%
7554   \else
7555     \protect\hyper@@link
7556     {\expandafter\@fifthoffive#1}%
7557     {page.\expandafter\@secondoffive#1}%

```

```

7558     {\expandafter\@secondoffive#1}%
7559   \fi
7560 }

7561 \</package>
7562 \<*check>
7563 \checklatex
7564 \checkcommand\def\@setref#1#2#3{%
7565   \ifx#1\relax
7566     \protect\G@refundefinedtrue
7567     \nfss@text{\reset@font\bfseries ??}%
7568     \@latex@warning{%
7569       Reference '#3' on page \thepage\space undefined%
7570     }%
7571   \else
7572     \expandafter#2#1\null
7573   \fi
7574 }
7575 \</check>
7576 \<*package>

```

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

```

7577 \def\HyRef@StarSetRef#1{%
7578   \begingroup
7579   \Hy@safe@activetrue
7580   \edef\x{#1}%
7581   \@onelevel@sanitize\x
7582   \edef\x{\endgroup
7583     \noexpand\HyRef@@StarSetRef
7584     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7585   }%
7586   \x
7587 }
7588 \def\HyRef@@StarSetRef#1#2#3{%
7589   \ifx#1\@undefined
7590     \let#1\relax
7591   \fi
7592   \real@setref#1#3{#2}%
7593 }
7594 \def\@refstar#1{%
7595   \HyRef@StarSetRef{#1}\@firstoffive
7596 }
7597 \def\@pagerefstar#1{%
7598   \HyRef@StarSetRef{#1}\@secondoffive
7599 }
7600 \def\@namerefstar#1{%
7601   \HyRef@StarSetRef{#1}\@thirdoffive
7602 }
7603 \Hy@AtBeginDocument{%
7604   \@ifpackageloaded{varioref}{%
7605     \def\@Refstar#1{%
7606       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7607     }%
7608     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7609       \MakeUppercase#1%
7610     }%
7611     \DeclareRobustCommand*\Ref}{%

```

```

7612 \@ifstar\@Refstar\HyRef@Ref
7613 }%
7614 \def\HyRef@Ref#1{%
7615 \hyperref[#1]{\Ref*{#1}}%
7616 }%
7617 \def\vr@f#1{%
7618 \leavevmode\unskip\vref@space
7619 \hyperref[#1]{%
7620 \Ref*{#1}%
7621 \let\vref@space\nobreakspace
7622 \@vpageref\unskip}{#1}%
7623 }%
7624 }%
7625 \def\vr@f#1{%
7626 \leavevmode\unskip\vref@space
7627 \begingroup
7628 \let\T@pageref\@pagerefstar
7629 \hyperref[#1]{%
7630 \ref*{#1}%
7631 \vpageref\unskip}{#1}%
7632 }%
7633 \endgroup
7634 }%
7635 }{}%
7636 }
7637 \DeclareRobustCommand*\autopageref{%
7638 \@ifstar{%
7639 \HyRef@autopagerefname\pageref*%
7640 }\HyRef@autopageref
7641 }
7642 \def\HyRef@autopageref#1{%
7643 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
7644 }
7645 \def\HyRef@autopagerefname{%
7646 \ltx@ifundefined{pageautorefname}{%
7647 \ltx@ifundefined{pagename}{%
7648 \Hy@Warning{No autoref name for 'page'}%
7649 }{%
7650 \pagename\nobreakspace
7651 }%
7652 }{}%
7653 \pageautorefname\nobreakspace
7654 }%
7655 }
7656 \DeclareRobustCommand*\autoref{%
7657 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7658 }
7659 \def\HyRef@autoref#1#2{%
7660 \begingroup
7661 \Hy@safe@activetrue
7662 \expandafter\HyRef@autosetref\csize r@#2\endcsname{#2}{#1}%
7663 \endgroup
7664 }
7665 \def\HyRef@autosetref#1#2#3{% link command, csize, refname
7666 \HyRef@ShowKeysRef{#2}%
7667 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7668 \edef\HyRef@thisref{%

```

```

7669 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7670 }%
7671 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7672 \Hy@safe@activesfalse
7673 #3{%
7674 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7675 }{%
7676 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7677 }{%
7678 \HyRef@currentHtag
7679 \expandafter\@firstoffive#1\@empty\@empty\@empty
7680 \null
7681 }%
7682 \else
7683 \protect\G@refundefinedtrue
7684 \nfss@text{\reset@font\bfseries ??}%
7685 \@latex@warning{%
7686 Reference '#2' on page \thepage\space undefined%
7687 }%
7688 \fi
7689 }
7690 \def\HyRef@testreftype#1.#2\.{%
7691 \ltx@ifundefined{#1autorefname}{%
7692 \ltx@ifundefined{#1name}{%
7693 \HyRef@StripStar#1\*\@nil{#1}%
7694 \ltx@ifundefined{\HyRef@name autorefname}{%
7695 \ltx@ifundefined{\HyRef@name name}{%
7696 \def\HyRef@currentHtag{%
7697 \Hy@Warning{No autoref name for '#1'}%
7698 }{%
7699 \edef\HyRef@currentHtag{%
7700 \expandafter\noexpand\csname\HyRef@name name\endcsname
7701 \noexpand~%
7702 }%
7703 }%
7704 }{%
7705 \edef\HyRef@currentHtag{%
7706 \expandafter\noexpand
7707 \csname\HyRef@name autorefname\endcsname
7708 \noexpand~%
7709 }%
7710 }%
7711 }{%
7712 \edef\HyRef@currentHtag{%
7713 \expandafter\noexpand\csname#1name\endcsname
7714 \noexpand~%
7715 }%
7716 }%
7717 }{%
7718 \edef\HyRef@currentHtag{%
7719 \expandafter\noexpand\csname#1autorefname\endcsname
7720 \noexpand~%
7721 }%
7722 }%
7723 }
7724 \def\HyRef@StripStar#1*\#2\@nil#3{%
7725 \def\HyRef@name{#2}%

```



```

7726 \ifx\HyRef@name\HyRef@CaseStar
7727 \def\HyRef@name{#1}%
7728 \else
7729 \def\HyRef@name{#3}%
7730 \fi
7731 }
7732 \def\HyRef@CaseStar{*\\}
7733 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7734 \let\HyRef@ShowKeysRef\@gobble
7735 \def\HyRef@ShowKeysInit{%
7736 \begingroup\expandafter\expandafter\expandafter\endgroup
7737 \expandafter\ifx\csname SK@@label\endcsname\relax
7738 \else
7739 \ifx\SK@ref\@empty
7740 \else
7741 \def\HyRef@ShowKeysRef{%
7742 \SK@\SK@\@ref
7743 }%
7744 \fi
7745 \fi
7746 }
7747 \@ifpackageloaded{showkeys}{%
7748 \HyRef@ShowKeysInit
7749 }{%
7750 \Hy@AtBeginDocument{%
7751 \@ifpackageloaded{showkeys}{%
7752 \HyRef@ShowKeysInit
7753 }{}%
7754 }%
7755 }

```

Defaults for the names that \autoref uses.

```

7756 \providecommand*\AMSautorefname{\equationautorefname}
7757 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7758 \providecommand*\Itemautorefname{\itemautorefname}
7759 \providecommand*\itemautorefname{item}
7760 \providecommand*\equationautorefname{Equation}
7761 \providecommand*\footnoteautorefname{footnote}
7762 \providecommand*\itemautorefname{item}
7763 \providecommand*\figureautorefname{Figure}
7764 \providecommand*\tableautorefname{Table}
7765 \providecommand*\partautorefname{Part}
7766 \providecommand*\appendixautorefname{Appendix}
7767 \providecommand*\chapterautorefname{chapter}
7768 \providecommand*\sectionautorefname{section}
7769 \providecommand*\subsectionautorefname{subsection}
7770 \providecommand*\subsubsectionautorefname{subsubsection}
7771 \providecommand*\paragraphautorefname{paragraph}
7772 \providecommand*\subparagraphautorefname{subparagraph}
7773 \providecommand*\FancyVerbLineautorefname{line}
7774 \providecommand*\theoremautorefname{Theorem}
7775 \providecommand*\pageautorefname{page}
7776 \</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`.

```
7777 <*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7778 \RequirePackage{pdfTEXcmds}[2009/04/10]
7779 \begingroup\expandafter\expandafter\expandafter\endgroup
7780 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7781 \begingroup
7782 \catcode'\| =0 %
7783 \@makeother\| %
7784 |@firstofone{ |endgroup
7785 |def|Hy@pstringdef#1#2{%
7786 |begingroup
7787 |edef~{|string~}%
7788 |xdef|Hy@gtemp{#2}%
7789 |endgroup
7790 |let#1|Hy@gtemp
7791 |@onelevel@sanitize#1%
7792 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7793 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7794 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7795 }%
7796 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7797 #1%
7798 |ifx|\#2\| %
7799 |else
7800 \| %
7801 |Hy@ReturnAfterFi{%
7802 |Hy@ExchangeBackslash#2|@nil
7803 }%
7804 |fi
7805 }%
7806 }%
7807 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7808 #1%
7809 \ifx\#2\| %
7810 \else
7811 \@backslashchar(%
7812 \Hy@ReturnAfterFi{%
7813 \Hy@ExchangeLeftParenthesis#2\@nil
7814 }%
7815 \fi
7816 }%
7817 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7818 #1%
7819 \ifx\#2\| %
7820 \else
7821 \@backslashchar)%
7822 \Hy@ReturnAfterFi{%
```

```

7823     \Hy@ExchangeRightParenthesis#2\@nil
7824   }%
7825   \fi
7826 }%
7827 \else
7828   \def\Hy@pstringdef#1#2{%
7829     \begingroup
7830     \edef~{\string~}%
7831     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7832     \endgroup
7833     \let#1\Hy@gtemp
7834   }%
7835 \fi
7836 \ifpdf | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)

```

46.2 pdftex

```

7837 <*pdftex>
7838 \providecommand*{\XR@ext}{pdf}
7839 \Hy@setbreaklinks{true}

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-081: `\pdfminorversion`

```

7840 \let\Hy@pdfminorversion\relax
7841 \begingroup\expandafter\expandafter\expandafter\endgroup
7842 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7843   \begingroup\expandafter\expandafter\expandafter\endgroup
7844   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7845     \else
7846       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7847     \fi
7848   \else
7849     \def\Hy@pdfminorversion{\pdfminorversion}%
7850   \fi
7851 \ifundefined{Hy@pdfminorversion}{%
7852   \PackageInfo{hyperref}{%
7853     PDF version is not set, because pdfTeX is too old (<1.10a)%
7854   }%
7855 }{%
7856   \ifHy@ocgcolorlinks
7857     \ifnum\Hy@pdfminorversion<5 %
7858       \setkeys{Hyp}{pdfversion=1.5}%
7859     \fi
7860   \fi
7861   \ifHy@setpdfversion
7862     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7863   \else
7864     \Hy@pdfminorversion=\Hy@pdfversion\relax
7865   \fi
7866   \PackageInfo{hyperref}{%
7867     \expandafter\string\Hy@pdfminorversion
7868     :=\number\Hy@pdfversion\space

```

```

7869 }%
7870 \fi
7871 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7872 }
7873 \Hy@DisableOption{pdfversion}%
7874 \ifHy@ocgcolorlinks
7875 \immediate\pdfobj{%
7876 <<%
7877 /Type/OCG%
7878 /Name(View)%
7879 /Usage<<%
7880 /Print<<%
7881 /PrintState/OFF%
7882 >>%
7883 /View<<%
7884 /ViewState/ON%
7885 >>%
7886 >>%
7887 >>%
7888 }%
7889 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7890 \immediate\pdfobj{%
7891 <<%
7892 /Type/OCG%
7893 /Name(Print)%
7894 /Usage<<%
7895 /Print<<%
7896 /PrintState/ON%
7897 >>%
7898 /View<<%
7899 /ViewState/OFF%
7900 >>%
7901 >>%
7902 >>%
7903 }%
7904 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7905 \immediate\pdfobj{%
7906 [%
7907 \OBJ@OCG@view\space\OBJ@OCG@print
7908 ]%
7909 }%
7910 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7911 \pdfcatalog{%
7912 /OCProperties<<%
7913 /OCGs \OBJ@OCGs
7914 /D<<%
7915 /OFF[\OBJ@OCG@print]%
7916 /AS[%
7917 <<%
7918 /Event/View%
7919 /OCGs \OBJ@OCGs
7920 /Category[/View]%
7921 >>%
7922 <<%
7923 /Event/Print%
7924 /OCGs \OBJ@OCGs
7925 /Category[/Print]%

```

```

7926      >>%
7927      <<%
7928      /Event/Export%
7929      /OCGs \OBJ@OCGs
7930      /Category[/Print]%
7931      >>%
7932      ]%
7933      >>%
7934      >>%
7935      }%
7936      \beginpgroup
7937      \edef\x{\endpgroup
7938      \pdfpageresources{%
7939      /Properties<<%
7940      /OCView \OBJ@OCG@view
7941      /OCPrint \OBJ@OCG@print
7942      >>%
7943      }%
7944      }%
7945      \x
7946      \Hy@AtBeginDocument{%
7947      \def\Hy@colorlink#1{%
7948      \beginpgroup
7949      \ifHy@ocgcolorlinks
7950      \def\Hy@ocgcolor{#1}%
7951      \setbox0=\color@hbox
7952      \else
7953      \HyColor@UseColor#1%
7954      \fi
7955      }%
7956      \def\Hy@endcolorlink{%
7957      \ifHy@ocgcolorlinks
7958      \color@endbox
7959      \mbox{%
7960      \pdfliteral page{/OC/OCPrint BDC}%
7961      \rlap{\copy0}%
7962      \pdfliteral page{EMC/OC/OCView BDC}%
7963      \beginpgroup
7964      \expandafter\HyColor@UseColor\Hy@ocgcolor
7965      \box0 %
7966      \endpgroup
7967      \pdfliteral page{EMC}%
7968      }%
7969      \fi
7970      \endpgroup
7971      }%
7972      }%
7973      \else
7974      \Hy@DisableOption{ocgcolorlinks}%
7975      \fi

```

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

```

7976 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7977 \ifx\pdfstartlink\@undefined% less than version 14
7978 \let\pdfstartlink\pdfannotlink
7979 \let\pdfinkmargin\@tempdima
7980 \let\pdfxform\pdfform
7981 \let\pdflastxform\pdfastform

```

```

7982 \let\pdfrefxform\pdfrefform
7983 \else
7984 \pdflinkmargin1pt %
7985 \fi

```

First set up the default linking

```
7986 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7987 \def\new@pdfink#1{%
7988 \Hy@SaveLastskip
7989 \Hy@VerboseAnchor{#1}%
7990 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7991 \Hy@DestName\Hy@pstringDest\@pdfview
7992 \Hy@RestoreLastskip
7993 }
7994 \let\pdf@endanchor\@empty

```

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

```

7995 \def\Hy@DestName#1#2{%
7996 \pdfdest name{#1}#2\relax
7997 }

```

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.

```

7998 \providecommand*\@pdfborder{0 0 1}
7999 \providecommand*\@pdfborderstyle{}
8000 \def\Hy@undefinedname{UNDEFINED}
8001 \def\find@pdfink#1#2{%
8002 \leavevmode
8003 \protected@edef\Hy@testname{#2}%
8004 \ifx\Hy@testname\@empty
8005 \Hy@Warning{%
8006 Empty destination name,\MessageBreak
8007 using '\Hy@undefinedname'%
8008 }%
8009 \let\Hy@testname\Hy@undefinedname
8010 \else
8011 \Hy@pstringdef\Hy@testname{%
8012 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8013 }%
8014 \fi
8015 \Hy@StartlinkName{%
8016 \ifHy@pdfa /F 4\fi
8017 \Hy@setpdfborder
8018 \ifx\@pdfhighlight\@empty
8019 \else
8020 /H\@pdfhighlight
8021 \fi
8022 \ifx\CurrentBorderColor\relax
8023 \else
8024 /C[\CurrentBorderColor]%
8025 \fi
8026 }\Hy@testname
8027 \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

8028 }
8029 \def\Hy@StartlinkName#1#2{%
8030   \pdfstartlink attr{#1}goto name{#2}\relax
8031 }
8032 \def\close@pdfink{%
8033   \Hy@endcolorlink
8034   \Hy@VerboseLinkStop
8035   \pdfendlink
8036 }
8037 \def\hyper@anchor#1{%
8038   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8039 }
8040 \def\hyper@anchorstart#1{%
8041   \new@pdfink{#1}%
8042   \Hy@activeanchortrue
8043 }
8044 \def\hyper@anchorend{%
8045   \pdf@endanchor
8046   \Hy@activeanchorfalse
8047 }
8048 \def\hyper@linkstart#1#2{%
8049   \Hy@VerboseLinkStart{#1}{#2}%
8050   \ltx@ifundefined{@#1bordercolor}{%
8051     \let\CurrentBorderColor\relax
8052   }{%
8053     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8054   }%
8055   \find@pdfink{#1}{#2}%
8056 }
8057 \def\hyper@linkend{\close@pdfink}
8058 \def\hyper@link#1#2#3{%
8059   \Hy@VerboseLinkStart{#1}{#2}%
8060   \ltx@ifundefined{@#1bordercolor}{%
8061     \let\CurrentBorderColor\relax
8062   }{%
8063     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8064   }%
8065   \find@pdfink{#1}{#2}#3%
8066   \close@pdfink
8067 }
8068 \let\CurrentBorderColor\@linkbordercolor
8069 \def\hyper@linkurl#1#2{%
8070   \begingroup
8071     \Hy@pstringdef\Hy@pstringURI{#2}%
8072     \hyper@chars
8073     \leavevmode
8074     \pdfstartlink
8075       attr{%
8076         \Hy@setpdfborder
8077         \ifx\@pdfhighlight\@empty
8078           \else
8079             /H\@pdfhighlight
8080           \fi
8081         \ifx\@urlbordercolor\relax
8082           \else
8083             /C[\@urlbordercolor]%
8084           \fi

```

```

8085     }%
8086     user{%
8087         /Subtype/Link%
8088         \ifHy@pdfa /F 4\fi
8089         /A<<%
8090         /Type/Action%
8091         /S/URI%
8092         /URI(\Hy@pstringURI)%
8093     >>%
8094     }%
8095     \relax
8096     \Hy@colorlink\@urlcolor#1%
8097     \close@pdflink
8098     \endgroup
8099 }
8100 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8101     \begingroup
8102     \Hy@pstringdef\Hy@pstringF{#2}%
8103     \Hy@pstringdef\Hy@pstringD{#3}%
8104     \leavevmode
8105     \pdfstartlink
8106     attr{%
8107         \Hy@setpdfborder
8108         \ifx\@pdfhighlight\@empty
8109             \else
8110                 /H\@pdfhighlight
8111             \fi
8112         \ifx\@filebordercolor\relax
8113             \else
8114                 /C[\@filebordercolor]%
8115             \fi
8116     }%
8117     user {%
8118         /Subtype/Link%
8119         \ifHy@pdfa /F 4\fi
8120         /A<<%
8121         /F(\Hy@pstringF)%
8122         /S/GoToR%
8123         \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}

```

```

8124     \ifx\#3\%
8125         /D[0 \@pdfstartview]%
8126     \else
8127         /D(\Hy@pstringD)%
8128     \fi
8129     >>%
8130     }%

```



```

8131 \relax
8132 \Hy@colorlink\@filecolor#1%
8133 \close@pdflink
8134 \endgroup
8135 }
8136 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
8137 \begingroup
8138 \Hy@pstringdef\Hy@pstringF{#1}%
8139 \Hy@pstringdef\Hy@pstringP{#3}%
8140 \leavevmode
8141 \pdfstartlink
8142 attr{%
8143 \Hy@setpdfborder
8144 \ifx\@pdfhighlight\@empty
8145 \else
8146 /H\@pdfhighlight
8147 \fi
8148 \ifx\@runbordercolor\relax
8149 \else
8150 /C[\@runbordercolor]%
8151 \fi
8152 }%
8153 user {%
8154 /Subtype/Link%
8155 \ifHy@pdfa /F 4\fi
8156 /A<<%
8157 /F(\Hy@pstringF)%
8158 /S/Launch%
8159 \Hy@SetNewWindow
8160 \ifx\|#3\|%
8161 \else
8162 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8163 \fi
8164 >>%
8165 }%
8166 \relax
8167 \Hy@colorlink\@runcolor#2%
8168 \close@pdflink
8169 \endgroup
8170 }

```

\@pdfproducer

```

8171 \ifx\@pdfproducer\relax
8172 \begingroup\expandafter\expandafter\expandafter\endgroup
8173 \expandafter\ifx\csname luatexversion\endcsname\relax
8174 \def\@pdfproducer{pdfTeX}%
8175 \ifx\eTeXversion\@undefined
8176 \else
8177 \ifx\eTeXversion\relax
8178 \else
8179 \ifnum\eTeXversion>0 %
8180 \def\@pdfproducer{pdfTeX}%
8181 \fi
8182 \fi
8183 \fi
8184 \ifx\pdfTeXversion\@undefined
8185 \else

```

```

8186 \ifnum\pdfTeXversion<100 %
8187 \edef\@pdfproducer{%
8188 \@pdfproducer
8189 \the\pdfTeXversion.\pdfTeXrevision
8190 }%
8191 \else
8192 \ifnum\pdfTeXversion<130 %
8193 \edef\@pdfproducer{%
8194 \@pdfproducer-%
8195 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8196 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8197 \pdfTeXrevision
8198 }%
8199 \else
8200 \ifnum\pdfTeXversion<140 %
8201 \else
8202 \def\@pdfproducer{pdfTeX}%
8203 \fi
8204 \edef\@pdfproducer{%
8205 \@pdfproducer-%
8206 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8207 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8208 \pdfTeXrevision
8209 }%
8210 \fi
8211 \fi
8212 \fi
8213 \else
8214 \begingroup
8215 \count@=\luaTeXversion
8216 \divide\count@ by 100 %
8217 \edef\x{\the\count@}%
8218 \count@=-\x\relax
8219 \multiply\count@ by 100 %
8220 \advance\count@ by \luaTeXversion
8221 \edef\x{\endgroup
8222 \def\noexpand\@pdfproducer{%
8223 LuaTeX-\x.\the\count@.\luaTeXrevision
8224 }%
8225 }%
8226 \x
8227 \fi
8228 \fi

```

\PDF@SetupDox

```

8229 \def\PDF@SetupDoc{%
8230 \ifx\@pdfpagescrop\@empty
8231 \else
8232 \edef\process@me{%
8233 \pdfpagesattr={%
8234 /CropBox[\@pdfpagescrop]%
8235 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8236 \else
8237 ^^J\the\pdfpagesattr
8238 \fi
8239 }%
8240 }%

```

```

8241 \process@me
8242 \fi
8243 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8244 \pdfcatalog{%
8245 /PageMode/\@pdfpagemode
8246 \ifx\@baseurl\@empty
8247 \else
8248 /URI<</Base(\Hy@pstringB)>>%
8249 \fi
8250 }%
8251 \ifx\@pdfstartpage\@empty
8252 \else
8253 \ifx\@pdfstartview\@empty
8254 \else
8255 openaction goto page\@pdfstartpage{\@pdfstartview}%
8256 \fi
8257 \fi
8258 \edef\Hy@temp{%
8259 \ifHy@toolbar\else /HideToolbar true\fi
8260 \ifHy@menubar\else /HideMenubar true\fi
8261 \ifHy>windowui\else /HideWindowUI true\fi
8262 \ifHy@fitwindow /FitWindow true\fi
8263 \ifHy@centerwindow /CenterWindow true\fi
8264 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8265 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8266 \Hy@UseNameKey{Direction}\@pdfdirection
8267 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8268 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8269 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8270 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8271 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8272 \Hy@UseNameKey{Duplex}\@pdfduplex
8273 \ifx\@pdfpicktraybypdfsize\@empty
8274 \else
8275 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8276 \fi
8277 \ifx\@pdfprintpagerange\@empty
8278 \else
8279 /PrintPageRange[\@pdfprintpagerange]%
8280 \fi
8281 \ifx\@pdfnumcopies\@empty
8282 \else
8283 /NumCopies \@pdfnumcopies
8284 \fi
8285 }%
8286 \pdfcatalog{%
8287 \ifx\Hy@temp\@empty
8288 \else
8289 /ViewerPreferences<<\Hy@temp>>%
8290 \fi
8291 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8292 \ifx\@pdflang\@empty
8293 \else
8294 /Lang(\@pdflang)%
8295 \fi
8296 }%
8297 }

```

\PDF@FinishDoc

```
8298 \def\PDF@FinishDoc{%
8299   \Hy@UseMaketitleInfos
8300   \HyInfo@GenerateAddons
8301   \pdfinfo{%
8302     /Author(\@pdfauthor)%
8303     /Title(\@pdftitle)%
8304     /Subject(\@pdfsubject)%
8305     /Creator(\@pdfcreator)%
8306     \ifx\@pdfcreationdate\@empty
8307     \else
8308       /CreationDate(\@pdfcreationdate)%
8309     \fi
8310     \ifx\@pdfmoddate\@empty
8311     \else
8312       /ModDate(\@pdfmoddate)%
8313     \fi
8314     \ifx\@pdfproducer\relax
8315     \else
8316       /Producer(\@pdfproducer)%
8317     \fi
8318     /Keywords(\@pdfkeywords)%
8319     \ifx\@pdftrapped\@empty
8320     \else
8321       /Trapped/\@pdftrapped
8322     \fi
8323     \HyInfo@Addons
8324   }%
8325   \Hy@DisableOption{pdfauthor}%
8326   \Hy@DisableOption{pdftitle}%
8327   \Hy@DisableOption{pdfsubject}%
8328   \Hy@DisableOption{pdfcreator}%
8329   \Hy@DisableOption{pdfcreationdate}%
8330   \Hy@DisableOption{pdfmoddate}%
8331   \Hy@DisableOption{pdfproducer}%
8332   \Hy@DisableOption{pdfkeywords}%
8333   \Hy@DisableOption{pdftrapped}%
8334   \Hy@DisableOption{pdfinfo}%
8335 }
```

\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.

```
8336 \def\hyper@pagetransition{%
8337   \ifx\@pdfpagetransition\relax
8338   \else
8339     \expandafter\Hy@RemoveTransPageAttr
8340     \the\pdfpageattr^^J/Trans{}}>>\END
8341   \ifx\@pdfpagetransition\@empty
8342   \else
8343     \edef\@processme{%
8344       \global\pdfpageattr{%
8345         \the\pdfpageattr
8346         ^^J/Trans << /S /\@pdfpagetransition\space >>%
8347       }%
8348     }%
8349     \@processme
```

```

8350   \fi
8351   \fi
8352 }

```

`\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.

```

8353 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8354   \ifx\#2\%
8355     \global\pdfpageattr{#1}%
8356   \else
8357     \Hy@RemoveTransPageAttr#1#4\END
8358   \fi
8359 }

```

`\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`.

```

8360 \def\hyper@pageduration{%
8361   \ifx\@pdfpageduration\relax
8362   \else
8363     \expandafter
8364     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
8365     \ifx\@pdfpageduration\@empty
8366     \else
8367       \edef\@processme{%
8368         \global\pdfpageattr{%
8369           \the\pdfpageattr
8370           ^^J/Dur \@pdfpageduration\space
8371         }%
8372       }%
8373       \@processme
8374     \fi
8375   \fi
8376 }

```

`\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.

```

8377 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8378   \ifx\#2\%
8379     \global\pdfpageattr{#1}%
8380   \else
8381     \Hy@RemoveDurPageAttr#1#4\END
8382   \fi
8383 }

```

`\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).

```

8384 \def\hyper@pagehidden{%
8385   \ifHy@useHidKey
8386   \expandafter
8387   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END

```

```

8388 \ifHy@pdfpagehidden
8389 \edef\@processme{%
8390 \global\pdfpageattr{%
8391 \the\pdfpageattr
8392 ^^J/Hid true % SPACE
8393 }%
8394 }%
8395 \@processme
8396 \fi
8397 \fi
8398 }

```

`\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.

```

8399 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8400 \ifx\#2\%
8401 \global\pdfpageattr{#1}%
8402 \else
8403 \Hy@RemoveHidPageAttr#1#4\END
8404 \fi
8405 }

8406 \g@addto@macro\Hy@EveryPageHook{%
8407 \hyper@pagetransition
8408 \hyper@pageduration
8409 \hyper@pagehidden
8410 }

```

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

```

8411 </pdfTeX>
8412 <*pdfTeX | xetex>
8413 \Hy@AtBeginDocument{%
8414 \ifHy@setpagesize
8415 \expandafter\@firstofone
8416 \else
8417 \expandafter\@gobble
8418 \fi
8419 {%
8420 \@ifclassloaded{seminar}{%
8421 <*pdfTeX>
8422 \setlength{\pdfhorigin}{1truein}%
8423 \setlength{\pdfvorigin}{1truein}%
8424 </pdfTeX>
8425 \ifportrait
8426 \ifdim\paperwidth=\z@
8427 \else
8428 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8429 \fi
8430 \ifdim\paperheight=\z@
8431 \else
8432 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8433 \fi
8434 \else
8435 \ifdim\paperheight=\z@
8436 \else

```

```

8437     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8438     \fi
8439     \ifdim\paperwidth=\z@
8440     \else
8441     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8442     \fi
8443     \fi
8444   }{%
8445     \ltx@ifundefined{stockwidth}{%
8446     \ifdim\paperwidth>\z@
8447     \setlength{\pdfpagewidth}{\paperwidth}%
8448     \fi
8449     \ifdim\paperheight>\z@
8450     \setlength{\pdfpageheight}{\paperheight}%
8451     \fi
8452   }{%
8453     \ifdim\stockwidth>\z@
8454     \setlength{\pdfpagewidth}{\stockwidth}%
8455     \fi
8456     \ifdim\stockheight>\z@
8457     \setlength{\pdfpageheight}{\stockheight}%
8458     \fi
8459   }%
8460 }%
8461 }%
8462 \Hy@DisableOption{setpagesize}%
8463 }
8464 </pdfTeX | xetex>
8465 <*pdfTeX>
8466 \def\Acrobatmenu#1#2{%
8467   \Hy@Acrobatmenu{#1}{#2}{%
8468     \pdfstartlink
8469     attr{%
8470       \Hy@setpdfborder
8471       \ifx\@pdfhighlight\@empty
8472       \else
8473       /H\@pdfhighlight
8474       \fi
8475       \ifx\@menubordercolor\relax
8476       \else
8477       /C[\@menubordercolor]%
8478       \fi
8479     }%
8480     user{%
8481       /Subtype/Link%
8482       \ifHy@pdfa /F 4\fi
8483       /A<<%
8484       /S/Named/N/#1%
8485       >>%
8486     }%
8487     \relax
8488     \Hy@colorlink\@menucolor#2%
8489     \close@pdfink
8490   }%
8491 }

```

46.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_T_EX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdf_T_EX—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`.

```
8492 \def\Hy@FixNotFirstPage{%
8493   \gdef\Hy@FixNotFirstPage{%
8494     \setbox\AtBeginShipoutBox=\hbox{%
8495       \copy\AtBeginShipoutBox
8496     }%
8497   }%
8498 }
8499 \AtBeginShipout{\Hy@FixNotFirstPage}
8500 \</pdfTeX>
```

46.3 hypertex

The Hyper_T_EX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the _T_EX file — the _T_EX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (`\`), and if it looks like a URL name it may cause problems.

```
8501 \<*hypertex>
8502 \providecommand*{\XR@ext}{dvi}
8503 \def\PDF@FinishDoc{}
8504 \def\PDF@SetupDoc{%
```



```

8505 \ifx\@baseurl\@empty
8506 \else
8507 \special{html:<base href="\@baseurl">}%
8508 \fi
8509 }
8510 \def\hyper@anchor#1{%
8511 \Hy@SaveLastskip
8512 \Hy@VerboseAnchor{#1}%
8513 \begingroup
8514 \let\protect=\string
8515 \hyper@chars
8516 \special{html:<a name=%
8517 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8518 \endgroup
8519 \Hy@activeanchortrue
8520 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8521 \special{html:</a>}%
8522 \Hy@activeanchorfalse
8523 \Hy@RestoreLastskip
8524 }
8525 \def\hyper@anchorstart#1{%
8526 \Hy@SaveLastskip
8527 \Hy@VerboseAnchor{#1}%
8528 \begingroup
8529 \hyper@chars
8530 \special{html:<a name=%
8531 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8532 \endgroup
8533 \Hy@activeanchortrue
8534 }
8535 \def\hyper@anchorend{%
8536 \special{html:</a>}%
8537 \Hy@activeanchorfalse
8538 \Hy@RestoreLastskip
8539 }
8540 \def\@urltype{url}
8541 \def\hyper@linkstart#1#2{%
8542 \Hy@VerboseLinkStart{#1}{#2}%
8543 \expandafter\Hy@colorlink\csname @#1color\endcsname
8544 \def\Hy@tempa{#1}%
8545 \ifx\Hy@tempa\@urltype
8546 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8547 \else
8548 \begingroup
8549 \hyper@chars
8550 \special{html:<a href=%
8551 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
8552 \endgroup
8553 \fi
8554 }
8555 \def\hyper@linkend{%
8556 \special{html:</a>}%
8557 \Hy@endcolorlink
8558 }
8559 \def\hyper@linkfile#1#2#3{%
8560 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8561 }

```

```
8562 \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.

```
8563 \leavevmode
8564 \ifHy@raiselinks
8565 \setbox\@tempboxa=\color@hbox #1\color@endbox
8566 \@linkdim\dp\@tempboxa
8567 \lower\@linkdim\hbox{%
8568   \hyper@chars
8569   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8570 }%
8571 \Hy@colorlink\@urlcolor#1%
8572 \@linkdim\ht\@tempboxa
```

Because of the interaction with the `dvi` processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new `dvi`s (Jan 1997).

```
8573 \advance\@linkdim by -6.5\p@
8574 \raise\@linkdim\hbox{\special{html:</a>}}%
8575 \Hy@endcolorlink
8576 \else
8577 \begingroup
8578   \hyper@chars
8579   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8580   \Hy@colorlink\@urlcolor#1%
8581   \special{html:</a>}%
8582   \Hy@endcolorlink
8583 \endgroup
8584 \fi
8585 }
```

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

```
8586 \def\hyper@link#1#2#3{%
8587   \Hy@VerboseLinkStart{#1}{#2}%
8588   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
8589 }

8590 \def\hyper@image#1#2{%
8591   \begingroup
8592   \hyper@chars
8593   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8594   \endgroup
8595 }
8596 </hypertex>
8597 <*dviwindo>
```

46.4 dviwindo

[This was developed by David Carlisle]. Within a file `dviwindo` hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable) `Dviwindo` could in fact handle external links to `dvi` files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the `hypertex` `cfg`. For `dviwindo`, \LaTeX must specify the size of the active area for links. For some hooks this information is available

but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

8598 \providecommand*{\XR@ext}{dvi}
8599 \providecommand*{\wwwbrowser{c:\string\netscape\string\netscape}
8600 \def\hyper@anchor#1{%
8601   \Hy@SaveLastskip
8602   \Hy@VerboseAnchor{#1}%
8603   \begingroup
8604     \let\protect=\string
8605     \special{mark: #1}%
8606   \endgroup
8607   \Hy@activeanchortrue
8608   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8609   \Hy@activeanchorfalse
8610   \Hy@RestoreLastskip
8611 }
8612 \def\hyper@anchorstart#1{%
8613   \Hy@SaveLastskip
8614   \Hy@VerboseAnchor{#1}%
8615   \special{mark: #1}%
8616   \Hy@activeanchortrue
8617 }
8618 \def\hyper@anchorend{%
8619   \Hy@activeanchorfalse
8620   \Hy@RestoreLastskip
8621 }
8622 \def\hyper@linkstart#1#2{%
8623   \Hy@VerboseLinkStart{#1}{#2}%
8624   \expandafter\Hy@colorlink\csname @#1color\endcsname
8625   \special{button: %
8626     10000000 %
8627     \number\baselineskip\space
8628     #2%
8629   }%
8630 }
8631 \def\hyper@linkend{%
8632   \Hy@endcolorlink
8633 }
8634 \def\hyper@link#1#2#3{%
8635   \Hy@VerboseLinkStart{#1}{#2}%
8636   \setbox\@tempboxa=\color@hbox #3\color@endbox
8637   \leavevmode
8638   \ifHy@raiselinks
8639     \@linkdim\dp\@tempboxa
8640     \lower\@linkdim\hbox{%
8641       \special{button: %
8642         \number\wd\@tempboxa\space
8643         \number\ht\@tempboxa\space
8644         #2%
8645       }%
8646       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8647       \Hy@endcolorlink
8648     }%
8649     \@linkdim\ht\@tempboxa
8650     \advance\@linkdim by -6.5\p@
8651     \raise\@linkdim\hbox{}%
8652   \else

```

```

8653 \special{button: %
8654 \number\wd\@tempboxa\space
8655 \number\ht\@tempboxa\space
8656 #2%
8657 }%
8658 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8659 \Hy@endcolorlink
8660 \fi
8661 }
8662 \def\hyper@linkurl#1#2{%
8663 \begingroup
8664 \hyper@chars
8665 \leavevmode
8666 \setbox\@tempboxa=\color@hbox #1\color@endbox
8667 \ifHy@raiselinks
8668 \@linkdim\dp\@tempboxa
8669 \lower\@linkdim\hbox{%
8670 \special{button: %
8671 \number\wd\@tempboxa\space
8672 \number\ht\@tempboxa\space
8673 launch: \wwwbrowser\space
8674 #2%
8675 }%
8676 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8677 }%
8678 \@linkdim\ht\@tempboxa
8679 \advance\@linkdim by -6.5\p@
8680 \raise\@linkdim\hbox{}}%
8681 \else
8682 \special{button: %
8683 \number\wd\@tempboxa\space
8684 \number\ht\@tempboxa\space
8685 launch: \wwwbrowser\space
8686 #2%
8687 }%
8688 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8689 \fi
8690 \endgroup
8691 }
8692 \def\hyper@linkfile#1#2#3{%
8693 \begingroup
8694 \hyper@chars
8695 \leavevmode
8696 \setbox\@tempboxa=\color@hbox #1\color@endbox
8697 \ifHy@raiselinks
8698 \@linkdim\dp\@tempboxa
8699 \lower\@linkdim\hbox{%
8700 \special{button: %
8701 \number\wd\@tempboxa\space
8702 \number\ht\@tempboxa\space
8703 #3,%
8704 file: #2%
8705 }%
8706 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8707 }%
8708 \@linkdim\ht\@tempboxa
8709 \advance\@linkdim by -6.5\p@

```

```

8710     \raise\@linkdim\hbox{}%
8711   \else
8712     \special{button: %
8713       \number\wd\@tempboxa\space
8714       \number\ht\@tempboxa\space
8715       #3,%
8716       file: #2%
8717     }%
8718     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8719   \fi
8720 \endgroup
8721 }
8722 \ifx\@pdfproducer\relax
8723   \def\@pdfproducer{dviwindo + Distiller}%
8724 \fi
8725 \HyInfo@AddonUnsupportedtrue
8726 \def\PDF@FinishDoc{%
8727   \Hy@UseMaketitleInfos
8728   \HyInfo@TrappedUnsupported
8729   \special{PDF: Keywords \@pdfkeywords}%
8730   \special{PDF: Title \@pdftitle}%
8731   \special{PDF: Creator \@pdfcreator}%
8732   \ifx\@pdfcreationdate\@empty
8733   \else
8734     \special{PDF: CreationDate \@pdfcreationdate}%
8735   \fi
8736   \ifx\@pdfmoddate\@empty
8737   \else
8738     \special{PDF: ModDate \@pdfmoddate}%
8739   \fi
8740   \special{PDF: Author \@pdfauthor}%
8741   \ifx\@pdfproducer\relax
8742   \else
8743     \special{PDF: Producer \@pdfproducer}%
8744   \fi
8745   \special{PDF: Subject \@pdfsubject}%
8746   \Hy@DisableOption{pdfauthor}%
8747   \Hy@DisableOption{pdftitle}%
8748   \Hy@DisableOption{pdfsubject}%
8749   \Hy@DisableOption{pdfcreator}%
8750   \Hy@DisableOption{pdfcreationdate}%
8751   \Hy@DisableOption{pdfmoddate}%
8752   \Hy@DisableOption{pdfproducer}%
8753   \Hy@DisableOption{pdfkeywords}%
8754   \Hy@DisableOption{pdftrapped}%
8755   \Hy@DisableOption{pdfinfo}%
8756 }
8757 \def\PDF@SetupDoc{%
8758   \ifx\@baseurl\@empty
8759   \else
8760     \special{PDF: Base \@baseurl}%
8761   \fi
8762   \ifx\@pdfpagescrop\@empty\else
8763     \special{PDF: BBox \@pdfpagescrop}%
8764   \fi
8765   \def\Hy@temp{}%
8766   \ifx\@pdfstartpage\@empty

```

```

8767 \else
8768 \ifx\@pdfstartview\@empty
8769 \else
8770 \edef\Hy@temp{%
8771 ,Page=\@pdfstartpage
8772 ,View=\@pdfstartview
8773 }%
8774 \fi
8775 \fi
8776 \edef\Hy@temp{%
8777 \noexpand\pdfmark{%
8778 pdfmark=/DOCVIEW,%
8779 PageMode=/\@pdfpagemode
8780 \Hy@temp
8781 }%
8782 }%
8783 \Hy@temp
8784 \ifx\@pdfpagescrop\@empty
8785 \else
8786 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8787 \fi
8788 \edef\Hy@temp{%
8789 \ifHy@toolbar\else /HideToolbar true\fi
8790 \ifHy@menubar\else /HideMenubar true\fi
8791 \ifHy>windowui\else /HideWindowUI true\fi
8792 \ifHy@fitwindow /FitWindow true\fi
8793 \ifHy@centerwindow /CenterWindow true\fi
8794 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8795 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
8796 \Hy@UseNameKey{Direction}\@pdfdirection
8797 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8798 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8799 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8800 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8801 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8802 \Hy@UseNameKey{Duplex}\@pdfduplex
8803 \ifx\@pdfpicktraybypdfsize\@empty
8804 \else
8805 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8806 \fi
8807 \ifx\@pdfprintpagerange\@empty
8808 \else
8809 /PrintPageRange[\@pdfprintpagerange]%
8810 \fi
8811 \ifx\@pdfnumcopies\@empty
8812 \else
8813 /NumCopies \@pdfnumcopies
8814 \fi
8815 }%
8816 \pdfmark{pdfmark=/PUT,%
8817 Raw={%
8818 \string{Catalog\string}<<%
8819 \ifx\Hy@temp\@empty
8820 \else
8821 /ViewerPreferences<<\Hy@temp>>%
8822 \fi
8823 \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```

```

8824 \ifx\@pdflang\@empty
8825 \else
8826 /Lang(\@pdflang)%
8827 \fi
8828 >>%
8829 }%
8830 }%
8831 }
8832 </dviwindo>
8833 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8834 \providecommand*{\XR@ext}{pdf}
8835 \Hy@setbreaklinks{true}
8836 \newsavebox{\pdfm@box}
8837 \def\@pdfm@mark#1{\special{pdf:#1}}
8838 \def\@pdfm@dest#1{%
8839 \Hy@SaveLastskip
8840 \Hy@VerboseAnchor{#1}%
8841 \begingroup
8842 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8843 \def\x{XYZ}%
8844 \ifx\x\@pdfview
8845 \def\x{XYZ @xpos @ypos null}%
8846 \else
8847 \def\x{FitH}%
8848 \ifx\x\@pdfview
8849 \def\x{FitH @ypos}%
8850 \else
8851 \def\x{FitBH}%
8852 \ifx\x\@pdfview
8853 \def\x{FitBH @ypos}%
8854 \else
8855 \def\x{FitV}%
8856 \ifx\x\@pdfview
8857 \def\x{FitV @xpos}%
8858 \else
8859 \def\x{FitBV}%
8860 \ifx\x\@pdfview
8861 \def\x{FitBV @xpos}%
8862 \else
8863 \def\x{Fit}%
8864 \ifx\x\@pdfview
8865 \let\x\@pdfview
8866 \else
8867 \def\x{FitB}%
8868 \ifx\x\@pdfview
8869 \let\x\@pdfview
8870 \else
8871 \def\x{FitR}%
8872 \ifx\x\@pdfview
8873 \Hy@Warning{'pdfview=FitR' is not supported}%
8874 \def\x{XYZ @xpos @ypos null}%
8875 \else
8876 \@onelevel@sanitize\@pdfview

```

```

8877         \Hy@Warning{%
8878             Unknown value '\@pdfview' for pdfview%
8879         }%
8880         \def\x{XYZ @xpos @ypos null}%
8881     \fi
8882 \fi
8883 \fi
8884 \fi
8885 \fi
8886 \fi
8887 \fi
8888 \fi
8889 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8890 \endgroup
8891 \Hy@RestoreLastskip
8892 }
8893 \providecommand*\@pdfview{XYZ}
8894 \providecommand*\@pdfborder{0 0 1}
8895 \providecommand*\@pdfborderstyle{}
8896 \def\hyper@anchor#1{%
8897     \@pdfm@dest{#1}%
8898 }
8899 \def\hyper@anchorstart#1{%
8900     \Hy@activeanchortrue
8901     \@pdfm@dest{#1}%
8902 }
8903 \def\hyper@anchorend{%
8904     \Hy@activeanchorfalse
8905 }
8906 \newcounter{Hy@AnnotLevel}
8907 \ifHy@ocgcolorlinks
8908     \def\OBJ@OCG@view{@OCG@view}%
8909     \@pdfm@mark{%
8910         obj \OBJ@OCG@view <<%
8911         /Type/OCG%
8912         /Name(View)%
8913         /Usage<<%
8914         /Print<<%
8915         /PrintState/OFF%
8916         >>%
8917         /View<<%
8918         /ViewState/ON%
8919         >>%
8920         >>%
8921         >>%
8922     }%
8923     \@pdfm@mark{close \OBJ@OCG@view}%
8924     \def\OBJ@OCG@print{@OCG@print}%
8925     \@pdfm@mark{%
8926         obj \OBJ@OCG@print <<%
8927         /Type/OCG%
8928         /Name(Print)%
8929         /Usage<<%
8930         /Print<<%
8931         /PrintState/ON%
8932         >>%
8933         /View<<%

```



```

8934      /ViewState/OFF%
8935      >>%
8936      >>%
8937      >>%
8938  }%
8939  \@pdfm@mark{close \OBJ@OCG@print}%
8940  \def\OBJ@OCGs{\@OCGs}%
8941  \@pdfm@mark{%
8942    obj \OBJ@OCGs [%
8943      \OBJ@OCG@view\space\OBJ@OCG@print
8944    ]%
8945  }%
8946  \@pdfm@mark{close \OBJ@OCGs}%
8947  \@pdfm@mark{%
8948    put @catalog <<%
8949      /OCProperties<<%
8950      /OCGs \OBJ@OCGs
8951      /D<<%
8952      /OFF[\OBJ@OCG@print]%
8953      /AS[%
8954        <<%
8955          /Event/View%
8956          /OCGs \OBJ@OCGs
8957          /Category[/View]%
8958        >>%
8959        <<%
8960          /Event/Print%
8961          /OCGs \OBJ@OCGs
8962          /Category[/Print]%
8963        >>%
8964        <<%
8965          /Event/Export%
8966          /OCGs \OBJ@OCGs
8967          /Category[/Print]%
8968        >>%
8969      ]%
8970    >>%
8971    >>%
8972    >>%
8973  }%
8974  \AtBeginShipout{%
8975    \setbox\AtBeginShipoutBox=\hbox{%
8976      \copy\AtBeginShipoutBox
8977      \@pdfm@mark{%
8978        put @resources <<%
8979          /Properties<<%
8980          /OCView \OBJ@OCG@view
8981          /OCPrint \OBJ@OCG@print
8982        >>%
8983        >>%
8984      }%
8985    }%
8986  }%
8987  \Hy@AtBeginDocument{%
8988    \def\Hy@colorlink#1{%
8989      \begingroup
8990      \ifHy@ocgcolorlinks

```

```

8991      \def\Hy@ocgcolor{#1}%
8992      \setbox0=\color@hbox
8993      \else
8994      \HyColor@UseColor#1%
8995      \fi
8996  }%
8997  \def\Hy@endcolorlink{%
8998      \ifHy@ocgcolorlinks
8999      \color@endbox
9000      \mbox{%
9001          \@pdfm@mark{content /OC/OCPrint BDC}%
9002          \rlap{\copy0}%
9003          \@pdfm@mark{content EMC/OC/OCView BDC}%
9004          \begingroup
9005              \expandafter\HyColor@UseColor\Hy@ocgcolor
9006              \box0 %
9007          \endgroup
9008          \@pdfm@mark{content EMC}%
9009      }%
9010      \fi
9011      \endgroup
9012  }%
9013  }%
9014  \else
9015      \Hy@DisableOption{ocgcolorlinks}%
9016  \fi

9017  \def\Hy@BeginAnnot#1{%
9018      \stepcounter{Hy@AnnotLevel}%
9019      \ifnum\value{Hy@AnnotLevel}=\@ne
9020          #1%
9021      \fi
9022  }
9023  \def\Hy@endAnnot{%
9024      \ifnum\value{Hy@AnnotLevel}=\@ne
9025          \Hy@endcolorlink
9026          \@pdfm@mark{eann}%
9027      \fi
9028      \addtocounter{Hy@AnnotLevel}\m@ne
9029  }

9030  \def\Hy@undefinedname{UNDEFINED}
9031  \def\hyper@linkstart#1#2{%
9032      \Hy@VerboseLinkStart{#1}{#2}%
9033      \Hy@BeginAnnot{%
9034          \protected@edef\Hy@testname{#2}%
9035          \ifx\Hy@testname\@empty
9036              \Hy@Warning{%
9037                  Empty destination name,\MessageBreak
9038                  using '\Hy@undefinedname'%
9039              }%
9040              \let\Hy@testname\Hy@undefinedname
9041          \else
9042              \Hy@pstringdef\Hy@testname{%
9043                  \expandafter\HyperDestNameFilter\expandafter{%
9044                      \Hy@testname
9045                  }%
9046              }%
9047          \fi

```

```

9048 \pdfmark{mark}%
9049   bann<<%
9050     /Type/Annot%
9051     /Subtype/Link%
9052     \ifHy@pdfa /F 4\fi
9053     \Hy@setpdfborder
9054     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9055     \else
9056       /C[\csname @#1bordercolor\endcsname]%
9057     \fi
9058     /A<<%
9059     /S/GoTo%
9060     /D(\Hy@testname)%
9061     >>%
9062   >>%
9063 }%
9064 \expandafter\Hy@colorlink\csname @#1color\endcsname
9065 }%
9066 }
9067 \def\hyper@linkend{\Hy@EndAnnot}%
9068 \def\hyper@link#1#2#3{%
9069   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9070 }
9071 \def\hyper@linkfile#1#2#3{%
9072   \leavevmode
9073   \Hy@BeginAnnot{%
9074     \Hy@pstringdef\Hy@pstringF{#2}%
9075     \Hy@pstringdef\Hy@pstringD{#3}%
9076     \pdfmark{mark}%
9077     bann<<%
9078       /Type/Annot%
9079       /Subtype/Link%
9080       \ifHy@pdfa /F 4\fi
9081       \Hy@setpdfborder
9082       \ifx\@filebordercolor\relax
9083       \else
9084         /C[\@filebordercolor]%
9085       \fi
9086       /A<<%
9087       /S/GoToR%
9088       /F(\Hy@pstringF)%
9089       /D\ifx\#3\[\[0 \pdfstartview\else(\Hy@pstringD)\fi
9090       \Hy@SetNewWindow
9091       >>%
9092     >>%
9093   }%
9094   \Hy@colorlink\@filecolor
9095 }%
9096 #1%
9097 \Hy@EndAnnot
9098 }
9099 \def\hyper@linkurl#1#2{%
9100   \leavevmode
9101   \Hy@BeginAnnot{%
9102     \Hy@pstringdef\Hy@pstringURI{#2}%
9103     \pdfmark{mark}%
9104     bann<<%

```

```

9105      /Type/Annot%
9106      /Subtype/Link%
9107      \ifHy@pdfa /F 4\fi
9108      \Hy@setpdfborder
9109      \ifx\@urlbordercolor\relax
9110      \else
9111      /C[\@urlbordercolor]%
9112      \fi
9113      /A<<%
9114      /S/URI%
9115      /URI(\Hy@pstringURI)%
9116      >>%
9117      >>%
9118      }%
9119      \Hy@colorlink\@urlcolor
9120      }%
9121      #1%
9122      \Hy@endAnnot
9123      }
9124      \def\Acrobatmenu#1#2{%
9125      \Hy@Acrobatmenu{#1}{#2}{%
9126      \Hy@BeginAnnot{%
9127      \@pdfm@mark{%
9128      bann<<%
9129      /Type/Annot%
9130      /Subtype/Link%
9131      \ifHy@pdfa /F 4\fi
9132      /A<<%
9133      /S/Named%
9134      /N/#1%
9135      >>%
9136      \Hy@setpdfborder
9137      \ifx\@menubordercolor\relax
9138      \relax
9139      /C[\@menubordercolor]%
9140      \fi
9141      >>%
9142      }%
9143      \Hy@colorlink\@menucolor
9144      }%
9145      #2%
9146      \Hy@endAnnot
9147      }%
9148      }
9149      \ifx\@pdfproducer\relax
9150      \def\@pdfproducer{dvipdfm}%

```

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

```

9151      \begingroup\expandafter\expandafter\expandafter\endgroup
9152      \expandafter\ifx\csname XeTeXversion\endcsname\relax
9153      \else
9154      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9155      \fi
9156      \fi
9157      \def\PDF@FinishDoc{%
9158      \Hy@UseMaketitleInfos
9159      \HyInfo@GenerateAddons
9160      \@pdfm@mark{%

```

```

9161 docinfo<<%
9162   /Title(\@pdftitle)%
9163   /Subject(\@pdfsubject)%
9164   /Creator(\@pdfcreator)%
9165   \ifx\@pdfcreationdate\@empty
9166   \else
9167     /CreationDate(\@pdfcreationdate)%
9168   \fi
9169   \ifx\@pdfmoddate\@empty
9170   \else
9171     /ModDate(\@pdfmoddate)%
9172   \fi
9173   /Author(\@pdfauthor)%
9174   \ifx\@pdfproducer\relax
9175   \else
9176     /Producer(\@pdfproducer)%
9177   \fi
9178   /Keywords(\@pdfkeywords)%
9179   \ifx\@pdftrapped\@empty
9180   \else
9181     /Trapped/\@pdftrapped
9182   \fi
9183   \HyInfo@Addons
9184   >>%
9185 }%
9186 \Hy@DisableOption{pdfauthor}%
9187 \Hy@DisableOption{pdftitle}%
9188 \Hy@DisableOption{pdfsubject}%
9189 \Hy@DisableOption{pdfcreator}%
9190 \Hy@DisableOption{pdfcreationdate}%
9191 \Hy@DisableOption{pdfmoddate}%
9192 \Hy@DisableOption{pdfproducer}%
9193 \Hy@DisableOption{pdfkeywords}%
9194 \Hy@DisableOption{pdftrapped}%
9195 \Hy@DisableOption{pdfinfo}%
9196 }

9197 \def\PDF@SetupDoc{%
9198   \edef\Hy@temp{%
9199     \ifHy@toolbar\else /HideToolbar true\fi
9200     \ifHy@menubar\else /HideMenubar true\fi
9201     \ifHy>windowui\else /HideWindowUI true\fi
9202     \ifHy@fitwindow /FitWindow true\fi
9203     \ifHy@centerwindow /CenterWindow true\fi
9204     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9205     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9206     \Hy@UseNameKey{Direction}\@pdfdirection
9207     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9208     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9209     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9210     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9211     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9212     \Hy@UseNameKey{Duplex}\@pdfduplex
9213     \ifx\@pdfpicktraybypdfsize\@empty
9214     \else
9215       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9216     \fi
9217     \ifx\@pdfprintpagerange\@empty

```

```

9218 \else
9219   /PrintPageRange[\@pdfprintpagerange]%
9220 \fi
9221 \ifx\@pdfnumcopies\@empty
9222 \else
9223   /NumCopies \@pdfnumcopies
9224 \fi
9225 }%
9226 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9227 \@pdfm@mark{%
9228   docview<<%
9229     \ifx\@pdfstartpage\@empty
9230     \else
9231       \ifx\@pdfstartview\@empty
9232       \else
9233         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9234       \fi
9235     \fi
9236     \ifx\@baseurl\@empty
9237     \else
9238       /URI<</Base(\Hy@pstringB)>>%
9239     \fi
9240     /PageMode/\@pdfpagemode
9241     \ifx\Hy@temp\@empty
9242     \else
9243       /ViewerPreferences<<\Hy@temp>>%
9244     \fi
9245     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9246     \ifx\@pdflang\@empty
9247     \else
9248       /Lang(\@pdflang)%
9249     \fi
9250   >>%
9251 }%
9252 \ifx\@pdfpagescrop\@empty
9253 \else
9254   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9255 \fi
9256 }
9257 </dvipdfm | xetex>

```

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

```

9258 <*dvipdfm>
9259 \AtBeginShipoutFirst{%
9260   \ifHy@setpagesize
9261   \begingroup
9262     \@ifundefined{stockwidth}{%
9263       \ifdim\paperwidth>\z@
9264       \ifdim\paperheight>\z@
9265         \special{papersize=\the\paperwidth,\the\paperheight}%
9266       \fi
9267     \fi
9268   }{%
9269     \ifdim\stockwidth>\z@
9270     \ifdim\stockheight>\z@
9271       \special{papersize=\the\stockwidth,\the\stockheight}%
9272     \fi

```

```

9273     \fi
9274   }%
9275 \endgroup
9276 \fi
9277 \Hy@DisableOption{setpagesize}%
9278 }
9279 </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.

```

9280 <*vtexhtml>
9281 \providecommand*{\XR@ext}{htm}
9282 \RequirePackage{vtexhtml}
9283 \newif\if@Localurl
9284 \def\PDF@FinishDoc{}
9285 \def\PDF@SetupDoc{%
9286   \ifx\@baseurl\@empty
9287     \else
9288       \special{!direct <base href="\@baseurl">}%
9289     \fi
9290 }
9291 \def\@urltype{url}
9292 \def\hyper@link#1#2#3{%
9293   \Hy@VerboseLinkStart{#1}{#2}%
9294   \leavevmode
9295   \special{!direct <a href=%
9296     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9297   #3%
9298   \special{!direct </a>}%
9299 }
9300 \def\hyper@linkurl#1#2{%
9301   \begingroup
9302     \hyper@chars
9303     \leavevmode
9304     \MathBSuppress=1\relax
9305     \special{!direct <a href=%
9306       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9307     #1%
9308     \MathBSuppress=0\relax
9309     \special{!direct </a>}%
9310   \endgroup
9311 }
9312 \def\hyper@linkfile#1#2#3{%
9313   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\##3\fi}%
9314 }
9315 \def\hyper@linkstart#1#2{%
9316   \Hy@VerboseLinkStart{#1}{#2}%
9317   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
9318     \@Localurltrue
9319     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9320   \else
9321     \@Localurlfalse
9322   \begingroup
9323     \hyper@chars
9324     \special{!aref \HyperDestNameFilter{#2}}%

```

```

9325 \endgroup
9326 \fi
9327 }
9328 \def\hyper@linkend{%
9329 \if@Localurl
9330 \special{!endaref}%
9331 \else
9332 \special{!direct </a>}%
9333 \fi
9334 }
9335 \def\hyper@anchorstart#1{%
9336 \Hy@SaveLastskip
9337 \Hy@VerboseAnchor{#1}%
9338 \begingroup
9339 \hyper@chars
9340 \special{!aname #1}%
9341 \special{!direct <a name=%
9342 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9343 \endgroup
9344 \Hy@Activeanchortrue
9345 }
9346 \def\hyper@anchorend{%
9347 \special{!direct </a>}%
9348 \Hy@Activeanchorfalse
9349 \Hy@RestoreLastskip
9350 }
9351 \def\hyper@anchor#1{%
9352 \Hy@SaveLastskip
9353 \Hy@VerboseAnchor{#1}%
9354 \begingroup
9355 \let\protect=\string
9356 \hyper@chars
9357 \leavevmode
9358 \special{!aname #1}%
9359 \special{!direct <a name=%
9360 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9361 \endgroup
9362 \Hy@Activeanchortrue
9363 \bgroup\anchor@spot\egroup
9364 \special{!direct </a>}%
9365 \Hy@Activeanchorfalse
9366 \Hy@RestoreLastskip
9367 }
9368 \def\@Form[#1]{%
9369 \typeout{Sorry, TeXpider does not yet support FORMs}%
9370 }
9371 \def\@endForm{}
9372 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9373 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9374 }
9375 \def\@TextField[#1]#2{% parameters, label
9376 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9377 }
9378 \def\@CheckBox[#1]#2{% parameters, label
9379 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9380 }
9381 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```



```

9382 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9383 }
9384 \def\@PushButton[#1]#2{% parameters, label
9385 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9386 }
9387 \def\@Reset[#1]#2{%
9388 \typeout{Sorry, TeXpider does not yet support FORMs}%
9389 }
9390 \def\@Submit[#1]#2{%
9391 \typeout{Sorry, TeXpider does not yet support FORMs}%
9392 }
9393 \</vtexhtml>
9394 \*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.

```

9395 \ifx\mediaheight\@undefined
9396 \else
9397 \ifx\mediaheight\relax
9398 \else
9399 \ifHy@setpagesize
9400 \providecommand*\VTeXInitMediaSize{%
9401 \ltx@ifundefined{stockwidth}{%
9402 \ifdim\paperheight>0pt %
9403 \setlength\mediaheight\paperheight
9404 \fi
9405 \ifdim\paperheight>0pt %
9406 \setlength\mediawidth\paperwidth
9407 \fi
9408 }{%
9409 \ifdim\stockheight>0pt %
9410 \setlength\mediaheight\stockheight
9411 \fi
9412 \ifdim\stockwidth>0pt %
9413 \setlength\mediawidth\stockwidth
9414 \fi
9415 }%
9416 }%
9417 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9418 \fi
9419 \Hy@DisableOption{setpagesize}%
9420 \fi
9421 \fi

```

Older versions of VTeX require xyz in lower case.

```

9422 \providecommand*\@pdfview{xyz}
9423 \providecommand*\@pdfborder{0 0 1}
9424 \providecommand*\@pdfborderstyle{}
9425 \let\CurrentBorderColor\@linkbordercolor
9426 \def\hyper@anchor#1{%
9427 \Hy@SaveLastskip
9428 \Hy@VerboseAnchor{#1}%
9429 \begingroup
9430 \let\protect=\string
9431 \hyper@chars
9432 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9433 \endgroup

```

```

9434 \Hy@activeanchortrue
9435 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9436 \Hy@activeanchorfalse
9437 \Hy@RestoreLastskip
9438 }
9439 \def\hyper@anchorstart#1{%
9440 \Hy@SaveLastskip
9441 \Hy@VerboseAnchor{#1}%
9442 \begingroup
9443 \hyper@chars
9444 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9445 \endgroup
9446 \Hy@activeanchortrue
9447 }
9448 \def\hyper@anchorend{%
9449 \Hy@activeanchorfalse
9450 \Hy@RestoreLastskip
9451 }
9452 \def\@urltype{url}
9453 \def\Hy@undefinedname{UNDEFINED}
9454 \def\hyper@linkstart#1#2{%
9455 \Hy@VerboseLinkStart{#1}{#2}%
9456 \Hy@pstringdef\Hy@pstringURI{#2}%
9457 \expandafter\Hy@colorlink\csname @#1color\endcsname
9458 \ltx@ifUndefined{@#1bordercolor}{%
9459 \let\CurrentBorderColor\relax
9460 }{%
9461 \edef\CurrentBorderColor{%
9462 \csname @#1bordercolor\endcsname
9463 }%
9464 }%
9465 \def\Hy@tempa{#1}%
9466 \ifx\Hy@tempa\@urltype
9467 \special{!%
9468 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9469 a=<%
9470 \ifHy@pdfa /F 4\fi
9471 \Hy@setpdfborder
9472 \ifx\CurrentBorderColor\relax
9473 \else
9474 /C [\CurrentBorderColor]%
9475 \fi
9476 >%
9477 }%
9478 \else
9479 \protected@edef\Hy@testname{#2}%
9480 \ifx\Hy@testname\@empty
9481 \Hy@Warning{%
9482 Empty destination name,\MessageBreak
9483 using '\Hy@undefinedname'%
9484 }%
9485 \let\Hy@testname\Hy@undefinedname
9486 \fi
9487 \special{!%
9488 aref \expandafter\HyperDestNameFilter
9489 \expandafter{\Hy@testname};%
9490 a=<%

```

```

9491     \ifHy@pdfa /F 4\fi
9492     \Hy@setpdfborder
9493     \ifx\CurrentBorderColor\relax
9494     \else
9495         /C [\CurrentBorderColor]%
9496     \fi
9497     >%
9498     }%
9499 \fi
9500 }
9501 \def\hyper@linkend{%
9502 \special{!endaref}%
9503 \Hy@endcolorlink
9504 }
9505 \def\hyper@linkfile#1#2#3{%
9506 \leavevmode
9507 \special{!%
9508   aref <%
9509   \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9510   f=#2>#3;%
9511   a=<%
9512     \ifHy@pdfa /F 4\fi
9513     \Hy@setpdfborder
9514     \ifx\@filebordercolor\relax
9515     \else
9516         /C [\@filebordercolor]%
9517     \fi
9518     >%
9519     }%
9520     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9521     \special{!endaref}%
9522 }
9523 \def\hyper@linkurl#1#2{%
9524 \begingroup
9525 \Hy@pstringdef\Hy@pstringURI{#2}%
9526 \hyper@chars
9527 \leavevmode
9528 \special{!%
9529   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9530   a=<%
9531     \ifHy@pdfa /F 4\fi
9532     \Hy@setpdfborder
9533     \ifx\@urlbordercolor\relax
9534     \else
9535         /C [\@urlbordercolor]%
9536     \fi
9537     >%
9538     }%
9539     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9540     \special{!endaref}%
9541 \endgroup
9542 }
9543 \def\hyper@link#1#2#3{%
9544 \Hy@VerboseLinkStart{#1}{#2}%
9545 \ltx@ifundefined{@#1bordercolor}{%
9546 \let\CurrentBorderColor\relax
9547 }{%

```

```

9548 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9549 }%
9550 \leavevmode
9551 \protected@edef\Hy@testname{#2}%
9552 \ifx\Hy@testname\@empty
9553 \Hy@Warning{%
9554   Empty destination name,\MessageBreak
9555   using '\Hy@undefinedname'%
9556 }%
9557 \let\Hy@testname\Hy@undefinedname
9558 \fi
9559 \special{!%
9560   aref \expandafter\HyperDestNameFilter
9561   \expandafter{\Hy@testname};%
9562   a=<%
9563   \ifHy@pdfa /F 4\fi
9564   \Hy@setpdfborder
9565   \ifx\CurrentBorderColor\relax
9566   \else
9567   /C [\CurrentBorderColor]%
9568   \fi
9569   >%
9570 }%
9571 \expandafter
9572 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9573 \special{!endaref}%
9574 }
9575 \def\hyper@image#1#2{%
9576 \hyper@linkurl{#2}{#1}%
9577 }
9578 \def\@hyper@launch run:#1\#2#3{%
9579 \Hy@pstringdef\Hy@pstringF{#1}%
9580 \Hy@pstringdef\Hy@pstringP{#3}%
9581 \leavevmode
9582 \special{!aref %
9583   <u=%
9584   /Type/Action%
9585   /S/Launch%
9586   /F(\Hy@pstringF)%
9587   \Hy@SetNewWindow
9588   \ifx\#3\%
9589   \else
9590   /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9591   \fi%
9592   >%
9593   a=<%
9594   \ifHy@pdfa /F 4\fi
9595   \Hy@setpdfborder
9596   \ifx\@runbordercolor\relax
9597   \else
9598   /C[\@runbordercolor]%
9599   \fi
9600   >%
9601 }%
9602 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9603 \special{!endaref}%
9604 }

```

```

9605 \def\Acrobatmenu#1#2{%
9606   \Hy@Acrobatmenu{#1}{#2}{%
9607     \special{!%
9608       aref <u=/S /Named /N /#1>;%
9609       a=<%
9610         \ifHy@pdfa /F 4\fi
9611         \Hy@setpdfborder
9612         \ifx\@menubordercolor\relax
9613         \else
9614           /C[\@menubordercolor]%
9615         \fi
9616       >%
9617     }%
9618     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9619     \special{!endaref}%
9620   }%
9621 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for VT_EX 7.02 or later.

Please never use \@ifundefined{VTeXversion}{..}{..} *globally*.

```

9622 \ifnum\Hy@VTeXversion<702 %
9623 \else
9624   \def\hyper@pagetransition{%
9625     \ifx\@pdfpagetransition\relax
9626     \else
9627       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9628   \else
9629     \hvtex@parse@trans\@pdfpagetransition
9630   \fi
9631 \fi
9632 }%

```

I have to write an “honest” parser to convert raw PDF code into VT_EX \special.
(AVK)

Syntax of VT_EX \special{!trans <transition_effect>}:

```

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

```

Transition codes:

```

9633 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9634 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%

```

```

9635 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}}%
9636 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}}%
9637 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}}%
9638 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}}%
9639 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%

```

Optional parameters:

```

9640 \def\hvtex@par@dimension{/Dm}%
9641 \def\hvtex@par@direction{/Di}%
9642 \def\hvtex@par@duration{/D}%
9643 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9644 \def\hvtex@gettoken{%
9645   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9646 }%

```

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

```

9647 \def\hvtex@gettoken@#1 #2\@nil{%
9648   \edef\hvtex@token{#1}%
9649   \edef\hvtex@buffer{#2}%
9650 }%
9651 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9652 \let\hvtex@trans@code\@empty
9653 \let\hvtex@param@dimension\@empty
9654 \let\hvtex@param@direction\@empty
9655 \let\hvtex@param@duration\@empty
9656 \let\hvtex@param@motion\@empty
9657 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9658 \hvtex@gettoken
9659 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9660   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9661   \else
9662     \hvtex@gettoken
9663   \fi
9664 \fi
9665 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9666 \hvtex@trans@params
9667 }%

```

Reentrant macro to parse optional parameters.

```

9668 \def\hvtex@trans@params{%
9669   \ifx\hvtex@buffer\@empty
9670   \else
9671     \hvtex@gettoken
9672     \let\hvtex@trans@par\hvtex@token
9673     \ifx\hvtex@buffer\@empty
9674     \else
9675       \hvtex@gettoken
9676       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```
9677 \let\hvtex@param@duration\hvtex@token
9678 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9679 \expandafter\edef\expandafter\hvtex@param@motion
9680 \expandafter{\expandafter\@gobble\hvtex@token}%
9681 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9682 \expandafter\edef\expandafter\hvtex@param@dimension
9683 \expandafter{\expandafter\@gobble\hvtex@token}%
9684 \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).

```
9685 \let\hvtex@param@direction\hvtex@token
9686 \fi\fi\fi
9687 \fi
9688 \fi
9689 \ifx\hvtex@buffer\@empty
9690 \let\next\hvtex@produce@trans
9691 \else
9692 \let\next\hvtex@trans@params
9693 \fi
9694 \next
9695 }%
```

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

```
9696 \def\hvtex@produce@trans{%
9697 \let\vtex@trans@special\@empty
9698 \if S\hvtex@trans@code
9699 \edef\vtex@trans@special{\hvtex@trans@code
9700 \hvtex@param@dimension\hvtex@param@motion}%
9701 \else\if B\hvtex@trans@code
9702 \edef\vtex@trans@special{%
9703 \hvtex@trans@code\hvtex@param@dimension
9704 }%
9705 \else\if X\hvtex@trans@code
9706 \edef\vtex@trans@special{%
9707 \hvtex@trans@code\hvtex@param@motion
9708 }%
9709 \else\if W\hvtex@trans@code
9710 \edef\vtex@trans@special{%
9711 \hvtex@trans@code\hvtex@param@direction
9712 }%
9713 \else\if D\hvtex@trans@code
9714 \let\vtex@trans@special\hvtex@trans@code
9715 \else\if R\hvtex@trans@code
9716 \let\vtex@trans@special\hvtex@trans@code
9717 \else\if G\hvtex@trans@code
9718 \edef\vtex@trans@special{%
9719 \hvtex@trans@code\hvtex@param@direction
9720 }%
9721 \fi\fi\fi\fi\fi
9722 \ifx\vtex@trans@special\@empty
9723 \else
9724 \ifx\hvtex@param@duration\@empty
```

```

9725     \else
9726     \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9727     \multiply\dimen@\@m
9728     \edef\vtex@trans@special{%
9729     \vtex@trans@special,\strip@pt\dimen@
9730     }%
9731     \fi

```

And all the mess is just for this.

```

9732     \special{!trans \vtex@trans@special}%
9733     \fi
9734 }%

9735 \def\hyper@pageduration{%
9736 \ifx\@pdfpageduration\relax
9737 \else
9738 \ifx\@pdfpageduration\@empty
9739 \special{!duration-}%
9740 \else
9741 \special{!duration \@pdfpageduration}%
9742 \fi
9743 \fi
9744 }%

9745 \def\hyper@pagehidden{%
9746 \ifHy@useHidKey
9747 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9748 \fi
9749 }%

9750 \g@addto@macro\Hy@EveryPageBoxHook{%
9751 \hyper@pagetransition
9752 \hyper@pageduration
9753 \hyper@pagehidden
9754 }%
9755 \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

```

9756 \ifx\@pdfproducer\relax
9757 \def\@pdfproducer{VTeX}%
9758 \ifnum\Hy@VTeXversion>\z@
9759 \count@\VTeXversion
9760 \divide\count@ 100 %
9761 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9762 \multiply\count@ -100 %
9763 \advance\count@\VTeXversion
9764 \edef\@pdfproducer{%
9765 \@pdfproducer
9766 .\ifnum\count@<10 0\fi\the\count@
9767 \ifx\VTeXOS\@undefined\else

```



```

9768 \ifnum\VTeXOS>0 %
9769 \ifnum\VTeXOS<6 %
9770 \space(
9771 \ifcase\VTeXOS
9772 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9773 \fi
9774 )%
9775 \fi
9776 \fi
9777 \fi
9778 ,\space
9779 \ifnum\OpMode=\@one PDF\else PS\fi
9780 \space backend%
9781 \ifx\gexmode\@undefined\else
9782 \ifnum\gexmode>\z@\space with GeX\fi
9783 \fi
9784 }%
9785 \fi
9786 \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).

```

9787 \def\PDF@SetupDoc{%
9788 \ifx\@pdfpagescrop\@empty
9789 \else
9790 \special{!pdfinfo b=<\@pdfpagescrop>}%
9791 \fi
9792 \ifx\@pdfstartpage\@empty
9793 \else
9794 \ifx\@pdfstartview\@empty
9795 \else
9796 \special{!onopen Page\@pdfstartpage}%
9797 \fi
9798 \fi
9799 \special{!pdfinfo p=</\@pdfpagemode>}%
9800 \ifx\@baseurl\@empty
9801 \else
9802 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9803 \fi
9804 \special{!pdfinfo v=<<<%
9805 \ifHy@toolbar\else /HideToolbar true\fi
9806 \ifHy@menubar\else /HideMenubar true\fi
9807 \ifHy>windowui\else /HideWindowUI true\fi
9808 \ifHy@fitwindow /FitWindow true\fi
9809 \ifHy@centerwindow /CenterWindow true\fi

```

```

9810 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9811 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9812 \Hy@UseNameKey{Direction}\@pdfdirection
9813 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9814 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9815 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9816 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9817 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9818 \Hy@UseNameKey{Duplex}\@pdfduplex
9819 \ifx\@pdfpicktraybypdfsize\@empty
9820 \else
9821 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9822 \fi
9823 \ifx\@pdfprintpagerange\@empty
9824 \else
9825 /PrintPageRange[\@pdfprintpagerange]%
9826 \fi
9827 \ifx\@pdfnumcopies\@empty
9828 \else
9829 /NumCopies \@pdfnumcopies
9830 \fi
9831 >>>}%
9832 \ifx\@pdfpagelayout\@empty
9833 \else
9834 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9835 \fi
9836 }%
9837 \HyInfo@AddonUnsupportedtrue
9838 \def\PDF@FinishDoc{%
9839 \Hy@UseMaketitleInfos
9840 \HyInfo@TrappedUnsupported
9841 \special{!pdfinfo a=<\@pdfauthor>}%
9842 \special{!pdfinfo t=<\@pdftitle>}%
9843 \special{!pdfinfo s=<\@pdfsubject>}%
9844 \special{!pdfinfo c=<\@pdfcreator>}%
9845 \ifx\@pdfproducer\relax
9846 \else
9847 \special{!pdfinfo r=<\@pdfproducer>}%
9848 \fi
9849 \special{!pdfinfo k=<\@pdfkeywords>}%
9850 \Hy@DisableOption{pdfauthor}%
9851 \Hy@DisableOption{pdftitle}%
9852 \Hy@DisableOption{pdfsubject}%
9853 \Hy@DisableOption{pdfcreator}%
9854 \Hy@DisableOption{pdfcreationdate}%
9855 \Hy@DisableOption{pdfmoddate}%
9856 \Hy@DisableOption{pdfproducer}%
9857 \Hy@DisableOption{pdfkeywords}%
9858 \Hy@DisableOption{pdftrapped}%
9859 \Hy@DisableOption{pdfinfo}%
9860 }
9861 </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.

```
9862 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
9863 <package>\providecommand*{\Hy@DistillerDestFix}{%  
9864 <*pdfmark | dviwindo>  
9865 \def\Hy@DistillerDestFix{%  
9866   \begingroup  
9867   \let\x\literalps@out
```

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

```
9868   \ifnum \@ifundefined{OpMode}{0}{%  
9869     \@ifundefined{gexmode}{0}{%  
9870       \ifnum\gexmode>0 \OpMode\else 0\fi  
9871     }>1 %  
9872   \def\x##1{%  
9873     \immediate\special{!=##1}%  
9874   }%  
9875   \fi  
9876   \x{%  
9877     /product where{%  
9878       pop %  
9879       product(Distiller)search{%  
9880         pop pop pop %  
9881         version(.)search{%  
9882           exch pop exch pop%  
9883           (3011)eq{%  
9884             gsave %  
9885             newpath 0 0 moveto closepath clip%  
9886             /Courier findfont 10 scalefont setfont %  
9887             72 72 moveto(.)show %  
9888             grestore%  
9889           }if%  
9890         }{pop}ifelse%  
9891       }{pop}ifelse%  
9892     }if%  
9893   }%  
9894   \endgroup  
9895 }  
9896 </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

```

9897 <*pdfmark>
9898 \Hy@breaklinks@unsupported
9899 \def\hyper@anchor#1{%
9900   \Hy@SaveLastskip
9901   \Hy@VerboseAnchor{#1}%
9902   \begingroup
9903     \pdfmark[\anchor@spot]{%
9904       pdfmark=/DEST,%
9905       linktype=anchor,%
9906       View=/\@pdfview \@pdfviewparams,%
9907       DestAnchor={#1}%
9908     }%
9909   \endgroup
9910   \Hy@RestoreLastskip
9911 }
9912 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
9913 \def\hyper@anchorstart#1{%
9914   \Hy@SaveLastskip
9915   \Hy@VerboseAnchor{#1}%
9916   \literalps@out{H.S}%
9917   \Hy@AllowHyphens
9918   \xdef\hyper@currentanchor{#1}%
9919   \Hy@activeanchortrue
9920 }
9921 \def\hyper@anchorend{%
9922   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9923   \pdfmark{%
9924     pdfmark=/DEST,%
9925     linktype=anchor,%
9926     View=/\@pdfview \@pdfviewparams,%
9927     DestAnchor=\hyper@currentanchor,%
9928   }%
9929   \Hy@activeanchorfalse
9930   \Hy@RestoreLastskip
9931 }
9932 \def\hyper@linkstart#1#2{%
9933   \Hy@VerboseLinkStart{#1}{#2}%
9934   \ifHy@breaklinks
9935     \else
9936     \leavevmode\hbox\bgroup
9937     \fi
9938     \expandafter\Hy@colorlink\csname @#1color\endcsname
9939     \literalps@out{H.S}%
9940     \Hy@AllowHyphens
9941     \xdef\hyper@currentanchor{#2}%
9942     \gdef\hyper@currentlinktype{#1}%
9943   }
9944 \def\hyper@linkend{%
9945   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9946   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%

```

```

9947 \let\Hy@tempcolor\relax
9948 }{%
9949 \edef\Hy@tempcolor{%
9950 \csname @\hyper@currentlinktype bordercolor\endcsname
9951 }%
9952 }%
9953 \pdfmark{%
9954 pdfmark=/ANN,%
9955 linktype=link,%
9956 Subtype=/Link,%
9957 PDFAFlags=4,%
9958 Dest=\hyper@currentanchor,%
9959 AcroHighlight=\@pdfhighlight,%
9960 Border=\@pdfborder,%
9961 BorderStyle=\@pdfborderstyle,%
9962 Color=\Hy@tempcolor,%
9963 Raw=H.B%
9964 }%
9965 \Hy@endcolorlink
9966 \ifHy@breaklinks
9967 \else
9968 \egroup
9969 \fi
9970 }

```

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.

```

9971 \begingroup
9972 \catcode'P=12 %
9973 \catcode'T=12 %
9974 \lowercase{\endgroup
9975 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
9976 }
9977 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

9978 \def\hyper@pagetransition{%
9979 \ifx\@pdfpagetransition\relax
9980 \else
9981 \ifx\@pdfpagetransition\@empty
9982 % 1. Does an old entry have to be deleted?
9983 % 2. If 1=yes, how to delete?
9984 \else
9985 \pdfmark{%
9986 pdfmark=/PUT,%
9987 Raw={%
9988 \string{ThisPage\string}%
9989 <</Trans << /S /\@pdfpagetransition\space >> >>%
9990 }%
9991 }%
9992 \fi
9993 \fi
9994 }

```

\hyper@pageduration

```

9995 \def\hyper@pageduration{%

```

```

9996 \ifx\@pdfpageduration\relax
9997 \else
9998 \ifx\@pdfpageduration\@empty
9999 % 1. Does an old entry have to be deleted?
10000 % 2. If 1=yes, how to delete?
10001 \else
10002 \pdfmark{%
10003 pdfmark=/PUT,%
10004 Raw={%
10005 \string{ThisPage\string}%
10006 <</Dur \@pdfpageduration>>%
10007 }%
10008 }%
10009 \fi
10010 \fi
10011 }

```

\hyper@pagehidden

```

10012 \def\hyper@pagehidden{%
10013 \ifHy@useHidKey
10014 \pdfmark{%
10015 pdfmark=/PUT,%
10016 Raw={%
10017 \string{ThisPage\string}%
10018 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10019 }%
10020 }%
10021 \fi
10022 }

10023 \g@addto@macro\Hy@EveryPageBoxHook{%
10024 \hyper@pagetransition
10025 \hyper@pageduration
10026 \hyper@pagehidden
10027 }

10028 \def\hyper@image#1#2{%
10029 \hyper@linkurl{#2}{#1}%
10030 }
10031 \def\Hy@undefinedname{UNDEFINED}
10032 \def\hyper@link#1#2#3{%
10033 \Hy@VerboseLinkStart{#1}{#2}%
10034 \ltx@ifundefined{@#1bordercolor}{%
10035 \let\Hy@tempcolor\relax
10036 }{%
10037 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10038 }%
10039 \begingroup
10040 \protected@edef\Hy@testname{#2}%
10041 \ifx\Hy@testname\@empty
10042 \Hy@Warning{%
10043 Empty destination name,\MessageBreak
10044 using '\Hy@undefinedname'%
10045 }%
10046 \let\Hy@testname\Hy@undefinedname
10047 \fi
10048 \pdfmark[{#3}]{%
10049 Color=\Hy@tempcolor,%

```

```

10050     linktype={#1},%
10051     AcroHighlight=\@pdfhighlight,%
10052     Border=\@pdfborder,%
10053     BorderStyle=\@pdfborderstyle,%
10054     pdfmark=/ANN,%
10055     Subtype=/Link,%
10056     PDFAFlags=4,%
10057     Dest=\Hy@testname
10058   }%
10059 \endgroup
10060 }
10061 \newtoks\pdf@docset
10062 \def\PDF@FinishDoc{%
10063   \Hy@UseMaketitleInfos
10064   \HyInfo@GenerateAddons
10065   \let\Hy@temp\@empty
10066   \ifx\@pdfcreationdate\@empty
10067   \else
10068     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10069   \fi
10070   \ifx\@pdfmoddate\@empty
10071   \else
10072     \expandafter\def\expandafter\Hy@temp\expandafter{%
10073       \Hy@temp
10074       ModDate=\@pdfmoddate,%
10075     }%
10076   \fi
10077   \ifx\@pdfproducer\relax
10078   \else
10079     \expandafter\def\expandafter\Hy@temp\expandafter{%
10080       \Hy@temp
10081       Producer=\@pdfproducer,%
10082     }%
10083   \fi
10084   \expandafter
10085   \pdfmark\expandafter{%
10086     \Hy@temp
10087     pdfmark=/DOCINFO,%
10088     Title=\@pdftitle,%
10089     Subject=\@pdfsubject,%
10090     Creator=\@pdfcreator,%
10091     Author=\@pdfauthor,%
10092     Keywords=\@pdfkeywords,%
10093     Trapped=\@pdftrapped
10094   }%
10095   \ifx\HyInfo@Addons\@empty
10096   \else
10097     \pdfmark{%
10098       pdfmark=/DOCINFO,%
10099       Raw={\HyInfo@Addons}%
10100     }%
10101   \fi
10102   \Hy@DisableOption{pdfauthor}%
10103   \Hy@DisableOption{pdftitle}%
10104   \Hy@DisableOption{pdfsubject}%
10105   \Hy@DisableOption{pdfcreator}%
10106   \Hy@DisableOption{pdfcreationdate}%

```

```

10107 \Hy@DisableOption{pdfmoddate}%
10108 \Hy@DisableOption{pdfproducer}%
10109 \Hy@DisableOption{pdfkeywords}%
10110 \Hy@DisableOption{pdftrapped}%
10111 \Hy@DisableOption{pdfinfo}%
10112 }
10113 \def\PDF@SetupDoc{%
10114 \def\Hy@temp{%
10115 \ifx\@pdfstartpage\@empty
10116 \else
10117 \ifx\@pdfstartview\@empty
10118 \else
10119 \edef\Hy@temp{%
10120 ,Page=\@pdfstartpage
10121 ,View=\@pdfstartview
10122 }%
10123 \fi
10124 \fi
10125 \edef\Hy@temp{%
10126 \noexpand\pdfmark{%
10127 pdfmark=/DOCVIEW,%
10128 PageMode=/\@pdfpagemode
10129 \Hy@temp
10130 }%
10131 }%
10132 \Hy@temp
10133 \ifx\@pdfpagescrop\@empty
10134 \else
10135 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10136 \fi
10137 \edef\Hy@temp{%
10138 \ifHy@toolbar\else /HideToolbar true\fi
10139 \ifHy@menubar\else /HideMenubar true\fi
10140 \ifHy>windowui\else /HideWindowUI true\fi
10141 \ifHy@fitwindow /FitWindow true\fi
10142 \ifHy@centerwindow /CenterWindow true\fi
10143 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10144 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10145 \Hy@UseNameKey{Direction}\@pdfdirection
10146 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10147 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10148 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10149 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10150 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10151 \Hy@UseNameKey{Duplex}\@pdfduplex
10152 \ifx\@pdfpicktraybypdfsize\@empty
10153 \else
10154 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10155 \fi
10156 \ifx\@pdfprintpagerange\@empty
10157 \else
10158 /PrintPageRange\@pdfprintpagerange}%
10159 \fi
10160 \ifx\@pdfnumcopies\@empty
10161 \else
10162 /NumCopies \@pdfnumcopies
10163 \fi

```



```

10164 }%
10165 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10166 \pdfmark{%
10167   pdfmark=/PUT,%
10168   Raw={%
10169     \string{Catalog\string}<<%
10170     \ifx\Hy@temp\@empty
10171       \else
10172         /ViewerPreferences<<\Hy@temp>>%
10173       \fi
10174       \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10175       \ifx\@pdflang\@empty
10176       \else
10177         /Lang(\@pdflang)%
10178       \fi
10179       \ifx\@baseurl\@empty
10180       \else
10181         /URI<</Base(\Hy@pstringB)>>%
10182       \fi
10183     >>%
10184   }%
10185 }%
10186 }
10187 </pdfmark>
10188 <*pdfmarkbase>

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

10189 \newif\ifHy@pdfmarkerror
10190 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10191 \def\pdfmark@[#1]#2{%
10192   \Hy@pdfmarkerrorfalse
10193   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10194   \@processme
10195   \let\pdf@type\relax
10196   \setkeys{PDF}{#2}%
10197   \ifHy@pdfmarkerror
10198   \else
10199     \ifx\pdf@type\relax
10200       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10201       \ifx\#1\%
10202       \else
10203         \pdf@rect{#1}%
10204       \fi
10205     \else
10206       \ifx\#1\%
10207         \literalps@out{%
10208           [\the\pdf@toks\space\pdf@type\space pdfmark%
10209           ]%
10210         \else
10211           \ltx@ifundefined{@\pdf@linktype color}{%
10212             \Hy@colorlink\@linkcolor
10213           }{%
10214             \expandafter\Hy@colorlink

```

```

10215             \csname @\pdf@linktype color\endcsname
10216         }%
10217         \pdf@rect{#1}%
10218         \literalps@out{%
10219             [\the\pdf@toks\space\pdf@type\space pdfmark%
10220         }%
10221         \Hy@endcolorlink
10222     \fi
10223 \fi
10224 \fi
10225 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (tobyth@netspace.net.au).

For the case `breaklinks` is enabled, I have added two hooks, the first one for package `setouterhbox`, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

10226 \newsavebox{\pdf@box}
10227 \providecommand*{\Hy@setouterhbox}{\sbox}
10228 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10229 \def\Hy@DEST{/DEST}
10230 \def\pdf@rect#1{%
10231     \leavevmode
10232     \ifHy@breaklinks
10233         \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10234     \else
10235         \sbox\pdf@box{#1}%
10236     \fi
10237     \dimen@ \ht\pdf@box
10238     \ifdim\dp\pdf@box=\z@
10239         \literalps@out{H.S}%
10240     \else
10241         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10242     \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...).

```

10243     \ifHy@breaklinks
10244         \expandafter\Hy@breaklinksunhbox
10245     \else
10246         \expandafter\box
10247     \fi
10248     \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

```

```

10249 \ifdim\dimen@=\z@
10250     \literalps@out{H.R}%
10251 \else

```

```

10252 \raise\dimen@\hbox{\literalps@out{H.R}}}%
10253 \fi
10254 \ifx\pdf@type\Hy@DEST
10255 \else
10256 \pdf@addtoksx{H.B}%
10257 \fi
10258 }

```

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.

```

10259 \newtoks\pdf@toks
10260 \newtoks\pdf@defaulttoks
10261 \pdf@defaulttoks={}%
10262 \def\pdf@addtoks#1#2{%
10263 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10264 \@processme
10265 }
10266 \def\pdf@addtoksx#1{%
10267 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10268 \@processme
10269 }
10270 \def\PDFdefaults#1{%
10271 \pdf@defaulttoks={#1}%
10272 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

10273 % what is the type of pdfmark?
10274 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10275 % what is the link type?
10276 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10277 \def\pdf@linktype{link}
10278 % parameter is a stream of PDF
10279 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10280 % parameter is a name
10281 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10282 % parameter is a array
10283 \define@key{PDF}{Border}{%
10284 \edef\Hy@temp{#1}%
10285 \ifx\Hy@temp\@empty
10286 \else
10287 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10288 \fi
10289 }
10290 \let\Hy@BorderArrayPatch\@empty
10291 % parameter is a dictionary
10292 \define@key{PDF}{BorderStyle}{%
10293 \edef\Hy@temp{#1}%
10294 \ifx\Hy@temp\@empty
10295 \else
10296 \pdf@addtoks{<<#1>>}{BS}%
10297 \fi
10298 }
10299 % parameter is a array
10300 \define@key{PDF}{Color}{%
10301 \ifx\relax#1\relax
10302 \else
10303 \pdf@addtoks{[#1]}{Color}% hash-ok
10304 \fi

```

```

10305 }
10306 % parameter is a string
10307 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10308 % parameter is a integer
10309 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10310 % parameter is a array
10311 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10312 % parameter is a string
10313 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10314 % parameter is a string or file
10315 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10316 % parameter is a destination
10317 \define@key{PDF}{Dest}{%
10318   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10319   \ifx\Hy@pstringDest\@empty
10320     \Hy@pdfmarkerrortrue
10321     \Hy@Warning{Destination with empty name ignored}%
10322   \else
10323     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10324   \fi
10325 }
10326 \define@key{PDF}{DestAnchor}{%
10327   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10328   \ifx\Hy@pstringDest\@empty
10329     \Hy@pdfmarkerrortrue
10330     \Hy@Warning{Destination with empty name ignored}%
10331   \else
10332     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10333   \fi
10334 }
10335 % parameter is a string
10336 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10337 % parameter is a string
10338 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10339 % parameter is a int
10340 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10341 \define@key{PDF}{PDFAFlags}{%
10342   \ifHy@pdfa
10343     \pdf@addtoks{#1}{F}%
10344   \fi
10345 }
10346 % parameter is a name
10347 \define@key{PDF}{AcroHighlight}{%
10348   \begingroup
10349     \edef\x{#1}%
10350   \expandafter\endgroup\ifx\x\@empty
10351   \else
10352     \pdf@addtoks{#1}{H}%
10353   \fi
10354 }
10355 % parameter is a string
10356 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10357 % parameter is a string
10358 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10359 % parameter is a string
10360 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10361 % parameter is a string

```

```

10362 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10363 % parameter is a Boolean
10364 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10365 % parameter is a integer or name
10366 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10367 % parameter is a name
10368 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10369 % parameter is a string
10370 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10371 % parameter is a array
10372 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10373 % parameter is a integer
10374 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10375 % parameter is a name
10376 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10377 % parameter is a string
10378 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10379 % parameter is a string
10380 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10381 % parameter is a string
10382 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10383 % parameter is an array
10384 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10385 % parameter is a string
10386 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10387 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10388 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10389 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10390 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10391 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10392 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10393 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10394 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10395 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10396 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10397 \define@key{PDF}{Trapped}{%
10398   \edef\Hy@temp{#1}%
10399   \ifx\Hy@temp\@empty
10400     \else
10401       \pdf@addtoks{/#1}{Trapped}%
10402     \fi
10403 }
10404
10405 </pdfmarkbase>
10406 <*pdfmark>
10407 \def\Acrobatmenu#1#2{%
10408   \Hy@Acrobatmenu{#1}{#2}{%
10409     \pdfmark[{#2}]{%
10410       linktype=menu,%
10411       pdfmark=/ANN,%
10412       AcroHighlight=\pdfhighlight,%
10413       Border=\pdfborder,%
10414       BorderStyle=\pdfborderstyle,%
10415       Action={<< /Subtype /Named /N /#1 >>},%
10416       Subtype=/Link,%
10417       PDFAMFlags=4%

```

```

10418 }%
10419 }%
10420 }

```

And now for some useful examples:

```

10421 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10422 \def\PDFNextPage@[#1]#2{%
10423   \pdfmark[{#2}]{%
10424     #1,%
10425     Border=\@pdfborder,%
10426     BorderStyle=\@pdfborderstyle,%
10427     Color=.2 .1 .5,%
10428     pdfmark=/ANN,%
10429     Subtype=/Link,%
10430     PDFAFlags=4,%
10431     Page=/Next%
10432   }%
10433 }
10434 \def\PDFPreviousPage{%
10435   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10436 }
10437 \def\PDFPreviousPage@[#1]#2{%
10438   \pdfmark[{#2}]{%
10439     #1,%
10440     Border=\@pdfborder,%
10441     BorderStyle=\@pdfborderstyle,%
10442     Color=.4 .4 .1,%
10443     pdfmark=/ANN,%
10444     Subtype=/Link,%
10445     PDFAFlags=4,%
10446     Page=/Prev%
10447   }%
10448 }
10449 \def\PDFOpen#1{%
10450   \pdfmark{#1,pdfmark=/DOCVIEW}%
10451 }

```

This will only work if you use Distiller 2.1 or higher.

```

10452 \def\hyper@linkurl#1#2{%
10453   \begingroup
10454     \Hy@pstringdef\Hy@pstringURI{#2}%
10455     \hyper@chars
10456     \leavevmode
10457     \pdfmark[{#1}]{%
10458       pdfmark=/ANN,%
10459       linktype=url,%
10460       AcroHighlight=\@pdfhighlight,%
10461       Border=\@pdfborder,%
10462       BorderStyle=\@pdfborderstyle,%
10463       Color=\@urlbordercolor,%
10464       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10465       Subtype=/Link,%
10466       PDFAFlags=4%
10467     }%
10468   \endgroup
10469 }
10470 \def\hyper@linkfile#1#2#3{%
10471   \begingroup

```

```

10472 \Hy@pstringdef\Hy@pstringF{#2}%
10473 \Hy@pstringdef\Hy@pstringD{#3}%
10474 \leavevmode
10475 \pdfmark[{#1}]{%
10476   pdfmark=/ANN,%
10477   Subtype=/Link,%
10478   PDFAFlags=4,%
10479   AcroHighlight=\@pdfhighlight,%
10480   Border=\@pdfborder,%
10481   BorderStyle=\@pdfborderstyle,%
10482   linktype=file,%
10483   Color=\@filebordercolor,%
10484   Action={%
10485     <<%
10486       /S/GoToR%
10487       \Hy@SetNewWindow
10488       /F(\Hy@pstringF)%
10489       /D\ifx\#3\@0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
10490     >>%
10491   }%
10492 }%
10493 \endgroup
10494 }
10495 \def\@hyper@launch run:#1\#2#3{%
10496   \begingroup
10497   \Hy@pstringdef\Hy@pstringF{#1}%
10498   \Hy@pstringdef\Hy@pstringP{#3}%
10499   \leavevmode
10500   \pdfmark[{#2}]{%
10501     pdfmark=/ANN,%
10502     Subtype=/Link,%
10503     PDFAFlags=4,%
10504     AcroHighlight=\@pdfhighlight,%
10505     Border=\@pdfborder,%
10506     BorderStyle=\@pdfborderstyle,%
10507     linktype=run,%
10508     Color=\@runbordercolor,%
10509     Action={%
10510       <<%
10511         /S/Launch%
10512         \Hy@SetNewWindow
10513         /F(\Hy@pstringF)%
10514         \ifx\#3\@%
10515         \else
10516           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10517         \fi
10518       >>%
10519     }%
10520   }%
10521   \endgroup
10522 }
10523 \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.

```
10524 <*dvips>
10525 \providecommand*\XR@ext}{pdf}
10526 \def\Hy@raisedlink{}
10527 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10528 \def\headerps@out#1{\special{! #1}}%
10529 \input{pdfmark.def}%
10530 \ifx\@pdfproducer\relax
10531 \def\@pdfproducer{dvips + Distiller}%
10532 \fi
10533 \providecommand*\@pdfborder{0 0 1}
10534 \providecommand*\@pdfborderstyle{}
10535 \providecommand*\@pdfview{XYZ}
10536 \providecommand*\@pdfviewparams{ H.V}
10537 \def\Hy@BorderArrayPatch{BorderArrayPatch}

10538 \g@addto@macro\Hy@FirstPageHook{%
10539 \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.

```
10540 /DvipsToPDF{72.27 mul Resolution div} def%
10541 /PDFToDvips{72.27 div Resolution mul} def%
10542 /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.

```
10543 /BorderArrayPatch{%
10544 [exch{%
10545 dup dup type/integertype eq exch type/realtype eq or%
10546 {BPToDvips}if%
10547 }forall]%
10548 }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.

```
10549 /HyperBorder {1 PDFToDvips} def%
10550 /H.V {pdf@hoff pdf@voff null} def%
10551 /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

```
10552 /H.S {%
```



```

10553     currentpoint %
10554     HyperBorder add /pdf@lly exch def %
10555     dup DvipsToPDF 72 add /pdf@hoff exch def %
10556     HyperBorder sub /pdf@llx exch def%
10557 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

10558   /H.L {%
10559     2 sub dup%
10560     /HyperBasePt exch def %
10561     PDFToDvips /HyperBaseDvips exch def %
10562     currentpoint %
10563     HyperBaseDvips sub /pdf@ury exch def%
10564     /pdf@urx exch def%
10565   } def%
10566   /H.A {%
10567     H.L %
10568     % | /pdf@voff| = the distance from the top of the page to a point
10569     % | \baselineskip| above the current point in PDF coordinates
10570     currentpoint exch pop %
10571     vsize 72 sub exch DvipsToPDF %
10572     HyperBasePt sub % baseline skip
10573     sub /pdf@voff exch def%
10574   } def%
10575   /H.R {%
10576     currentpoint %
10577     HyperBorder sub /pdf@ury exch def %
10578     HyperBorder add /pdf@urx exch def %
10579     % | /pdf@voff| = the distance from the top of the page to the current point, in
10580     % PDF coordinates
10581     currentpoint exch pop vsize 72 sub %
10582     exch DvipsToPDF sub /pdf@voff exch def%
10583   } def%
10584 } %
10585 }
10586 \AtBeginShipoutFirst{%
10587   \ifHy@setpagesize
10588     \begingroup
10589     \@ifundefined{stockwidth}{%
10590       \ifdim\paperwidth>\z@
10591         \ifdim\paperheight>\z@
10592           \special{papersize=\the\paperwidth,\the\paperheight}%
10593         \fi
10594       \fi
10595     }{%
10596       \ifdim\stockwidth>\z@
10597         \ifdim\stockheight>\z@
10598           \special{papersize=\the\stockwidth,\the\stockheight}%
10599         \fi
10600       \fi
10601     }%

```

```

10602 \endgroup
10603 \fi
10604 \Hy@DisableOption{setpagesize}%
10605 }
10606 </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.

```

10607 <*vtexpdfmark>
10608 \providecommand*\XR@ext{-pdf}
10609 \def\Hy@raisedlink{}
10610 \def\literalps@out#1{\special{pS:#1}}%
10611 \def\headerps@out#1{\immediate\special{pS:#1}}%
10612 \input{pdfmark.def}%
10613 \ifx\@pdfproducer\relax
10614 \ifnum\OpMode=\@ne
10615 \def\@pdfproducer{VTeX}%
10616 \else
10617 \def\@pdfproducer{VTeX + Distiller}%
10618 \fi
10619 \fi
10620 \providecommand*\@pdfborder{0 0 1}
10621 \providecommand*\@pdfborderstyle{}
10622 \providecommand*\@pdfview{XYZ}
10623 \providecommand*\@pdfviewparams{ H.V}

10624 \g@addto@macro\Hy@FirstPageHook{%
10625 \headerps@out{%
10626 /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.

```

10627 /HyperBorder {1} def%
10628 /H.V {pdf@hoff pdf@voff null} def%
10629 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

10630 /H.S {%
10631 currentpoint %
10632 HyperBorder sub%
10633 /pdf@lly exch def %
10634 dup 72 add /pdf@hoff exch def %
10635 HyperBorder sub%
10636 /pdf@llx exch def%
10637 } def%

```

The x and y coordinates of the current point, minus the \baselineskip: pdf@ury = $Y_c + \text{HyperBasePt} + \text{HyperBorder}$, pdf@urx = $X_c + \text{HyperBorder}$

```

10638 /H.L {%
10639 2 sub%
10640 /HyperBasePt exch def %
10641 currentpoint %

```

```

10642   HyperBasePt add HyperBorder add%
10643   /pdf@ury exch def %
10644   HyperBorder add%
10645   /pdf@urx exch def%
10646   } def%
10647   /H.A {%
10648     H.L %
10649     currentpoint exch pop %
10650     vsize 72 sub exch %
10651     HyperBasePt add add%
10652     /pdf@voff exch def%
10653   } def%

pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder

10654   /H.R {%
10655     currentpoint %
10656     HyperBorder add%
10657     /pdf@ury exch def %
10658     HyperBorder add%
10659     /pdf@urx exch def %
10660     currentpoint exch pop vsize 72 sub add%
10661     /pdf@voff exch def%
10662   } def%
10663 }%
10664 }
10665 </vtxpdfmark>

```

46.11 Textures

```

10666 <*textures>
10667 \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.

```

10668 \begingroup
10669   \obeylines %
10670   \gdef\Hy@ps@CR{\noexpand
10671     }%
10672 \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`.

```

10673 \def\literalps@out#1{%

```

```

10674 \special{postscript 0 0 transform}%
10675 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10676 }%
10677 %

```

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.

```

10678 \def\headerps@out#1{%
10679 \special{%
10680   prepostscript TeXdict begin\Hy@ps@CR
10681   #1\Hy@ps@CR
10682   end%
10683 }%
10684 }%
10685 %

```

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.

```

10686 \g@addto@macro\Hy@FirstPageHook{%
10687 \headerps@out{%
10688 /betterpdfmark {%
10689   systemdict begin %
10690   dup /BP eq%
10691   {cleartomark gsave nulldevice []%
10692   {dup /EP eq%
10693     {cleartomark cleartomark grestore}%
10694     {cleartomark}%
10695     ifelse%
10696   }ifelse %
10697   end%
10698 }def\Hy@ps@CR
10699 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10700 }% end of \headerps@out
10701 }% end of \AtBeginShipoutFirst
10702 %
10703 \input{pdfmark.def}%
10704 %
10705 \ifx\@pdfproducer\relax
10706 \def\@pdfproducer{Textures + Distiller}%
10707 \fi
10708 \providecommand*\@pdfborder{0 0 1}
10709 \providecommand*\@pdfborderstyle{}
10710 \providecommand*\@pdfview{XYZ}
10711 \providecommand*\@pdfviewparams{ H.V}
10712 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```

10713 \Hy@AtBeginDocument{%
10714 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

10715 /vsize {\Hy@pageheight} def%

```

```

10716 /DvipsToPDF {} def%
10717 /PDFToDvips {} def%
10718 /BPToDvips {} def%
10719 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10720 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10721 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10722 /H.S {%
10723   currentpoint %
10724   HyperBorder add /pdf@lly exch def %
10725   dup DvipsToPDF 72 add /pdf@hoff exch def %
10726   HyperBorder sub /pdf@llx exch def%
10727 } def\Hy@ps@CR
10728 /H.L {%
10729   2 sub %
10730   PDFToDvips /HyperBase exch def %
10731   currentpoint %
10732   HyperBase sub /pdf@ury exch def%
10733   /pdf@urx exch def%
10734 } def\Hy@ps@CR
10735 /H.A {%
10736   H.L %
10737   currentpoint exch pop %
10738   vsize 72 sub exch DvipsToPDF %
10739   HyperBase sub % baseline skip
10740   sub /pdf@voff exch def%
10741 } def\Hy@ps@CR
10742 /H.R {%
10743   currentpoint %
10744   HyperBorder sub /pdf@ury exch def %
10745   HyperBorder add /pdf@urx exch def %
10746   currentpoint exch pop vsize 72 sub %
10747   exch DvipsToPDF sub /pdf@voff exch def%
10748 } def\Hy@ps@CR
10749 }%
10750 }

10751 \Hy@AtBeginDocument{%
10752   \ifHy@colorlinks
10753     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10754   \fi
10755 }

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.

10756 \expandafter\let\expandafter\keepPDF@SetupDoc
10757   \csname PDF@SetupDoc\endcsname
10758 \def\PDF@SetupDoc{%
10759   \ifx\@baseurl\@empty
10760   \else
10761     \special{html:<base href="\@baseurl">}%
10762   \fi
10763   \keepPDF@SetupDoc
10764 }
10765 \def\hyper@anchor#1{%
10766   \Hy@SaveLastskip
10767   \Hy@VerboseAnchor{#1}%
10768   \begingroup
10769     \let\protect=\string

```

```

10770 \special{html:<a name=%
10771 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10772 \endgroup
10773 \Hy@activeanchortrue
10774 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10775 \special{html:</a>}%
10776 \Hy@activeanchorfalse
10777 \Hy@RestoreLastskip
10778 }
10779 \def\hyper@anchorstart#1{%
10780 \Hy@SaveLastskip
10781 \Hy@VerboseAnchor{#1}%
10782 \begingroup
10783 \hyper@chars
10784 \special{html:<a name=%
10785 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10786 \endgroup
10787 \Hy@activeanchortrue
10788 }
10789 \def\hyper@anchorend{%
10790 \special{html:</a>}%
10791 \Hy@activeanchorfalse
10792 \Hy@RestoreLastskip
10793 }
10794 \def\@urlltype{url}
10795 \def\hyper@linkstart#1#2{%
10796 \Hy@VerboseLinkStart{#1}{#2}%
10797 \expandafter\Hy@colorlink\csname @#1color\endcsname
10798 \def\Hy@tempa{#1}%
10799 \ifx\Hy@tempa\@urlltype
10800 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10801 \else
10802 \begingroup
10803 \hyper@chars
10804 \special{%
10805 html:<a href=%
10806 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
10807 }%
10808 \endgroup
10809 \fi
10810 }
10811 \def\hyper@linkend{%
10812 \special{html:</a>}%
10813 \Hy@endcolorlink
10814 }
10815 \def\hyper@linkfile#1#2#3{%
10816 \hyper@linkurl{#1}{%
10817 \Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi
10818 }%
10819 }
10820 \def\hyper@linkurl#1#2{%
10821 \leavevmode
10822 \ifHy@raiselinks
10823 \setbox\@tempboxa=\color@hbox #1\color@endbox
10824 \@linkdim\dp\@tempboxa
10825 \lower\@linkdim\hbox{%
10826 \hyper@chars

```

```

10827 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10828 }%
10829 \Hy@colorlink\@urlcolor#1%
10830 \@linkdim\ht\@tempboxa
10831 \advance\@linkdim by -6.5\p@
10832 \raise\@linkdim\hbox{\special{html:</a>}}%
10833 \Hy@endcolorlink
10834 \else
10835 \begingroup
10836 \hyper@chars
10837 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10838 \Hy@colorlink\@urlcolor#1%
10839 \special{html:</a>}%
10840 \Hy@endcolorlink
10841 \endgroup
10842 \fi
10843 }

```

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

```

10844 \def\hyper@link#1#2#3{%
10845 \Hy@VerboseLinkStart{#1}{#2}%
10846 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
10847 }
10848 \def\hyper@image#1#2{%
10849 \begingroup
10850 \hyper@chars
10851 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10852 \endgroup
10853 }
10854 </textures>

```

46.12 dvipsone

```

10855 % \subsection{dvipsone driver}
10856 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10857 % |\special| commands.
10858 (*dvipsone)
10859 \providecommand*\XR@ext}{pdf}
10860 \def\Hy@raisedlink{}
10861 \providecommand*\@pdfborder{0 0 1}
10862 \providecommand*\@pdfborderstyle{}
10863 \def\literalps@out#1{\special{ps:#1}}%
10864 \def\headerps@out#1{\special{headertext=#1}}%
10865 \input{pdfmark.def}%
10866 \ifx\@pdfproducer\relax
10867 \def\@pdfproducer{dvipsone + Distiller}%
10868 \fi
10869 \HyInfo@AddonUnsupportedtrue
10870 \def\PDF@FinishDoc{%
10871 \Hy@UseMaketitleInfos
10872 \HyInfo@TrappedUnsupported
10873 \special{PDF: Keywords \@pdfkeywords}%
10874 \special{PDF: Title \@pdftitle}%
10875 \special{PDF: Creator \@pdfcreator}%
10876 \ifx\@pdfcreationdate\empty
10877 \else
10878 \special{PDF: CreationDate \@pdfcreationdate}%
10879 \fi

```

```

10880 \ifx\@pdfmoddate\@empty
10881 \else
10882 \special{PDF: ModDate \@pdfmoddate}%
10883 \fi
10884 \special{PDF: Author \@pdfauthor}%
10885 \ifx\@pdfproducer\relax
10886 \else
10887 \special{PDF: Producer \@pdfproducer}%
10888 \fi
10889 \special{PDF: Subject \@pdfsubject}%
10890 \Hy@DisableOption{pdfauthor}%
10891 \Hy@DisableOption{pdftitle}%
10892 \Hy@DisableOption{pdfsubject}%
10893 \Hy@DisableOption{pdfcreator}%
10894 \Hy@DisableOption{pdfcreationdate}%
10895 \Hy@DisableOption{pdfmoddate}%
10896 \Hy@DisableOption{pdfproducer}%
10897 \Hy@DisableOption{pdfkeywords}%
10898 \Hy@DisableOption{pdftrapped}%
10899 \Hy@DisableOption{pdfinfo}%
10900 }
10901 \def\PDF@SetupDoc{%
10902 \def\Hy@temp{}%
10903 \ifx\@pdfstartpage\@empty
10904 \else
10905 \ifx\@pdfstartview\@empty
10906 \else
10907 \edef\Hy@temp{%
10908 ,Page=\@pdfstartpage
10909 ,View=\@pdfstartview
10910 }%
10911 \fi
10912 \fi
10913 \edef\Hy@temp{%
10914 \noexpand\pdfmark{%
10915 pdfmark=/DOCVIEW,%
10916 PageMode=/\@pdfpagemode
10917 \Hy@temp
10918 }%
10919 }%
10920 \Hy@temp
10921 \ifx\@pdfpagescrop\@empty
10922 \else
10923 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10924 \fi
10925 \edef\Hy@temp{%
10926 \ifHy@toolbar\else /HideToolbar true\fi
10927 \ifHy@menubar\else /HideMenubar true\fi
10928 \ifHy>windowui\else /HideWindowUI true\fi
10929 \ifHy@fitwindow /FitWindow true\fi
10930 \ifHy@centerwindow /CenterWindow true\fi
10931 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10932 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10933 \Hy@UseNameKey{Direction}\@pdfdirection
10934 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10935 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10936 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```



```

10937 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10938 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10939 \Hy@UseNameKey{Duplex}\@pdfduplex
10940 \ifx\@pdfpicktraybypdfsize\@empty
10941 \else
10942 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10943 \fi
10944 \ifx\@pdfprintpagerange\@empty
10945 \else
10946 /PrintPageRange[\@pdfprintpagerange]%
10947 \fi
10948 \ifx\@pdfnumcopies\@empty
10949 \else
10950 /NumCopies \@pdfnumcopies
10951 \fi
10952 }%
10953 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10954 \pdfmark{%
10955 pdfmark=/PUT,%
10956 Raw={%
10957 \string{Catalog\string}<<%
10958 \ifx\Hy@temp\@empty
10959 \else
10960 /ViewerPreferences<<\Hy@temp>>%
10961 \fi
10962 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10963 \ifx\@pdflang\@empty
10964 \else
10965 /Lang(\@pdflang)%
10966 \fi
10967 \ifx\@baseurl\@empty
10968 \else
10969 /URI<</Base(\Hy@pstringB)>>%
10970 \fi
10971 >>%
10972 }%
10973 }%
10974 }
10975 \providecommand*\@pdfview{XYZ}
10976 \providecommand*\@pdfviewparams{ %
10977 gsave revscl currentpoint grestore %
10978 72 add exch pop null exch null%
10979 }
10980 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to $T_E X$.

```

10981 \g@addto@macro\Hy@FirstPageHook{%
10982 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

10983 /DvipsToPDF { 65781 div } def%
10984 /PDFToDvips { 65781 mul } def%
10985 /BPToDvips{65781 mul}def%
10986 /HyperBorder { 1 PDFToDvips } def%

```

```
10987 /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.

```
10988 /BorderArrayPatch{%
10989   [exch{%
10990     dup dup type/integertype eq exch type/realtype eq or%
10991     {BPToDvips}if%
10992   }forall]%
10993 }def%
10994 /H.S {%
10995   currentpoint %
10996   HyperBorder add /pdf@lly exch def %
10997   dup DvipsToPDF 72 add /pdf@hoff exch def %
10998   HyperBorder sub /pdf@llx exch def%
10999 } def%
11000 /H.L {%
11001   2 sub %
11002   PDFToDvips /HyperBase exch def %
11003   currentpoint %
11004   HyperBase sub /pdf@ury exch def%
11005   /pdf@urx exch def%
11006 } def%
11007 /H.A {%
11008   H.L %
11009   currentpoint exch pop %
11010   HyperBase sub % baseline skip
11011   DvipsToPDF /pdf@voff exch def%
11012 } def%
11013 /H.R {%
11014   currentpoint %
11015   HyperBorder sub /pdf@ury exch def %
11016   HyperBorder add /pdf@urx exch def %
11017   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11018 } def%
11019 }%
11020 }
11021 </dvipsone>
```

46.13 TeX4ht

```
11022 <*tex4ht>
11023 \providecommand*{\XR@ext}{html}
11024 \def\Hy@raisedlink{}
11025 \ifpackageloaded{tex4ht}{%
11026   \typeout{hyperref tex4ht: tex4ht already loaded}%
11027 }{%
11028   \RequirePackage[hTeX4ht]{tex4ht}%
11029 }
11030 \hyperlinkfileprefix{}
11031 \def\PDF@FinishDoc{}
11032 \def\PDF@SetupDoc{%
11033   \ifx\@baseurl\@empty
11034   \else
11035     \special{t4ht=<base href="\@baseurl">}%
11036   \fi
11037 }
```

```

11038 \def\hyper@anchor#1{%
11039   \Hy@SaveLastskip
11040   \Hy@VerboseAnchor{#1}%
11041   \begingroup
11042     \let\protect=\string
11043     \special{t4ht=<a name=%
11044       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11045   \endgroup
11046   \Hy@activeanchortrue
11047   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11048   \special{t4ht=</a>}%
11049   \Hy@activeanchorfalse
11050   \Hy@RestoreLastskip
11051 }
11052 \def\hyper@anchorstart#1{%
11053   \Hy@SaveLastskip
11054   \Hy@VerboseAnchor{#1}%
11055   \begingroup
11056     \hyper@chars\special{t4ht=<a name=%
11057       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11058   \endgroup
11059   \Hy@activeanchortrue
11060 }
11061 \def\hyper@anchorend{%
11062   \special{t4ht=</a>}%
11063   \Hy@activeanchorfalse
11064   \Hy@RestoreLastskip
11065 }
11066 \def\@urlltype{url}
11067 \def\hyper@linkstart#1#2{%
11068   \Hy@VerboseLinkStart{#1}{#2}%
11069   \expandafter\Hy@colorlink\csname @#1color\endcsname
11070   \def\Hy@tempa{#1}%
11071   \ifx\Hy@tempa\@urlltype
11072     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11073   \else
11074     \begingroup
11075       \hyper@chars
11076       \special{t4ht=<a href=%
11077         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
11078     \endgroup
11079   \fi
11080 }
11081 \def\hyper@linkend{%
11082   \special{t4ht=</a>}%
11083   \Hy@endcolorlink
11084 }
11085 \def\hyper@linkfile#1#2#3{%
11086   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11087 }
11088 \def\hyper@linkurl#1#2{%
11089   \leavevmode
11090   \ifHy@raiselinks
11091     \setbox\@tempboxa=\color@hbox #1\color@endbox
11092     \@linkdim\dp\@tempboxa
11093     \lower\@linkdim\hbox{%
11094       \begingroup

```

```

11095      \hyper@chars
11096      \special{%
11097        t4ht=<a href=\hyper@quote#2\hyper@quote>%
11098      }%
11099      \endgroup
11100    }%
11101    \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11102    \@linkdim\ht\@tempboxa
11103    \advance\@linkdim by -6.5\p@
11104    \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11105  \else
11106    \begingroup
11107    \hyper@chars
11108    \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11109    \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11110    \special{t4ht=</a>}%
11111  \endgroup
11112 \fi
11113 }

```

Poor implementation of \hyper@link without considering #1.

```

11114 \def\hyper@link#1#2#3{%
11115   \Hy@VerboseLinkStart{#1}{#2}%
11116   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11117 }
11118 \def\hyper@image#1#2{%
11119   \begingroup
11120   \hyper@chars
11121   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11122   \endgroup
11123 }
11124 \let\autoref\ref
11125 \ifx \rEfLiNK \UnDef
11126   \def\rEfLiNK #1#2{#2}%
11127 \fi
11128 \def\backref#1{}
11129 </tex4ht>
11130 <*tex4htcfg>
11131 \IfFileExists{\jobname.cfg}{\endinput}{}
11132 \Preamble{html}
11133   \begin{document}%
11134 \EndPreamble
11135 \def\TeX{TeX}
11136 \def\OMEGA{Omega}
11137 \def\LaTeX{LaTeX}
11138 \def\LaTeXe{\LaTeX2e}
11139 \def\eTeX{e-TeX}
11140 \def\MF{Metafont}
11141 \def\MP{MetaPost}
11142 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11143 <*pdfmark>
11144 \long\def\@Form[#1]{%
11145   \g@addto@macro\Hy@FirstPageHook{%

```

```

11146 \headerps@out{%
11147 [%
11148   /_objdef{pdfDocEncoding}%
11149   /type/dict%
11150 /OBJ pdfmark%
11151 [%
11152   {pdfDocEncoding}%
11153   <<%
11154     /Type/Encoding%
11155     /Differences[%
11156       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11157       /tilde %
11158       39/quotesingle %
11159       96/grave %
11160       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11161       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11162       /quotedblbase/quotedblleft/quotedblright/quoteleft%
11163       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11164       /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11165       164/currency %
11166       166/brokenbar %
11167       168/dieresis/copyright/ordfeminine %
11168       172/logicalnot/.notdef/registered/macron/degree/plusminus%
11169       /twosuperior/threesuperior/acute/mu %
11170       183/periodcentered/cedilla/onesuperior/ordmasculine %
11171       188/onequarter/onehalf/threequarters %
11172       192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11173       /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11174       /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11175       /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11176       /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11177       /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11178       /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11179       /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
11180       /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11181       /ucircumflex/udieresis/yacute/thorn/ydieresis%
11182     ]%
11183   >>%
11184 /PUT pdfmark%
11185 [%
11186   /_objdef{ZaDb}%
11187   /type/dict%
11188 /OBJ pdfmark%
11189 [%
11190   {ZaDb}%
11191   <<%
11192     /Type/Font%
11193     /Subtype/Type1%
11194     /Name/ZaDb%
11195     /BaseFont/ZapfDingbats%
11196   >>%
11197 /PUT pdfmark%
11198 [%
11199   /_objdef{Helv}%
11200   /type/dict%
11201 /OBJ pdfmark%
11202 [%

```

```

11203 {Helv}%
11204 <<%
11205 /Type/Font%
11206 /Subtype/Type1%
11207 /Name/Helv%
11208 /BaseFont/Helvetica%
11209 /Encoding{pdfDocEncoding}%
11210 >>%
11211 /PUT pdfmark%
11212 [%
11213 /_objdef{aform}%
11214 /type/dict%
11215 /OBJ pdfmark%
11216 [%
11217 /_objdef{afields}%
11218 /type/array%
11219 /OBJ pdfmark%
11220 {%
11221 [%
11222 /BBox[0 0 100 100]%
11223 /_objdef{Check}%
11224 /BP pdfmark %
11225 1 0 0 setrgbcolor%
11226 /ZapfDingbats 80 selectfont %
11227 20 20 moveto%
11228 (4)show%
11229 [/EP pdfmark%
11230 [%
11231 /BBox[0 0 100 100]%
11232 /_objdef{Cross}%
11233 /BP pdfmark %
11234 1 0 0 setrgbcolor%
11235 /ZapfDingbats 80 selectfont %
11236 20 20 moveto%
11237 (8)show%
11238 [/EP pdfmark%
11239 [%
11240 /BBox[0 0 250 100]%
11241 /_objdef{Submit}%
11242 /BP pdfmark %
11243 0.6 setgray %
11244 0 0 250 100 rectfill %
11245 1 setgray %
11246 2 2 moveto %
11247 2 98 lineto %
11248 248 98 lineto %
11249 246 96 lineto %
11250 4 96 lineto %
11251 4 4 lineto %
11252 fill %
11253 0.34 setgray %
11254 248 98 moveto %
11255 248 2 lineto %
11256 2 2 lineto %
11257 4 4 lineto %
11258 246 4 lineto %
11259 246 96 lineto %

```

```

11260 fill%
11261 /Helvetica 76 selectfont %
11262 0 setgray %
11263 8 22.5 moveto%
11264 (Submit)show%
11265 [/EP pdfmark%
11266 [%
11267 /BBox[0 0 250 100]%
11268 /_objdef{SubmitP}%
11269 /BP pdfmark %
11270 0.6 setgray %
11271 0 0 250 100 rectfill %
11272 0.34 setgray %
11273 2 2 moveto %
11274 2 98 lineto %
11275 248 98 lineto %
11276 246 96 lineto %
11277 4 96 lineto %
11278 4 4 lineto %
11279 fill %
11280 1 setgray %
11281 248 98 moveto %
11282 248 2 lineto %
11283 2 2 lineto %
11284 4 4 lineto %
11285 246 4 lineto %
11286 246 96 lineto %
11287 fill%
11288 /Helvetica 76 selectfont %
11289 0 setgray %
11290 10 20.5 moveto%
11291 (Submit)show%
11292 [/EP pdfmark%
11293 } ?pdfmark%
11294 [%
11295 {aform}%
11296 <<%
11297 /Fields{afields}%
11298 /DR<<%
11299 /Font<<%
11300 /ZaDb{ZaDb}%
11301 /Helv{Helv}%
11302 >>%
11303 >>%
11304 /DA(/Helv 10 Tf 0 g)%
11305 /CO{corder}%
11306 \ifHy@pdfa
11307 \else
11308 /NeedAppearances true%
11309 \fi
11310 >>%
11311 /PUT pdfmark%
11312 [%
11313 {Catalog}%
11314 <<%
11315 /AcroForm{aform}%
11316 >>%

```

```

11317 /PUT pdfmark%
11318 [%
11319   /_objdef{corder}%
11320   /type/array%
11321 /OBJ pdfmark% dps
11322 }}%
11323   \setkeys{Form}{#1}%
11324 }
11325 \def\@endForm{}
11326 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11327   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11328 }
11329 \def\@TextField[#1]#2{% parameters, label
11330   \def\Fld@name{#2}%
11331   \def\Fld@default{}%
11332   \let\Fld@value\@empty
11333   \def\Fld@width{\DefaultWidthofText}%
11334   \def\Fld@height{%
11335     \ifFld@multiline
11336       \DefaultHeightofTextMultiline
11337     \else
11338       \DefaultHeightofText
11339     \fi
11340   }%
11341   \begingroup
11342     \Field@toks={ }%
11343     \expandafter\HyField@SetKeys\expandafter{%
11344       \DefaultOptionsofText,#1%
11345     }%
11346     \HyField@FlagsText
11347     \ifFld@hidden\def\Fld@width{1sp}\fi
11348     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11349     \LayoutTextField{#2}{%
11350       \Hy@escapeform\PDFForm@Text
11351       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11352         pdfmark=/ANN,Raw={\PDFForm@Text}%
11353       }%
11354     }%
11355   \endgroup
11356 }
11357 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11358   \def\Fld@name{#2}%
11359   \let\Fld@default\relax
11360   \let\Fld@value\relax
11361   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11362   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11363   \begingroup
11364     \Fld@menulength=0 %
11365     \@tempdima\z@
11366     \@for\@curropt:=#3\do{%
11367       \expandafter\Fld@checkequals\@curropt==\%
11368       \Hy@StepCount\Fld@menulength
11369       \settowidth{\@tempdimb}{\@currDisplay}%
11370       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11371     }%
11372     \advance\@tempdima by 15\p@
11373     \Field@toks={ }%

```



```

11374 \begingroup
11375   \HyField@SetKeys{#1}%
11376 \edef\x{\endgroup
11377   \noexpand\expandafter
11378   \noexpand\HyField@SetKeys
11379   \noexpand\expandafter{%
11380     \expandafter\noexpand\csname DefaultOptionsof%
11381       \ifFld@radio
11382         Radio%
11383       \else
11384         \ifFld@combo
11385         \ifFld@popdown
11386           PopdownBox%
11387         \else
11388           ComboBox%
11389         \fi
11390       \else
11391         ListBox%
11392       \fi
11393     \fi
11394   \endcsname
11395 }%
11396 }\x
11397 \HyField@SetKeys{#1}%
11398 \ifFld@hidden\def\Fld@width{1sp}\fi
11399 \ifx\Fld@value\relax
11400   \let\Fld@value\Fld@default
11401 \fi
11402 \LayoutChoiceField{#2}{%
11403   \ifFld@radio
11404     \HyField@FlagsRadioButton
11405     \@@Radio{#3}%
11406   \else
11407     \begingroup
11408     \HyField@FlagsChoice
11409     \ifdim\Fld@width<\@tempdima
11410       \ifdim\@tempdima<1cm\@tempdima1cm\fi
11411       \edef\Fld@width{\the\@tempdima}%
11412     \fi
11413     \ifFld@combo
11414     \else
11415       \@tempdima=\the\Fld@menulength\Fld@charsize
11416       \advance\@tempdima by \Fld@borderwidth bp %
11417       \advance\@tempdima by \Fld@borderwidth bp %
11418       \edef\Fld@height{\the\@tempdima}%
11419     \fi
11420     \@@ListBox{#3}%
11421   \endgroup
11422 \fi
11423 }%
11424 \endgroup
11425 }
11426 \def\@@Radio#1{%
11427   \Fld@listcount=0 %
11428   \@for\@curropt:=#1\do{%
11429     \expandafter\Fld@checkequals\@curropt==\\%
11430     \Hy@StepCount\Fld@listcount

```

```

11431 \@currDisplay\space
11432 \Hy@escapeform\PDFForm@Radio
11433 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11434 pdfmark=/ANN,%
11435 Raw={%
11436 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11437 }%
11438 } % deliberate space between radio buttons
11439 }%
11440 }
11441 \newcount\Fld@listcount
11442 \def\@@ListBox#1{%
11443 \HyField@PDFChoices{#1}%
11444 \Hy@escapeform\PDFForm@List
11445 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11446 pdfmark=/ANN,Raw={\PDFForm@List}%
11447 }%
11448 }
11449 \def\@PushButton[#1]#2{% parameters, label
11450 \def\Fld@name{#2}%
11451 \begingroup
11452 \Field@toks={ }%
11453 \expandafter\HyField@SetKeys\expandafter{%
11454 \DefaultOptionsofPushButton,#1%
11455 }%
11456 \ifHy@pdfa
11457 \PackageError{hyperref}{%
11458 PDF/A: Push button with JavaScript is prohibited%
11459 }\@ehc
11460 \LayoutPushButtonField{%
11461 \leavevmode
11462 \MakeButtonField{#2}%
11463 }%
11464 \else
11465 \HyField@FlagsPushButton
11466 \ifFld@hidden\def\Fld@width{1sp}\fi
11467 \LayoutPushButtonField{%
11468 \leavevmode
11469 \Hy@escapeform\PDFForm@Push
11470 \pdfmark[\MakeButtonField{#2}]{%
11471 pdfmark=/ANN,Raw={\PDFForm@Push}%
11472 }%
11473 }%
11474 \fi
11475 \endgroup
11476 }
11477 \def\@Submit[#1]#2{%
11478 \Field@toks={ }%
11479 \def\Fld@width{\DefaultWidthofSubmit}%
11480 \def\Fld@height{\DefaultHeightofSubmit}%
11481 \begingroup
11482 \expandafter\HyField@SetKeys\expandafter{%
11483 \DefaultOptionsofSubmit,#1%
11484 }%
11485 \HyField@FlagsPushButton
11486 \HyField@FlagsSubmit
11487 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11488 \Hy@escapeform\PDFForm@Submit
11489 \pdfmark[\MakeButtonField{#2}]{%
11490 pdfmark=/ANN,%
11491 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11492 }%
11493 \endgroup
11494 }
11495 \def\@Reset[#1]#2{%
11496 \Field@toks={ }%
11497 \def\Fld@width{\DefaultWidthofReset}%
11498 \def\Fld@height{\DefaultHeightofReset}%
11499 \begingroup
11500 \expandafter\HyField@SetKeys\expandafter{%
11501 \DefaultOptionsofReset,#1%
11502 }%
11503 \leavevmode
11504 \ifHy@pdfa
11505 \PackageError{hyperref}{%
11506 PDF/A: Reset action is prohibited%
11507 }\@ehc
11508 \MakeButtonField{#2}%
11509 \else
11510 \HyField@FlagsPushButton
11511 \ifFld@hidden\def\Fld@width{1sp}\fi
11512 \Hy@escapeform\PDFForm@Reset
11513 \pdfmark[\MakeButtonField{#2}]{%
11514 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11515 }%
11516 \fi
11517 \endgroup
11518 }%
11519 \def\@CheckBox[#1]#2{% parameters, label
11520 \def\Fld@name{#2}%
11521 \def\Fld@default{0}%
11522 \begingroup
11523 \def\Fld@width{\DefaultWidthofCheckBox}%
11524 \def\Fld@height{\DefaultHeightofCheckBox}%
11525 \Field@toks={ }%
11526 \expandafter\HyField@SetKeys\expandafter{%
11527 \DefaultOptionsofCheckBox,#1%
11528 }%
11529 \HyField@FlagsCheckBox
11530 \ifFld@hidden\def\Fld@width{1sp}\fi
11531 \LayoutCheckField{#2}{%
11532 \Hy@escapeform\PDFForm@Check
11533 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11534 pdfmark=/ANN,Raw={\PDFForm@Check}%
11535 }%
11536 }%
11537 \endgroup
11538 }
11539 \pdfmark>

```

47.2 HyperTeX

```

11540 <*hypertex>
11541 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11542 \def\@endForm{}

```

```

11543 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11544 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11545 }
11546 \def\@TextField[#1]#2{% parameters, label
11547 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11548 }
11549 \def\@CheckBox[#1]#2{% parameters, label
11550 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11551 }
11552 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11553 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11554 }
11555 \def\@PushButton[#1]#2{% parameters, label
11556 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11557 }
11558 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11559 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11560 \end{hypertex}

```

47.3 TeX4ht

```

11561 \let\tex4ht
11562 \def\@Form[#1]{%
11563 \setkeys{Form}{#1}%
11564 \HCode{<form action="\Form@action" method="\Form@method">}%
11565 }
11566 \def\@endForm{\HCode{</form>}}
11567 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11568 \typeout{Sorry, TeX4ht does not support gauges}%
11569 }
11570 \def\@TextField[#1]#2{% parameters, label
11571 \let\Hy@reserved@a\@empty
11572 \def\Fld@name{#2}%
11573 \def\Fld@default{}%
11574 \bgroup
11575 \Field@toks={ }%
11576 \setkeys{Field}{#1}%
11577 \HCode{<label for="\Fld@name">#2</label>}%
11578 \ifFld@password
11579 \@@PasswordField
11580 \else
11581 \@@TextField
11582 \fi
11583 \egroup
11584 }
11585 \def\@@PasswordField{%
11586 \HCode{%
11587 <input type="password" %
11588 id="\Fld@name" %
11589 name="\Fld@name" %
11590 \ifFld@hidden type="hidden" \fi
11591 value="\Fld@default" %
11592 \the\Field@toks
11593 >%
11594 }%
11595 }
11596 \def\@@TextField{%
11597 \ifFld@multiline

```

```

11598 \HCode{<textarea %
11599 \ifFld@readonly readonly \fi
11600 id="\Fld@name" %
11601 name="\Fld@name" %
11602 \ifFld@hidden type="hidden" \fi
11603 \the\Field@toks>%
11604 }%
11605 \Fld@default
11606 \HCode{</textarea>}%
11607 \else
11608 \HCode{<input type="textbox" %
11609 \ifFld@readonly readonly \fi
11610 id="\Fld@name" %
11611 name="\Fld@name" %
11612 \ifFld@hidden type="hidden" \fi
11613 value="\Fld@default" %
11614 \the\Field@toks>%
11615 }%
11616 \fi
11617 }
11618 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11619 \def\Fld@name{#2}%
11620 \def\Fld@default{}%
11621 \let\Hy@reserved@a\relax
11622 \begingroup
11623 \expandafter\Fld@findlength#3\\%
11624 \Field@toks={ }%
11625 \setkeys{Field}{#1}%
11626 #2%
11627 \ifFld@radio
11628 \expandafter\@@Radio#3\\%
11629 \else
11630 \expandafter\@@Menu#3\\%
11631 \fi
11632 \endgroup
11633 }
11634 \def\Fld@findlength#1\\{%
11635 \Fld@menulength=0 %
11636 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11637 }
11638 \def\@@Menu#1\\{%
11639 \HCode{<select size="\the\Fld@menulength" %
11640 name="\Fld@name" %
11641 \the\Field@toks>%
11642 }%
11643 \@for\@curropt:=#1\do{%
11644 \expandafter\Fld@checkequals\@curropt==\\%
11645 \HCode{<option %
11646 \ifx\@curropt\Fld@default selected \fi
11647 value="\@currValue">\@currDisplay</option>%
11648 }%
11649 }%
11650 \HCode{</select>}%
11651 }
11652 \def\@@Radio#1\\{%
11653 \@for\@curropt:=#1\do{%
11654 \expandafter\Fld@checkequals\@curropt==\\%

```

```

11655 \HCode{<input type="radio" %
11656 \ifx\@curropt\Fld@default checked \fi
11657 name="\Fld@name" %
11658 value="\@currValue" %
11659 \the\Fld@toks>%
11660 }%
11661 \@currDisplay
11662 }%
11663 }
11664 \def\@PushButton[#1]#2{% parameters, label
11665 \def\Fld@name{#2}%
11666 \bgroup
11667 \Field@toks={ }%
11668 \setkeys{Field}{#1}%
11669 \HCode{<input type="button" %
11670 name="\Fld@name" %
11671 value="#2" %
11672 \the\Fld@toks>%
11673 }%
11674 \HCode{</button>}%
11675 \egroup
11676 }
11677 \def\@Submit[#1]#2{%
11678 \HCode{<button type="submit">#2</button>}%
11679 }
11680 \def\@Reset[#1]#2{%
11681 \HCode{<button type="reset">#2</button>}%
11682 }
11683 \def\@CheckBox[#1]#2{% parameters, label
11684 \let\Hy@reserved@a\@empty
11685 \def\Fld@name{#2}%
11686 \def\Fld@default{0}%
11687 \bgroup
11688 \Field@toks={ }%
11689 \setkeys{Field}{#1}%
11690 \HCode{<input type="checkbox" %
11691 \ifFld@checked checked \fi
11692 \ifFld@disabled disabled \fi
11693 \ifFld@readonly readonly \fi
11694 name="\Fld@name" %
11695 \ifFld@hidden type="hidden" \fi
11696 value="\Fld@default" %
11697 \the\Fld@toks>%
11698 #2%
11699 }%
11700 \egroup
11701 }
11702 </tex4ht>

```

47.4 pdfTeX

```

11703 <*pdfTeX>
11704 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11705 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11706 }
11707 \def\MakeFieldObject#1#2{\sbox0{#1}%
11708 \immediate\pdfxform0 %
11709 \expandafter\edef\csname #2Object\endcsname{%

```

```

11710 \the\pdflastxform\space 0 R%
11711 }%
11712 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
11713 }%
11714 \def\HyField@afields{}
11715 \begingroup\expandafter\expandafter\expandafter\endgroup
11716 \expandafter\ifx\csname pdflastlink\endcsname\relax
11717 \let\HyField@AddToFields\relax
11718 \PackageInfo{hyperref}{%
11719   You need pdfTeX 1.40.0 for setting the /Fields entry.%
11720 \MessageBreak
11721   Adobe Reader/Acrobat accepts an empty /Field array,%
11722 \MessageBreak
11723   but other PDF viewers might complain%
11724 }%
11725 \else
11726 \def\HyField@AuxAddToFields#1{}%
11727 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11728 \Hy@AtBeginDocument{%
11729   \if@filesw
11730     \immediate\write\@mainaux{%
11731       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11732     }%
11733   \fi
11734   \let\HyField@AfterAuxOpen\@firstofone
11735   \def\HyField@AuxAddToFields#1{%
11736     \xdef\HyField@afields{%
11737       \ifx\HyField@afields\@empty
11738       \else
11739         \HyField@afields
11740       \space
11741       \fi
11742       #1 0 R%
11743     }%
11744   }%
11745 }%
11746 \def\HyField@AddToFields{%
11747   \expandafter\HyField@@AddToFields\expandafter{%
11748     \the\pdflastlink
11749   }%
11750 }%
11751 \def\HyField@@AddToFields#1{%
11752   \HyField@AfterAuxOpen{%
11753     \if@filesw
11754       \write\@mainaux{%
11755         \string\HyField@AuxAddToFields{#1}%
11756       }%
11757     \fi
11758   }%
11759 }%
11760 \fi
11761 \def\@Form[#1]{}%
11762 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11763 \setkeys{Form}{#1}%
11764 \Hy@FormObjects
11765 \ifnum\pdfTeXversion>13 %
11766 \pdfrefobj\OBJ@pdfdocencoding

```

```

11767 \pdfrefobj\OBJ@ZaDb
11768 \pdfrefobj\OBJ@Helv
11769 \fi
11770 \AtVeryEndDocument{%
11771 \immediate\pdfobj{%
11772 <<%
11773 /Fields\HyField@afields}%
11774 /DR<<%
11775 /Font<<%
11776 /ZaDb \OBJ@ZaDb\space 0 R%
11777 /Helv \OBJ@Helv\space 0 R%
11778 >>%
11779 >>%
11780 /DA(/Helv 10 Tf 0 g)%
11781 \ifHy@pdfa
11782 \else
11783 /NeedAppearances true%
11784 \fi
11785 >>%
11786 }%
11787 \edef\OBJ@acroform{\the\pdfastobj}%
11788 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11789 }%
11790 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

11791 \begingroup
11792 \fontfamily{pzd}%
11793 \fontencoding{U}%
11794 \fontseries{m}%
11795 \fontshape{n}%
11796 \selectfont
11797 \char123 %
11798 \endgroup
11799 }{Ding}%
11800 \MakeFieldObject{%
11801 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11802 }{Submit}%
11803 \MakeFieldObject{%
11804 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11805 }{SubmitP}%
11806 }
11807 \def\@endForm{}
11808 \def\@TextField[#1]#2{% parameters, label
11809 \def\Fld@name{#2}%
11810 \def\Fld@default{}%
11811 \let\Fld@value\@empty
11812 \def\Fld@width{\DefaultWidthofText}%
11813 \def\Fld@height{%
11814 \ifFld@multiline
11815 \DefaultHeightofTextMultiline
11816 \else
11817 \DefaultHeightofText
11818 \fi
11819 }%
11820 \begingroup
11821 \Field@toks={}%
11822 \expandafter\HyField@SetKeys\expandafter{%

```



```

11823 \DefaultOptionsofText,#1%
11824 }%
11825 \PDFForm@Name
11826 \HyField@FlagsText
11827 \ifFld@hidden\def\Fld@width{1sp}\fi
11828 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
11829 \LayoutTextField{#2}{%
11830 \Hy@escapeform\PDFForm@Text
11831 \pdfstartlink user {\PDFForm@Text}\relax
11832 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11833 \HyField@AddToFields
11834 }%
11835 \endgroup
11836 }
11837 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11838 \def\Fld@name{#2}%
11839 \let\Fld@default\relax
11840 \let\Fld@value\relax
11841 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11842 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11843 \begingroup
11844 \Fld@menulength=0 %
11845 \@tempdima\z@
11846 \@for\@curropt:=#3\do{%
11847 \expandafter\Fld@checkequals\@curropt==\%
11848 \Hy@StepCount\Fld@menulength
11849 \settowidth{\@tempdimb}{\@currDisplay}%
11850 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11851 }%
11852 \advance\@tempdima by 15\p@
11853 \Field@toks={ }%
11854 \begingroup
11855 \HyField@SetKeys{#1}%
11856 \edef\x{\endgroup
11857 \noexpand\expandafter
11858 \noexpand\HyField@SetKeys
11859 \noexpand\expandafter{%
11860 \expandafter\noexpand\csname DefaultOptionsof%
11861 \ifFld@radio
11862 Radio%
11863 \else
11864 \ifFld@combo
11865 \ifFld@popdown
11866 PopdownBox%
11867 \else
11868 ComboBox%
11869 \fi
11870 \else
11871 ListBox%
11872 \fi
11873 \fi
11874 \endcsname
11875 }%
11876 }\x
11877 \HyField@SetKeys{#1}%
11878 \PDFForm@Name
11879 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11880 \ifx\Fld@value\relax
11881 \let\Fld@value\Fld@default
11882 \fi
11883 \LayoutChoiceField{#2}{%
11884 \ifFld@radio
11885 \HyField@FlagsRadioButton
11886 \@@Radio{#3}%
11887 \else
11888 \beginngroup
11889 \HyField@FlagsChoice
11890 \ifdim\Fld@width<\@tempdima
11891 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11892 \edef\Fld@width{\the\@tempdima}%
11893 \fi
11894 \ifFld@combo
11895 \else
11896 \@tempdima=\the\Fld@menulength\Fld@charsize
11897 \advance\@tempdima by \Fld@borderwidth bp %
11898 \advance\@tempdima by \Fld@borderwidth bp %
11899 \edef\Fld@height{\the\@tempdima}%
11900 \fi
11901 \@@ListBox{#3}%
11902 \endgroup
11903 \fi
11904 }%
11905 \endgroup
11906 }
11907 \def\@@Radio#1{%
11908 \Fld@listcount=0 %
11909 \@for\@curropt:=#1\do{%
11910 \expandafter\Fld@checkequals\@curropt==\%
11911 \Hy@StepCount\Fld@listcount
11912 \@currDisplay\space
11913 \leavevmode
11914 \Hy@escapeform\PDFForm@Radio
11915 \pdfstartlink user {%
11916 \PDFForm@Radio
11917 /AP<<%
11918 /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.

```

11919 /\@currValue\space \DingObject
11920 >>%
11921 >>%
11922 }%
11923 \relax
11924 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11925 \ifnum\Fld@listcount=1 %
11926 \HyField@AddToFields
11927 \fi
11928 \space % deliberate space between radio buttons
11929 }%
11930 }
11931 \newcount\Fld@listcount
11932 \def\@@ListBox#1{%
11933 \HyField@PDFChoices{#1}%

```

```

11934 \leavevmode
11935 \Hy@escapeform\PDFForm@List
11936 \pdfstartlink user {\PDFForm@List}\relax
11937 \MakeChoiceField{\Fld@width}{\Fld@height}%
11938 \pdfendlink
11939 \HyField@AddToFields
11940 }
11941 \def\@PushButton[#1]#2{% parameters, label
11942 \def\Fld@name{#2}%
11943 \begingroup
11944 \Field@toks={ }%
11945 \expandafter\HyField@SetKeys\expandafter{%
11946 \DefaultOptionsofPushButton,#1%
11947 }%
11948 \PDFForm@Name
11949 \ifHy@pdfa
11950 \PackageError{hyperref}{%
11951 PDF/A: Push button with JavaScript is prohibited%
11952 }\@ehc
11953 \LayoutPushButtonField{%
11954 \leavevmode
11955 \MakeButtonField{#2}%
11956 }%
11957 \else
11958 \HyField@FlagsPushButton
11959 \ifFld@hidden\def\Fld@width{1sp}\fi
11960 \LayoutPushButtonField{%
11961 \leavevmode
11962 \Hy@escapeform\PDFForm@Push
11963 \pdfstartlink user {\PDFForm@Push}\relax
11964 \MakeButtonField{#2}%
11965 \pdfendlink
11966 \HyField@AddToFields
11967 }%
11968 \fi
11969 \endgroup
11970 }
11971 \def\@Submit[#1]#2{%
11972 \Field@toks={ }%
11973 \def\Fld@width{\DefaultWidthofSubmit}%
11974 \def\Fld@height{\DefaultHeightofSubmit}%
11975 \begingroup
11976 \expandafter\HyField@SetKeys\expandafter{%
11977 \DefaultOptionsofSubmit,#1%
11978 }%
11979 \HyField@FlagsPushButton
11980 \HyField@FlagsSubmit
11981 \ifFld@hidden\def\Fld@width{1sp}\fi
11982 \leavevmode
11983 \Hy@escapeform\PDFForm@Submit
11984 \pdfstartlink user {%
11985 \PDFForm@Submit
11986 /AP<</N \SubmitObject/D \SubmitPObject>>%
11987 }%
11988 \relax
11989 \MakeButtonField{#2}%
11990 \pdfendlink

```

```

11991 \HyField@AddToFields
11992 \endgroup
11993 }
11994 \def\@Reset[#1]#2{%
11995 \Field@toks={ }%
11996 \def\Fld@width{\DefaultWidthofReset}%
11997 \def\Fld@height{\DefaultHeightofReset}%
11998 \begingroup
11999 \expandafter\HyField@SetKeys\expandafter{%
12000 \DefaultOptionsofReset,#1%
12001 }%
12002 \leavevmode
12003 \ifHy@pdfa
12004 \PackageError{hyperref}{%
12005 PDF/A: Reset action is prohibited%
12006 }\@ehc
12007 \MakeButtonField{#2}%
12008 \else
12009 \HyField@FlagsPushButton
12010 \ifFld@hidden\def\Fld@width{1sp}\fi
12011 \Hy@escapeform\PDFForm@Reset
12012 \pdfstartlink user {\PDFForm@Reset}\relax
12013 \MakeButtonField{#2}%
12014 \pdfendlink
12015 \HyField@AddToFields
12016 \fi
12017 \endgroup
12018 }
12019 \def\@CheckBox[#1]#2{% parameters, label
12020 \def\Fld@name{#2}%
12021 \def\Fld@default{0}%
12022 \begingroup
12023 \def\Fld@width{\DefaultWidthofCheckBox}%
12024 \def\Fld@height{\DefaultHeightofCheckBox}%
12025 \Field@toks={ }%
12026 \expandafter\HyField@SetKeys\expandafter{%
12027 \DefaultOptionsofCheckBox,#1%
12028 }%
12029 \PDFForm@Name
12030 \HyField@FlagsCheckBox
12031 \ifFld@hidden\def\Fld@width{1sp}\fi
12032 \LayoutCheckField{#2}{%
12033 \Hy@escapeform\PDFForm@Check
12034 \pdfstartlink user {\PDFForm@Check}\relax
12035 \MakeCheckField{\Fld@width}{\Fld@height}%
12036 \pdfendlink
12037 \HyField@AddToFields
12038 }%
12039 \endgroup
12040 }
12041 \def\Hy@FormObjects{%
12042 \pdfobj {%
12043 <<%
12044 /Type/Encoding%
12045 /Differences[%
12046 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12047 /ring/tilde %

```

```

12048 39/quotesingle %
12049 96/grave %
12050 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12051 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12052 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12053 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12054 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12055 164/currency %
12056 166/brokenbar %
12057 168/dieresis/copyright/ordfeminine %
12058 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12059 /twosuperior/threesuperior/acute/mu %
12060 183/periodcentered/cedilla/onesuperior/ordmasculine %
12061 188/onequarter/onehalf/threequarters %
12062 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12063 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12064 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12065 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12066 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12067 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12068 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12069 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12070 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12071 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12072 }%
12073 >>%
12074 }%
12075 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12076 \pdfobj{%
12077 <<%
12078 /Type/Font%
12079 /Subtype/Type1%
12080 /Name/ZaDb%
12081 /BaseFont/ZapfDingbats%
12082 >>%
12083 }%
12084 \xdef\OBJ@ZaDb{\the\pdflastobj}%
12085 \pdfobj{%
12086 <<%
12087 /Type/Font%
12088 /Subtype/Type1%
12089 /Name/Helv%
12090 /BaseFont/Helvetica%
12091 /Encoding \OBJ@pdfdocencoding\space 0 R%
12092 >>%
12093 }%
12094 \xdef\OBJ@Helv{\the\pdflastobj}%
12095 \global\let\Hy@FormObjects\relax
12096 }
12097 </pdfTeX>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf \TeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
12098 <*\dvipdfm | xetex>
```

\@Gauge

```

12099 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12100 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12101 }

```

\@Form

```

12102 \def\@Form[#1]{%
12103 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
12104 \setkeys{Form}{#1}%
12105 \Hy@FormObjects
12106 \@pdfm@mark{obj @afields []}%
12107 \@pdfm@mark{obj @corder []}%
12108 \@pdfm@mark{%
12109 obj @aform <<%
12110 /Fields @afields%
12111 /DR<<%
12112 /Font<<%
12113 /ZaDb @OBJZaDb%
12114 /Helv @OBJHelv%
12115 >>%
12116 >>%
12117 /DA(/Helv 10 Tf 0 g)%
12118 /CO @corder%
12119 \ifHy@pdfa
12120 \else
12121 /NeedAppearances true%
12122 \fi
12123 >>%
12124 }%
12125 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
12126 }

```

\@endForm

```

12127 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

12128 \def\dvipdfm@setdim{%
12129 height \the\ht\pdfm@box\space
12130 width \the\wd\pdfm@box\space
12131 depth \the\dp\pdfm@box\space
12132 }

```

\HyField@AnnotCount

```

12133 \newcount\HyField@AnnotCount
12134 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

12135 \def\HyField@AdvanceAnnotCount{%
12136 \global\advance\HyField@AnnotCount\@ne
12137 }

```

\HyField@TheAnnotCount

```

12138 \def\HyField@TheAnnotCount{%
12139 \the\HyField@AnnotCount
12140 }

```

\@TextField

```

12141 \def\@TextField[#1]#2{% parameters, label
12142   \def\Fld@name{#2}%
12143   \def\Fld@default{}%
12144   \let\Fld@value\@empty
12145   \def\Fld@width{\DefaultWidthofText}%
12146   \def\Fld@height{%
12147     \ifFld@multiline
12148       \DefaultHeightofTextMultiline
12149     \else
12150       \DefaultHeightofText
12151     \fi
12152   }%
12153   \begingroup
12154     \Field@toks={ }%
12155     \expandafter\HyField@SetKeys\expandafter{%
12156       \DefaultOptionsofText,#1%
12157     }%
12158     \PDFForm@Name
12159     \HyField@FlagsText
12160     \ifFld@hidden\def\Fld@width{1sp}\fi
12161     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12162     \setbox\pdfm@box=\hbox{%
12163       \MakeTextField{\Fld@width}{\Fld@height}%
12164     }%
12165     \HyField@AdvanceAnnotCount
12166     \LayoutTextField{#2}{%
12167       \Hy@escapeform\PDFForm@Text
12168       \@pdfm@mark{%
12169         ann @text\HyField@TheAnnotCount\space
12170         \dvipdfm@setdim << \PDFForm@Text >>%
12171       }%
12172     }%
12173     \unhbox\pdfm@box
12174     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12175     % record in @afields array
12176   \endgroup
12177 }

```

\@ChoiceMenu

```

12178 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12179   \def\Fld@name{#2}%
12180   \let\Fld@default\relax
12181   \let\Fld@value\relax
12182   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12183   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12184   \begingroup
12185     \Fld@menulength=0 %
12186     \@tempdima\z@
12187     \@for\@curropt=#3\do{%
12188       \expandafter\Fld@checkequals\@curropt==\%
12189       \Hy@StepCount\Fld@menulength
12190       \settowidth{\@tempdimb}{\@currDisplay}%
12191       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12192     }%
12193     \advance\@tempdima by 15\p@
12194     \Field@toks={ }%

```

```

12195 \begingroup
12196   \HyField@SetKeys{#1}%
12197 \edef\x{\endgroup
12198   \noexpand\expandafter
12199   \noexpand\HyField@SetKeys
12200   \noexpand\expandafter{%
12201     \expandafter\noexpand\csname DefaultOptionsof%
12202       \ifFld@radio
12203         Radio%
12204       \else
12205         \ifFld@combo
12206         \ifFld@popdown
12207           PopdownBox%
12208         \else
12209           ComboBox%
12210         \fi
12211       \else
12212         ListBox%
12213       \fi
12214     \fi
12215   \endcsname
12216   }%
12217 } \x
12218 \HyField@SetKeys{#1}%
12219 \PDFForm@Name
12220 \ifFld@hidden\def\Fld@width{1sp}\fi
12221 \ifx\Fld@value\relax
12222   \let\Fld@value\Fld@default
12223 \fi
12224 \LayoutChoiceField{#2}{%
12225   \ifFld@radio
12226     \HyField@FlagsRadioButton
12227     \@@Radio{#3}%
12228   \else
12229     \begingroup
12230     \HyField@FlagsChoice
12231     \ifdim\Fld@width<\@tempdima
12232       \ifdim\@tempdima<1cm\@tempdima1cm\fi
12233       \edef\Fld@width{\the\@tempdima}%
12234     \fi
12235     \ifFld@combo
12236     \else
12237       \@tempdima=\the\Fld@menulength\Fld@charsize
12238       \advance\@tempdima by \Fld@borderwidth bp %
12239       \advance\@tempdima by \Fld@borderwidth bp %
12240       \edef\Fld@height{\the\@tempdima}%
12241     \fi
12242     \@@ListBox{#3}%
12243   \endgroup
12244 \fi
12245 }%
12246 \endgroup
12247 }

```

\@@Radio

```

12248 \def\@@Radio#1{%
12249   \Fld@listcount=0 %

```



```

12250 \setbox\pdfm@box=\hbox{%
12251   \MakeRadioField{\Fld@width}{\Fld@height}%
12252 }%
12253 \@for\@curropt:=#1\do{%
12254   \expandafter\Fld@checkequals\@curropt==\%
12255   \Hy@StepCount\Fld@listcount
12256   \@currDisplay\space
12257   \leavevmode
12258   \Hy@escapeform\PDFForm@Radio
12259   \ifnum\Fld@listcount=1 %
12260     \HyField@AdvanceAnnotCount
12261   \fi
12262   \@pdfm@mark{%
12263     ann %
12264     \ifnum\Fld@listcount=1 %
12265       @radio\HyField@TheAnnotCount%
12266     \space
12267   \fi
12268   \dvi pdfm@setdim
12269   <<%
12270     \PDFForm@Radio
12271     /AP<</N<</\@currValue /null>>>>%
12272   >>%
12273 }%
12274 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12275 \ifnum\Fld@listcount=1 %
12276   \@pdfm@mark{%
12277     put @afields @radio\HyField@TheAnnotCount
12278   }%
12279 \fi
12280 }%
12281 }

```

\Fld@listcount

```

12282 \newcount\Fld@listcount

```

\@@ListBox

```

12283 \def\@@ListBox#1{%
12284   \HyField@PDFChoices{#1}%
12285   \setbox\pdfm@box=\hbox{%
12286     \MakeChoiceField{\Fld@width}{\Fld@height}%
12287   }%
12288   \leavevmode
12289   \Hy@escapeform\PDFForm@List
12290   \HyField@AdvanceAnnotCount
12291   \@pdfm@mark{%
12292     ann @list\HyField@TheAnnotCount\space
12293     \dvi pdfm@setdim
12294     <<\PDFForm@List>>%
12295   }%
12296   \unhbox\pdfm@box
12297   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12298 }

```

\@PushButton

```

12299 \def\@PushButton[#1]#2{% parameters, label
12300   \def\Fld@name{#2}%

```

```

12301 \begingroup
12302 \Field@toks={ }%
12303 \expandafter\HyField@SetKeys\expandafter{%
12304 \DefaultOptionsofPushButton,#1%
12305 }%
12306 \PDFForm@Name
12307 \ifHy@pdfa
12308 \PackageError{hyperref}{%
12309 PDF/A: Push button with JavaScript is prohibited%
12310 }\@ehc
12311 \LayoutPushButtonField{%
12312 \leavevmode
12313 \MakeButtonField{#2}%
12314 }%
12315 \else
12316 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12317 \HyField@FlagsPushButton
12318 \ifFld@hidden\def\Fld@width{1sp}\fi
12319 \HyField@AdvanceAnnotCount
12320 \LayoutPushButtonField{%
12321 \leavevmode
12322 \Hy@escapeform\PDFForm@Push
12323 \@pdfm@mark{%
12324 ann @push\HyField@TheAnnotCount\space
12325 \dvipdfm@setdim
12326 <<\PDFForm@Push>>%
12327 }%
12328 }%
12329 \unhbox\pdfm@box
12330 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12331 \fi
12332 \endgroup
12333 }

```

\@Submit

```

12334 \def\@Submit[#1]#2{%
12335 \Field@toks={ }%
12336 \def\Fld@width{\DefaultWidthofSubmit}%
12337 \def\Fld@height{\DefaultHeightofSubmit}%
12338 \begingroup
12339 \expandafter\HyField@SetKeys\expandafter{%
12340 \DefaultOptionsofSubmit,#1%
12341 }%
12342 \HyField@FlagsPushButton
12343 \HyField@FlagsSubmit
12344 \ifFld@hidden\def\Fld@width{1sp}\fi
12345 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12346 \leavevmode
12347 \Hy@escapeform\PDFForm@Submit
12348 \HyField@AdvanceAnnotCount
12349 \@pdfm@mark{%
12350 ann @submit\HyField@TheAnnotCount\space
12351 \dvipdfm@setdim
12352 <<\PDFForm@Submit>>%
12353 }%
12354 \unhbox\pdfm@box%
12355 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%

```

```

12356 \endgroup
12357 }

\@Reset
12358 \def\@Reset[#1]#2{%
12359   \Field@toks={ }%
12360   \def\Fld@width{\DefaultWidthofReset}%
12361   \def\Fld@height{\DefaultHeightofReset}%
12362   \begingroup
12363     \expandafter\HyField@SetKeys\expandafter{%
12364       \DefaultOptionsofReset,#1%
12365     }%
12366     \leavevmode
12367     \ifHy@pdfa
12368       \PackageError{hyperref}{%
12369         PDF/A: Reset action is prohibited%
12370       }\@ehc
12371       \MakeButtonField{#2}%
12372     \else
12373       \HyField@FlagsPushButton
12374       \ifFld@hidden\def\Fld@width{1sp}\fi
12375       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12376       \Hy@escapeform\PDFForm@Reset
12377       \HyField@AdvanceAnnotCount
12378       \@pdfm@mark{%
12379         ann @reset\HyField@TheAnnotCount\space
12380         \dvipdfm@setdim
12381         <<\PDFForm@Reset>>%
12382       }%
12383       \unhbox\pdfm@box
12384       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12385     \fi
12386   \endgroup
12387 }

\@CheckBox
12388 \def\@CheckBox[#1]#2{% parameters, label
12389   \def\Fld@name{#2}%
12390   \def\Fld@default{0}%
12391   \begingroup
12392     \def\Fld@width{\DefaultWidthofCheckBox}%
12393     \def\Fld@height{\DefaultHeightofCheckBox}%
12394     \Field@toks={ }%
12395     \expandafter\HyField@SetKeys\expandafter{%
12396       \DefaultOptionsofCheckBox,#1%
12397     }%
12398     \PDFForm@Name
12399     \HyField@FlagsCheckBox
12400     \ifFld@hidden\def\Fld@width{1sp}\fi
12401     \setbox\pdfm@box=\hbox{%
12402       \MakeCheckField{\Fld@width}{\Fld@height}%
12403     }%
12404     \HyField@AdvanceAnnotCount
12405     \LayoutCheckField{#2}{%
12406       \Hy@escapeform\PDFForm@Check
12407       \@pdfm@mark{%
12408         ann @check\HyField@TheAnnotCount\space

```

```

12409     \dvipdfm@setdim
12410     <<\PDFForm@Check>>%
12411 }%
12412     \unhbox\pdfm@box
12413     \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12414 }%
12415 \endgroup
12416 }

12417 \def\Hy@FormObjects{%
12418   \@pdfm@mark{obj @OBJpdfdocencoding%
12419     <<%
12420       /Type/Encoding%
12421       /Differences[%
12422         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12423         39/quotesingle %
12424         96/grave %
12425         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12426         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12427         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12428         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12429         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12430         164/currency %
12431         166/brokenbar %
12432         168/dieresis/copyright/ordfeminine %
12433         172/logicalnot/.notdef/registered/macron/degree/plusminus%
12434         /twosuperior/threesuperior/acute/mu %
12435         183/periodcentered/cedilla/onesuperior/ordmasculine %
12436         188/onequarter/onehalf/threequarters %
12437         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12438         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12439         /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12440         /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12441         /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12442         /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12443         /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12444         /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12445         /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12446         /thorn/ydieresis%
12447       ]%
12448     >>%
12449   }%
12450   \@pdfm@mark{obj @OBJZaDb%
12451     <<%
12452       /Type/Font%
12453       /Subtype/Type1%
12454       /Name/ZaDb%
12455       /BaseFont/ZapfDingbats%
12456     >>%
12457   }%
12458   \@pdfm@mark{obj @OBJHelv%
12459     <<%
12460       /Type/Font%
12461       /Subtype/Type1%
12462       /Name/Helv%
12463       /BaseFont/Helvetica%
12464       /Encoding @OBJpdfdocencoding%
12465     >>%

```

```

12466 }%
12467 \global\let\Hy@FormObjects\relax
12468 }
12469 </dvipdfm | xetex>

```

47.6 Common forms part

```
12470 <*pdfform>
```

\Hy@escapestring

```

12471 \begingroup\expandafter\expandafter\expandafter\endgroup
12472 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12473 \let\Hy@escapestring\@firstofone
12474 \def\Hy@escapeform#1{%
12475   \ifHy@escapeform
12476     \def\Hy@escapestring##1{%
12477       \noexpand\Hy@escapestring{\noexpand##1}%
12478     }%
12479     \edef\Hy@temp{#1}%
12480     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12481     \def\Hy@escapestring##1{%
12482       \@ifundefined{Hy@esc@\string##1}{%
12483         ##1%
12484         \ThisShouldNotHappen
12485       }{%
12486         \csname Hy@esc@\string##1\endcsname
12487       }%
12488     }%
12489   \else
12490     \let\Hy@escapestring\@firstofone
12491   \fi
12492 }%
12493 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
12494   \ifx\#3\%
12495   \else
12496     \expandafter
12497     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12498     \Hy@ReturnAfterFi{%
12499       \Hy@@@escapeform#3\@nil
12500     }%
12501   \fi
12502 }%
12503 \else
12504 \def\Hy@escapeform#1{%
12505   \ifHy@escapeform
12506     \let\Hy@escapestring\pdfescapestring
12507   \else
12508     \let\Hy@escapestring\@firstofone
12509   \fi
12510 }%
12511 \Hy@escapeform{}%
12512 \fi

```

\PDFForm@Name

```

12513 \def\PDFForm@Name{%
12514   \begingroup
12515   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7

```

```

12516 \ifHy@unicode
12517 \Hy@unicodedefalse
12518 \fi
12519 \fi
12520 \HyPsd@XeTeXBigCharstrue
12521 \pdfstringdef\Hy@gtemp\Fld@name
12522 \endgroup
12523 \let\Fld@name\Hy@gtemp
12524 }

```

\PDFForm@Check

```

12525 \def\PDFForm@Check{%
12526 /Subtype/Widget%
12527 \Fld@annotflags
12528 /T(\Fld@name)%
12529 /FT/Btn%
12530 \Fld@flags
12531 /Q \Fld@align
12532 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12533 /MK<<%
12534 \ifnum\Fld@rotation=\z@
12535 \else
12536 /R \Fld@rotation
12537 \fi
12538 \ifx\Fld@bordercolor\relax
12539 \else
12540 /BC[\Fld@bordercolor]%
12541 \fi
12542 \ifx\Fld@bcolor\relax
12543 \else
12544 /BG[\Fld@bcolor]%
12545 \fi
12546 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12547 >>%
12548 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12549 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12550 /H/P%
12551 \ifFld@checked /V/Yes\else /V/Off\fi
12552 }

```

\PDFForm@Push

```

12553 \ifHy@pdfa
12554 \else
12555 \def\PDFForm@Push{%
12556 /Subtype/Widget%
12557 \Fld@annotflags
12558 /T(\Fld@name)%
12559 /FT/Btn%
12560 \Fld@flags
12561 /H/P%
12562 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12563 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12564 \ifx\Fld@bordercolor\relax\else 1\fi
12565 \space
12566 \else
12567 /MK<<%
12568 \ifnum\Fld@rotation=\z@

```

```

12569     \else
12570         /R \Fld@rotation
12571     \fi
12572     \ifx\Fld@bordercolor\relax
12573     \else
12574         /BC[\Fld@bordercolor]%
12575     \fi
12576     >>%
12577 \fi
12578 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12579 }%
12580 \fi

```

\Fld@additionalactions

```

12581 \def\Fld@@additionalactions{%
K input (keystroke) format
12582 \ifx\Fld@keystroke@code\@empty
12583 \else
12584     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12585 \fi

```

F display format

```

12586 \ifx\Fld@format@code\@empty
12587 \else
12588     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12589 \fi

```

V validation

```

12590 \ifx\Fld@validate@code\@empty
12591 \else
12592     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12593 \fi

```

C calculation

```

12594 \ifx\Fld@calculate@code\@empty
12595 \else
12596     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12597 \fi

```

Fo receiving the input focus

```

12598 \ifx\Fld@onfocus@code\@empty
12599 \else
12600     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12601 \fi

```

Bl loosing the input focus (blurred)

```

12602 \ifx\Fld@onblur@code\@empty
12603 \else
12604     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12605 \fi

```

D pressing the mouse button (down)

```

12606 \ifx\Fld@onmousedown@code\@empty
12607 \else
12608     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12609 \fi

```

U releasing the mouse button (up)

```

12610 \ifx\Fld@onmouseup@code\@empty

```

```

12611 \else
12612   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12613 \fi

```

E cursor enters the annotation's active area.

```

12614 \ifx\Fld@onenter@code\@empty
12615 \else
12616   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12617 \fi

```

X cursor exits the annotation's active area.

```

12618 \ifx\Fld@onexit@code\@empty
12619 \else
12620   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12621 \fi
12622 }
12623 \def\Fld@additionalactions{%
12624 \if\Fld@@additionalactions-%
12625 \else
12626   \ifHy@pdfa
12627   \else
12628     /AA<<\Fld@@additionalactions>>%
12629   \fi
12630 \fi
12631 }

```

\PDFForm@List

```

12632 \def\PDFForm@List{%
12633   /Subtype/Widget%
12634   \Fld@annotflags
12635   /T(\Fld@name)%
12636   /FT/Ch%
12637   \Fld@flags
12638   /Q \Fld@align
12639   /BS<</W \Fld@borderwidth/S\Fld@borderstyle>>%
12640   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12641     \ifx\Fld@bordercolor\relax\else 1\fi
12642     \ifx\Fld@bcolor\relax \else 1\fi
12643     \space
12644   \else
12645     /MK<<%
12646     \ifnum\Fld@rotation=\z@
12647     \else
12648       /R \Fld@rotation
12649     \fi
12650     \ifx\Fld@bordercolor\relax
12651     \else
12652       /BC[\Fld@bordercolor]%
12653     \fi
12654     \ifx\Fld@bcolor\relax
12655     \else
12656       /BG[\Fld@bcolor]%
12657     \fi
12658     >>%
12659   \fi
12660   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12661     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12662   \Fld@choices

```



```
12663 \Fld@additionalactions
12664 }
```

\PDFForm@Radio

```
12665 \def\PDFForm@Radio{%
12666   /Subtype/Widget%
12667   \Fld@annotflags
12668   /T(\Fld@name)%
12669   /FT/Btn%
12670   \Fld@flags
12671   /H/P%
12672   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
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     /CA(\Fld@radiosymbol)%
12687   >>%
12688   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12689     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12690   \ifx\@currValue\Fld@default
12691     /V/\Fld@default
12692   \else
12693     /V/Off%
12694   \fi
12695   \Fld@additionalactions
12696 }
```

\PDFForm@Text

```
12697 \def\PDFForm@Text{%
12698   /Subtype/Widget%
12699   \Fld@annotflags
12700   /T(\Fld@name)%
12701   /FT/Tx%
12702   \Fld@flags
12703   /Q \Fld@align
12704   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12705   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12706     \ifx\Fld@bordercolor\relax\else 1\fi
12707     \ifx\Fld@bcolor\relax \else 1\fi
12708     \space
12709   \else
12710     /MK<<%
12711     \ifnum\Fld@rotation=\z@
12712     \else
12713       /R \Fld@rotation
12714     \fi
12715     \ifx\Fld@bordercolor\relax
```

```

12716     \else
12717         /BC[\Fld@bordercolor]%
12718     \fi
12719     \ifx\Fld@bcolor\relax
12720     \else
12721         /BG[\Fld@bcolor]%
12722     \fi
12723     >>%
12724 \fi
12725 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12726     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12727 /DV(\Hy@escapestring{\Fld@default})%
12728 /V(\Hy@escapestring{\Fld@value})%
12729 \Fld@additionalactions
12730 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12731 }

```

\PDFForm@Submit

```

12732 \def\PDFForm@Submit{%
12733 /Subtype/Widget%
12734 \Fld@annotflags
12735 /T(\Fld@name)%
12736 /FT/Btn%
12737 \Fld@flags
12738 /H/P%
12739 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12740 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12741     \ifx\Fld@bordercolor\relax\else 1\fi
12742     \space
12743 \else
12744 /MK<<%
12745     \ifnum\Fld@rotation=\z@
12746     \else
12747         /R \Fld@rotation
12748     \fi
12749     \ifx\Fld@bordercolor\relax
12750     \else
12751         /BC[\Fld@bordercolor]%
12752     \fi
12753     >>%
12754 \fi
12755 /A<<%
12756 /S/SubmitForm%
12757 /F<<%
12758     /FS/URL%
12759     /F(\Hy@escapestring{\Form@action})%
12760     >>%
12761     \Fld@submitflags
12762     >>%
12763 }

```

\PDFForm@Reset

```

12764 \ifHy@pdfa
12765 \else
12766 \def\PDFForm@Reset{%
12767 /Subtype/Widget%
12768 \Fld@annotflags

```

```

12769 /T(\Fld@name)%
12770 /FT/Btn%
12771 \Fld@flags
12772 /H/P%
12773 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12774 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12775 \ifx\Fld@bordercolor\relax\else 1\fi
12776 \space
12777 \else
12778 /MK<<%
12779 \ifnum\Fld@rotation=\z@
12780 \else
12781 /R \Fld@rotation
12782 \fi
12783 \ifx\Fld@bordercolor\relax
12784 \else
12785 /BC[\Fld@bordercolor]%
12786 \fi
12787 % /CA (Clear)
12788 % /AC (Done)
12789 >>%
12790 \fi
12791 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12792 /A<</S/ResetForm>>%
12793 }%
12794 \fi

12795 </pdfform>
12796 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

12797 \def\phantomsection{%
12798 \Hy@MakeCurrentHrefAuto{section*}%
12799 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12800 }
12801 </package>

```

48.1 Bookmarks

```
12802 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of

ε - \TeX 's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

12803 \def\Hy@writebookmark#1#2#3#4#5{%
12804   % section number, text, label, level, file
12805   \ifx\WriteBookmarks\relax%
12806   \else
12807     \ifnum#4>\Hy@bookmarksdepth\relax
12808     \else
12809       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12810     \fi
12811   \fi
12812 }
12813 \def\Hy@currentbookmarklevel{0}
12814 \def\Hy@numberline#1{#1 }
12815 \def\@@writetorep#1#2#3#4#5{%
12816   \begingroup
12817     \edef\Hy@tempa{#5}%
12818     \ifx\Hy@tempa\Hy@bookmarkstype
12819       \edef\Hy@level{#4}%
12820       \ifx\Hy@levelcheck Y%
12821         \@tempcnta\Hy@level\relax
12822         \advance\@tempcnta by -1 %
12823         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12824           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12825           \advance\@tempcnta by 1 %
12826           \Hy@Warning{%
12827             Difference (\the\@tempcnta) between bookmark levels is %
12828             greater \MessageBreak than one, level fixed%
12829           }%
12830           \@tempcnta\Hy@currentbookmarklevel
12831           \advance\@tempcnta by 1 %
12832           \edef\Hy@level{\the\@tempcnta}%
12833         \fi
12834       \else
12835         \global\let\Hy@levelcheck Y%
12836       \fi
12837       \global\let\Hy@currentbookmarklevel\Hy@level
12838       \@tempcnta\Hy@level\relax
12839       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12840       \advance\@tempcnta by -1 %
12841       \edef\Hy@tempa{#3}%
12842       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12843       \ifx\Hy@tempa\Hy@tempb
12844         \Hy@Warning{%
12845           The anchor of a bookmark and its parent's must not%
12846           \MessageBreak be the same. Added a new anchor%
12847         }%
12848       \phantomsection
12849     \fi
12850     \ifHy@bookmarksnumbered
12851       \let\numberline\Hy@numberline
12852       \let\partnumberline\Hy@numberline

```

```

12853     \let\chapternumberline\Hy@numberline
12854     \else
12855         \let\numberline\@gobble
12856         \let\partnumberline\@gobble
12857         \let\chapternumberline\@gobble
12858     \fi
12859     \HyPsd@XeTeXBigCharstrue
12860     \pdfstringdef\Hy@tempa{#2}%
12861     \HyPsd@SanitizeForOutFile\Hy@tempa
12862     \if@filesw
12863         \stepcounter{bookmark@seq@number}%
12864         \@ifundefined{@outlinefile}{%
12865             }{%
12866                 \protected@write\@outlinefile{}{%
12867                     \protect\BOOKMARK
12868                     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12869                     {\Hy@tempa}{\Hy@tempb}%
12870                     \@percentchar\space\thebookmark@seq@number
12871                 }%
12872             }%
12873     \fi
12874     \fi
12875     \endgroup
12876 }
12877 \newcounter{bookmark@seq@number}

12878 \begingroup
12879 \lccode'=''{%
12880 \lccode'}='}%
12881 \lccode'1=\z@
12882 \lccode'2=\z@
12883 \lccode'3=\z@
12884 \lccode'5=\z@
12885 \lccode'7=\z@
12886 \lccode'\#=\z@
12887 \lccode'\='=\z@
12888 \lccode'\{=\z@
12889 \lccode'\}=\z@
12890 \lowercase{%
12891     \endgroup
12892     \def\HyPsd@SanitizeForOutFile#1{%
12893         \@onelevel@sanitize\Hy@tempa
12894         \escapechar'\%
12895         \edef\Hy@tempa{%
12896             \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12897         }%
12898         \edef\Hy@tempa{%
12899             \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12900         }%
12901     }%
12902     \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12903         #1%
12904         \ifx\#2\\%
12905             \expandafter\ltx@gobble
12906         \else
12907             \expandafter\ltx@firstofone
12908         \fi
12909         {%

```

```

12910 \string\173%
12911 \HyPsd@SanitizeOut@BraceLeft#2\@nil
12912 }%
12913 }%
12914 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12915 #1%
12916 \ifx\#2\%
12917 \expandafter\ltx@gobble
12918 \else
12919 \expandafter\ltx@firstofone
12920 \fi
12921 {%
12922 \string\175%
12923 \HyPsd@SanitizeOut@BraceRight#2\@nil
12924 }%
12925 }%
12926 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

12927 \newcommand{\currentpdfbookmark}{%
12928 \pdfbookmark[\Hy@currentbookmarklevel]%
12929 }
12930 \newcommand{\subpdfbookmark}{%
12931 \@tempcnta\Hy@currentbookmarklevel
12932 \Hy@StepCount\@tempcnta
12933 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12934 }
12935 \newcommand{\belowpdfbookmark}[2]{%
12936 \@tempcnta\Hy@currentbookmarklevel
12937 \Hy@StepCount\@tempcnta
12938 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12939 \advance\@tempcnta by -1 %
12940 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12941 }

```

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.

```

12942 \renewcommand{\pdfbookmark}[3][0]{%
12943 \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
12944 \hyper@anchorstart{#3.#1}\hyper@anchorend
12945 }
12946 \def\BOOKMARK{%
12947 \@ifnextchar[{\@BOOKMARK}{\@BOOKMARK[1][-]}%
12948 }
12949 \def\@BOOKMARK[#1]{%
12950 \@ifnextchar[{\@BOOKMARK[#1]}{\@BOOKMARK[#1][-]}%
12951 }

```

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`

```

12952 \RequirePackage{rerunfilecheck}[2009/12/10]
12953 \def\Hy@OutlineRerunCheck{%
12954 \RerunFileCheck{\jobname.out}{%
12955 \immediate\closeout\@outlinefile

```

```

12956 }{%
12957   Rerun to get outlines right\MessageBreak
12958   or use package 'bookmark'%
12959 }%
12960 }

```

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.

```

12961 <*vtex>
12962 \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.

```

12963 \begingroup
12964 \catcode'\'=12 %
12965 \ifnum\Hy@VTeXversion<650 %
12966 \catcode'\=12 %
12967 \gdef\hv@pdf@char#1#2#3{%
12968 \char
12969 \ifcase'#1#2#3 %
12970 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12971 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12972 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12973 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12974 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12975 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12976 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12977 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12978 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12979 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12980 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12981 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12982 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12983 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12984 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12985 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12986 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12987 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12988 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12989 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12990 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12991 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12992 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12993 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12994 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12995 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12996 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12997 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12998 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12999 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13000 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%

```

```

13001 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13002 \fi
13003 }%
13004 \else
13005 \gdef\hv@pdf@char{\char'}%
13006 \fi
13007 \endgroup

```

\@@BOOKMARK

```

13008 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13009 \expandafter\edef\csname @count@#3\endcsname{%
13010 \the\@serial@counter
13011 }%
13012 \edef\@mycount{\the\@serial@counter}%
13013 \Hy@StepCount\@serial@counter
13014 \edef\@parcount{%
13015 \expandafter\ifx\csname @count@#5\endcsname\relax
13016 0%
13017 \else
13018 \csname @count@#5\endcsname
13019 \fi
13020 }%
13021 \immediate\special{%
13022 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13023 s=\ifx#2-c\else o\fi,t=#4%
13024 }%
13025 }%

```

\ReadBookmarks

```

13026 \def\ReadBookmarks{%
13027 \begingroup
13028 \def\0{\hv@pdf@char 0}%
13029 \def\1{\hv@pdf@char 1}%
13030 \def\2{\hv@pdf@char 2}%
13031 \def\3{\hv@pdf@char 3}%
13032 \def\({}%
13033 \def\)}%
13034 \def\do##1{%
13035 \ifnum\catcode'##1=\active
13036 \@makeother##1%
13037 \else
13038 \ifnum\catcode'##1=6 %
13039 \@makeother##1%
13040 \fi
13041 \fi
13042 }%
13043 \dospecials
13044 \Hy@safe@activetrue
13045 \InputIfFileExists{\jobname.out}{-}{-}%
13046 \endgroup
13047 \ifx\WriteBookmarks\relax
13048 \else
13049 \if@files
13050 \newwrite\@outlinefile
13051 \Hy@OutlineRerunCheck
13052 \immediate\openout\@outlinefile=\jobname.out\relax
13053 \ifHy@typexml

```



```

13054 \immediate\write\@outlinefile{<relaxxml>\relax}%
13055 \fi
13056 \fi
13057 \fi
13058 }

13059 </vtex>
13060 <*\vtex>
13061 \def\ReadBookmarks{%
13062 \begingroup
13063 \def\do##1{%
13064 \ifnum\catcode'##1=\active
13065 \@makeother##1%
13066 \else
13067 \ifnum\catcode'##1=6 %
13068 \@makeother##1%
13069 \fi
13070 \fi
13071 }%
13072 \dospecials
13073 \Hy@safe@activetrue
13074 \escapechar='\\%
13075 \let\escapechar\@gobble %
13076 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13077 \calc@bm@number{##5}%
13078 }%
13079 \InputIfFileExists{\jobname.out}{-}{-}%
13080 \ifx\WriteBookmarks\relax
13081 \global\let\WriteBookmarks\relax
13082 \fi
13083 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13084 \def\Hy@temp{##4}%
13085 <*pdfTex>
13086 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13087 \Hy@OutlineName{\Hy@pstringName%
13088 ##2\check@bm@number{##3}}%
13089 }{%
13090 \expandafter\strip@prefix\meaning\Hy@temp
13091 }%
13092 </pdfTex>
13093 <*pdfmark>
13094 \pdfmark{%
13095 pdfmark=/OUT,%
13096 Count={##2\check@bm@number{##3}},%
13097 Dest={##3},%
13098 Title=\expandafter\strip@prefix\meaning\Hy@temp
13099 }%
13100 </pdfmark>
13101 <*dvipdfm | xetex>
13102 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13103 \pdfmark@mark{%
13104 outline \ifHy@DvipdfmxOutlineOpen
13105 [%
13106 \ifnum##21>\z@
13107 \else
13108 -%
13109 \fi
13110 ] %

```

```

13111         \fi
13112         ##1<<%
13113         /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13114         /A<<%
13115         /S/GoTo%
13116         /D(\Hy@pstringName)%
13117         >>%
13118         >>%
13119     }%
13120 </dviptfm | xetex>
13121 }%
13122 {%
13123     \def\WriteBookmarks{0}%
13124     \InputIfFileExists{\jobname.out}{-}{-}%
13125 }%
13126 {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}%
13127 \ifx\WriteBookmarks\relax
13128 \else
13129     \if@filesw
13130         \newwrite\@outlinefile
13131         \Hy@OutlineRerunCheck
13132         \immediate\openout\@outlinefile=\jobname.out\relax
13133         \ifHy@typexml
13134             \immediate\write\@outlinefile{<relaxxml>\relax}%
13135         \fi
13136     \fi
13137 \fi
13138 \endgroup
13139 }
13140 <*pdfptex>
13141 \def\Hy@OutlineName#1#2#3#4{%
13142     \pdfoutline goto name{#2}count#3{#4}%
13143 }
13144 </pdfptex>
13145 \def\check@bm@number#1{%
13146     \expandafter\ifx\csname B_#1\endcsname\relax
13147         0%
13148     \else
13149         \csname B_#1\endcsname
13150     \fi
13151 }
13152 \def\calc@bm@number#1{%
13153     \@tempcnta=\check@bm@number{#1}\relax
13154     \advance\@tempcnta by 1 %
13155     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13156 }
13157 </!vtex>
13158 \ifHy@implicit
13159 \else
13160     \expandafter\endinput
13161 \fi
13162 </outlines>
13163 <*outlines | hypertex>
13164 \newlength\Hy@SectionHShift
13165 \def\Hy@SectionAnchorHref#1{%
13166     \ifx\protect\@typeset@protect

```

```

13167 \Hy@@SectionAnchor{#1}%
13168 \fi
13169 }
13170 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
13171 \leavevmode
13172 \hbox to 0pt{%
13173 \kern-\Hy@SectionHShift
13174 \Hy@raisedlink{%
13175 \hyper@anchorstart{#1}\hyper@anchorend
13176 }%
13177 \hss
13178 }%
13179 }
13180 \let\H@old@ssect\@ssect
13181 \def\@ssect#1#2#3#4#5{%
13182 \Hy@MakeCurrentHrefAuto{section*}%
13183 \setlength{\Hy@SectionHShift}{#1}%
13184 \begingroup
13185 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13186 \toks\tw@\expandafter{%
13187 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13188 #5%
13189 }%
13190 \edef\x{\endgroup
13191 \the\toks@{\the\toks\tw@}%
13192 }\x
13193 }
13194 \let\H@old@schapter\@schapter
13195 \def\@schapter#1{%
13196 \begingroup
13197 \let\@mkboth\@gobbletwo
13198 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13199 \Hy@raisedlink{%
13200 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13201 }%
13202 \endgroup
13203 \H@old@schapter{#1}%
13204 }

```

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:

```

13205 \ltx@ifundefined{@chapter}{}{%
13206 \let\Hy@org@chapter\@chapter
13207 \def\@chapter{%
13208 \def\Hy@next{%
13209 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13210 \Hy@raisedlink{%
13211 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13212 }%
13213 }%
13214 \ifnum\c@secnumdepth>\m@ne
13215 \ltx@ifundefined{if@mainmatter}%
13216 \iftrue{\csname if@mainmatter\endcsname}%
13217 \let\Hy@next\relax
13218 \fi
13219 \fi
13220 \Hy@next

```

```

13221 \Hy@org@chapter
13222 }%
13223 }

13224 \let\H@old@part\@part
13225 \begingroup\expandafter\expandafter\expandafter\endgroup
13226 \expandafter\ifx\csname chapter\endcsname\relax
13227 \let\Hy@secnum@part\z@
13228 \else
13229 \let\Hy@secnum@part\m@ne
13230 \fi
13231 \def\@part{%
13232 \ifnum\Hy@secnum@part>\c@secnumdepth
13233 \phantomsection
13234 \fi
13235 \H@old@part
13236 }

13237 \let\H@old@spart\@spart
13238 \def\@spart#1{%
13239 \Hy@MakeCurrentHrefAuto{part*}%
13240 \Hy@raisedlink{%
13241 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13242 }%
13243 \H@old@spart{#1}%
13244 }

13245 \let\H@old@sect\@sect
13246 \def\@sect#1#2#3#4#5#6[#7]#8{%
13247 \ifnum #2>\c@secnumdepth
13248 \expandafter\@firstoftwo
13249 \else
13250 \expandafter\@secondoftwo
13251 \fi
13252 {%
13253 \Hy@MakeCurrentHrefAuto{section*}%
13254 \setlength{\Hy@SectionHShift}{#3}%
13255 \begingroup
13256 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[{#7}]}%
13257 \toks\tw@\expandafter{%
13258 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13259 #8%
13260 }%
13261 \edef\x{\endgroup
13262 \the\toks@{\the\toks\tw@}}%
13263 }\x
13264 }{%
13265 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[{#7}]{#8}%
13266 }%
13267 }

13268 </outlines | hypertex>
13269 <*outlines>

13270 \expandafter\def\csname Parent-4\endcsname{}
13271 \expandafter\def\csname Parent-3\endcsname{}
13272 \expandafter\def\csname Parent-2\endcsname{}
13273 \expandafter\def\csname Parent-1\endcsname{}
13274 \expandafter\def\csname Parent0\endcsname{}
13275 \expandafter\def\csname Parent1\endcsname{}
13276 \expandafter\def\csname Parent2\endcsname{}

```

```

13277 \expandafter\def\csname Parent3\endcsname{}
13278 \expandafter\def\csname Parent4\endcsname{}
13279 </outlines>

```

49 Compatibility with koma-script classes

```

13280 <*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.

```

13281 \def\Hy@tempa{%
13282   \def\@addchap[##1]##2{%
13283     \typeout{##2}%
13284     \if@twoside
13285       \@mkboth{##1}{}%
13286     \else
13287       \@mkboth{}{##1}%
13288     \fi
13289     \addtocontents{lof}{\protect\addvspace{10\p@}}%
13290     \addtocontents{lot}{\protect\addvspace{10\p@}}%
13291     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13292     \Hy@raisedlink{%
13293       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13294     }%
13295     \if@twocolumn
13296       \@topnewpage[\@makeschapterhead{##2}]%
13297     \else
13298       \@makeschapterhead{##2}%
13299       \@afterheading
13300     \fi
13301     \addcontentsline{toc}{chapter}{##1}%
13302   }%
13303 }
13304 \ifclassloaded{scrbook}{%
13305   \ifclasslater{scrbook}{2001/01/01}{%
13306     \let\Hy@tempa\@empty
13307   }{}%
13308 }{%
13309   \ifclassloaded{scrreprt}{%
13310     \ifclasslater{scrreprt}{2001/01/01}{%
13311       \let\Hy@tempa\@empty
13312     }{}%
13313   }{%
13314     \let\Hy@tempa\@empty
13315   }%
13316 }%
13317 \Hy@tempa
13318 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

13319 `(*pdlenc)`

13320 `\DeclareFontEncoding{PD1}{-}{-}`

Accents

13321 `\DeclareTextAccent{'}{PD1}{\textasciigrave}`

13322 `\DeclareTextAccent{'}{PD1}{\textacute}`

13323 `\DeclareTextAccent{^}{PD1}{\textasciicircum}`

13324 `\DeclareTextAccent{~}{PD1}{\texttilde}`

13325 `\DeclareTextAccent{"}{PD1}{\textasciidieresis}`

13326 `\DeclareTextAccent{r}{PD1}{\textring}`

13327 `\DeclareTextAccent{v}{PD1}{\textasciicaron}`

13328 `\DeclareTextAccent{.}{PD1}{\textdotaccent}`

13329 `\DeclareTextAccent{c}{PD1}{\textcedilla}`

13330 `\DeclareTextAccent{=}{PD1}{\textasciimacron}`

13331 `\DeclareTextAccent{b}{PD1}{\textmacronbelow}`

13332 `\DeclareTextAccent{d}{PD1}{\textdotbelow}`

13333 `\DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}`

13334 `\DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}`

13335 `\DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}`

13336 `\DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}`

13337 `\DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}`

13338 `\DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}`

13339 `\DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}`

13340 `\DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}`

13341 `\DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}`

13342 `\DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}`

13343 `\DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}`

13344 `\DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}`

13345 `\DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}`

13346 `\DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}`

13347 `\DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}`

13348 `\DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}`

13349 `\DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}`

13350 `\DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}`

13351 `\DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}`

13352 `\DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}`

13353 `\DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}`

13354 `\DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}`

13355 `\DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}`

13356 `\DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}`

13357 `\DeclareTextCommand{k}{PD1}[1]{\TextSymbolUnavailable{k{#1}}#1}`

13358 `\DeclareTextCommand{t}{PD1}[1]{\TextSymbolUnavailable{t{#1}}#1}`

13359 `\DeclareTextCommand{\newtie}{PD1}[1]{%`

13360 `\TextSymbolUnavailable{\newtie{#1}}#1%`

13361 `}`

Special white space escape characters not for use in bookmarks but for other PDF strings.

13362 `% U+0009 (CHARACTER TABULATION)`

13363 `\DeclareTextCommand{textHT}{PD1}{\011}% U+0009`

13364 `% U+000A (LINE FEED)`

13365 `\DeclareTextCommand{textLF}{PD1}{\012}% U+000A`

13366 `% U+000D (CARRIAGE RETURN)`

13367 `\DeclareTextCommand{textCR}{PD1}{\015}% U+000D`

Accent glyph names

13368 `% U+02D8 BREVE; breve`

13369 `\DeclareTextCommand{textasciibreve}{PD1}{\030}% U+02D8`

13370 `% U+02C7 CARON; caron`

13371 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13372 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13373 \DeclareTextCommand{\textcirc{}}{PD1}{\032}% U+02C6
13374 % U+02D9 DOT ABOVE; dotaccent
13375 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13376 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13377 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13378 % U+02DB OGONEK; ogonek
13379 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13380 % U+02DA RING ABOVE; ring
13381 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13382 % U+02DC SMALL TILDE; ilde, *tilde
13383 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
13384 % U+0022 QUOTATION MARK; quotedbl
13385 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13386 % U+0023 NUMBER SIGN; numbersign
13387 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13388 % U+0024 DOLLAR SIGN; dollar
13389 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13390 % U+0025 PERCENT SIGN; percent
13391 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13392 % U+0026 AMPERSAND; ampersand
13393 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

13394 % U+0028 LEFT PARENTHESIS; parenleft
13395 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
13396 % U+0029 RIGHT PARENTHESIS; parenright
13397 \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
13398 % U+002E FULL STOP; period
13399 \DeclareTextCommand{\textdotbelow}{PD1}{\string\cdot}% \056 U+002E

\057: U+002F SOLIDUS; slash
\060: U+0030 DIGIT ZERO; zero
...
\071: U+0039 DIGIT NINE; nine
\072: U+003A COLON; colon
\073: U+003B SEMICOLON; semicolon
13400 % U+003C LESS-THAN SIGN; less
13401 \DeclareTextCommand{\textless}{PD1}{\string<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal
13402 % U+003E GREATER-THAN SIGN; greater
13403 \DeclareTextCommand{\textgreater}{PD1}{\string>}% \076 U+003E

\077: U+003F QUESTION MARK; question
\100: U+0040 COMMERCIAL AT; at
\101: U+0041 LATIN CAPITAL LETTER A; A
...

\132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 13404 % U+005C REVERSE SOLIDUS; backslash
 13405 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13406 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13407 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13408 % U+005F LOW LINE; underscore
 13409 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13410 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13411 % U+0060 GRAVE ACCENT; grave
 13412 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13413 % U+0069 LATIN SMALL LETTER I; i
 13414 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13415 % U+007B LEFT CURLY BRACKET; braceleft
 13416 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13417 % U+007C VERTICAL LINE; *bar, verticalbar
 13418 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13419 % U+007D RIGHT CURLY BRACKET; braceright
 13420 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13421 % U+007E TILDE; asciitilde
 13422 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13423 % U+2022 BULLET; bullet
 13424 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13425 % U+2020 DAGGER; dagger
 13426 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13427 % U+2021 DOUBLE DAGGER; daggerdbl
 13428 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13429 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13430 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13431 % U+2014 EM DASH; emdash
 13432 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13433 % U+2013 EN DASH; endash
 13434 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13435 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13436 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13437 % U+2044 FRACTION SLASH; fraction
 13438 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13439 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 13440 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 13441 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 13442 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 13443 % U+2212 MINUS SIGN; minus
 13444 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13445 % U+2030 PER MILLE SIGN; perthousand
 13446 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13447 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

13448 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 13449 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13450 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 13451 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13452 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 13453 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13454 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 13455 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13456 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 13457 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13458 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 13459 % U+2122 TRADE MARK SIGN; trademark
 13460 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 13461 % U+FB01 LATIN SMALL LIGATURE FI; fi
 13462 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 13463 % U+FB02 LATIN SMALL LIGATURE FL; fl
 13464 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 13465 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 13466 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 13467 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 13468 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 13469 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 13470 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 13471 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13472 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 13473 \DeclareTextCommand{\IJ}{PD1}{\230}
 13474 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13475 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 13476 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 13477 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 13478 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 13479 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 13480 % U+0153 LATIN SMALL LIGATURE OE; oe
 13481 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 13482 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 13483 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 13484 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13485 \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.

13486 % U+20AC EURO SIGN; *Euro, euro
 13487 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13488 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13489 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13490 % U+00A2 CENT SIGN; cent
 13491 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13492 % U+00A3 POUND SIGN; sterling
 13493 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13494 % U+00A4 CURRENCY SIGN; currency
 13495 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13496 % U+00A5 YEN SIGN; yen
 13497 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13498 % U+00A6 BROKEN BAR; brokenbar
 13499 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13500 % U+00A7 SECTION SIGN; section
 13501 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13502 % U+00A8 DIAERESIS; dieresis

13503 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13504 % U+00A9 COPYRIGHT SIGN; copyright
 13505 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13506 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13507 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13508 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13509 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13510 % U+00AC NOT SIGN; logicalnot
 13511 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13512 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 13513 % U+00AE REGISTERED SIGN; registered
 13514 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13515 % U+00AF MACRON; *macron, overscore
 13516 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13517 % U+00B0 DEGREE SIGN; degree
 13518 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13519 % U+00B1 PLUS-MINUS SIGN; plusminus
 13520 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13521 % U+00B2 SUPERSCRIFT TWO; twosuperior
 13522 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13523 % U+00B3 SUPERSCRIFT THREE; threesuperior
 13524 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13525 % U+00B4 ACUTE ACCENT; acute
 13526 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13527 % U+00B5 MICRO SIGN; mu, mul
 13528 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13529 % U+00B6 PILCROW SIGN; paragraph
 13530 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13531 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13532 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 13533 % U+00B8 CEDILLA; cedilla
 13534 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13535 % U+00B9 SUPERSCRIFT ONE; onesuperior
 13536 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 13537 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13538 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 13539 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13540 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 13541 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13542 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 13543 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13544 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 13545 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13546 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 13547 % U+00BF INVERTED QUESTION MARK; questiondown
 13548 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 13549 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13550 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 13551 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13552 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 13553 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13554 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 13555 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13556 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3

13557 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13558 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
13559 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13560 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13561 % U+00C6 LATIN CAPITAL LETTER AE; AE
13562 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13563 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13564 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13565 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13566 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13567 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13568 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13569 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13570 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13571 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13572 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
13573 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13574 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13575 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13576 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13577 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13578 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13579 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13580 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
13581 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13582 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13583 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13584 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13585 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13586 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13587 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13588 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13589 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13590 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13591 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13592 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13593 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13594 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13595 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13596 % U+00D7 MULTIPLICATION SIGN; multiply
13597 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13598 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13599 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13600 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13601 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13602 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13603 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13604 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13605 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13606 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13607 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13608 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13609 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13610 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13611 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13612 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13613 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF

13614 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13615 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13616 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13617 \DeclareTextCompositeCommand{\' }{PD1}{a}{\341}% U+00E1
13618 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13619 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13620 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13621 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13622 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13623 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13624 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13625 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13626 % U+00E6 LATIN SMALL LETTER AE; ae
13627 \DeclareTextCompositeCommand{\ae}{PD1}{\346}% U+00E6
13628 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13629 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13630 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13631 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13632 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13633 \DeclareTextCompositeCommand{\' }{PD1}{e}{\351}% U+00E9
13634 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13635 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13636 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13637 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13638 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13639 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13640 \DeclareTextCompositeCommand{\' }{PD1}{i}{\354}% U+00EC
13641 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13642 \DeclareTextCompositeCommand{\' }{PD1}{i}{\355}% U+00ED
13643 \DeclareTextCompositeCommand{\' }{PD1}{i}{\355}% U+00ED
13644 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13645 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13646 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13647 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13648 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13649 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13650 % U+00F0 LATIN SMALL LETTER ETH; eth
13651 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13652 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13653 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13654 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13655 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13656 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13657 \DeclareTextCompositeCommand{\' }{PD1}{o}{\363}% U+00F3
13658 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13659 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13660 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13661 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
13662 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13663 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13664 % U+00F7 DIVISION SIGN; divide
13665 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13666 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13667 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13668 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13669 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13670 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute

```

13671 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13672 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13673 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
13674 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13675 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13676 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13677 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13678 % U+00FE LATIN SMALL LETTER THORN; thorn
13679 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13680 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13681 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13682 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

13683 \DeclareTextCommand{\SS}{PD1}{SS}
13684 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

13685 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13686 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13687 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13688 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
13689 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13690 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13691 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13692 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

13693 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13694 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13695 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13696 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13697 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13698 \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).

```

13699 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13700 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13701 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13702 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13703 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13704 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13705 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13706 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13707 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13708 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13709 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13710 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13711 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13712 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

13713 \pdfenc)

```

50.2 PU encoding

```

13714 \*puenc)
13715 \DeclareFontEncoding{PU}{-}{}

```

50.2.1 NFSS2 accents

13716 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13717 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
 13718 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13719 \DeclareTextCommand{\~}{PU}[1]{#1\83\001}% U+0301
 13720 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13721 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13722 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13723 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13724 % U+0304 COMBINING MACRON; macroncmb
 13725 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13726 % U+0306 COMBINING BREVE; brevecmb
 13727 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13728 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13729 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13730 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13731 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13732 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13733 % U+030A COMBINING RING ABOVE; ringcmb
 13734 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13735 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13736 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13737 % U+030C COMBINING CARON; caroncmb
 13738 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13739 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13740 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13741 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13742 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13743 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13744 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13745 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13746 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13747 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13748 % U+0327 COMBINING CEDILLA; cedillacmb
 13749 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13750 % U+0328 COMBINING OGONEK; ogonekcmb
 13751 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13752 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13753 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13754 % U+20DD COMBINING ENCLOSING CIRCLE
 13755 \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.

13756 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
 13757 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textacute}
 13758 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
 13759 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13760 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
 13761 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
 13762 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
 13763 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
 13764 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
 13765 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
 13766 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
 13767 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
 13768 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
 13769 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
 13770 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}

```

13771 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13772 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13773 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13774 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13775 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13776 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13777 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
13778 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13779 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13780 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13781 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13782 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13783 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13784 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13785 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13786 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13787 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13788 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13789 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13790 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13791 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13792 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13793 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13794 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13795 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13796 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}
13797 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13798 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13799 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13800 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13801 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13802 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13803 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13804 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13805 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13806 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13807 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13808 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

13809 % U+0009 (CHARACTER TABULATION)
13810 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13811 % U+000A (LINE FEED)
13812 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13813 % U+000D (CARRIAGE RETURN)
13814 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

13815 % U+0022 QUOTATION MARK; quotedbl
13816 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13817 % U+0023 NUMBER SIGN; numbersign
13818 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13819 % U+0024 DOLLAR SIGN; dollar
13820 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

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13821 % U+0025 PERCENT SIGN; percent
 13822 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 13823 % U+0026 AMPERSAND; ampersand
 13824 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 13825 % U+0027 APOSTROPHE; quotesingle
 13826 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 13827 % U+0028 LEFT PARENTHESIS; parenleft
 13828 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 13829 % U+0029 RIGHT PARENTHESIS; parenright
 13830 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 13831 % U+002A ASTERISK; asterisk
 13832 \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
 13833 % U+003C LESS-THAN SIGN; less
 13834 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 13835 % U+003E GREATER-THAN SIGN; greater
 13836 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 \80\100: U+0040 COMMERCIAL AT; at
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 13837 % U+005C REVERSE SOLIDUS; backslash
 13838 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13839 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13840 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13841 % U+005F LOW LINE; underscore
 13842 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13843 % U+0060 GRAVE ACCENT; grave
 13844 \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
 13845 % U+0069 LATIN SMALL LETTER I; i
 13846 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 13847 \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
 13848 % U+007B LEFT CURLY BRACKET; braceleft

13849 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13850 % U+007C VERTICAL LINE; *bar, verticalbar
 13851 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13852 % U+007D RIGHT CURLY BRACKET; braceright
 13853 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13854 % U+007E TILDE; asciitilde
 13855 \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
 13856 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13857 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13858 % U+00A2 CENT SIGN; cent
 13859 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13860 % U+00A3 POUND SIGN; sterling
 13861 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13862 % U+00A4 CURRENCY SIGN; currency
 13863 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13864 % U+00A5 YEN SIGN; yen
 13865 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13866 % U+00A6 BROKEN BAR; brokenbar
 13867 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13868 % U+00A7 SECTION SIGN; section
 13869 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13870 % U+00A8 DIAERESIS; dieresis
 13871 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13872 % U+00A9 COPYRIGHT SIGN; copyright
 13873 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13874 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13875 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13876 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13877 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13878 % U+00AC NOT SIGN; logicalnot
 13879 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13880 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13881 % U+00AE REGISTERED SIGN; registered
 13882 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13883 % U+00AF MACRON; *macron, overscore
 13884 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13885 % U+00B0 DEGREE SIGN; degree
 13886 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13887 % U+00B1 PLUS-MINUS SIGN; plusminus
 13888 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13889 % U+00B2 SUPERSCRIFT TWO; twosuperior
 13890 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13891 % U+00B3 SUPERSCRIFT THREE; threesuperior
 13892 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13893 % U+00B4 ACUTE ACCENT; acute
 13894 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13895 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13896 % U+00B5 MICRO SIGN; mu, mu1
 13897 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13898 % U+00B6 PILCROW SIGN; paragraph
 13899 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

13900 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13901 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 13902 % U+00B8 CEDILLA; cedilla
 13903 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 13904 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13905 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 13906 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13907 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 13908 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13909 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 13910 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13911 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 13912 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13913 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 13914 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13915 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 13916 % U+00BF INVERTED QUESTION MARK; questiondown
 13917 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 13918 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13919 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 13920 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13921 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 13922 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13923 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 13924 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13925 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 13926 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13927 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 13928 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13929 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 13930 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13931 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13932 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 13933 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 13934 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 13935 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 13936 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 13937 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 13938 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 13939 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 13940 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 13941 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 13942 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 13943 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 13944 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 13945 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 13946 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 13947 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 13948 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 13949 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
 13950 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 13951 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
 13952 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 13953 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
 13954 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 13955 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

13956 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13957 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13958 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13959 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
13960 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13961 \DeclareTextCompositeCommand{\-}{PU}{O}{\80\325}% U+00D5
13962 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13963 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
13964 % U+00D7 MULTIPLICATION SIGN; multiply
13965 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13966 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13967 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13968 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13969 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
13970 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13971 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
13972 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13973 \DeclareTextCompositeCommand{\~}{PU}{U}{\80\333}% U+00DB
13974 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13975 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
13976 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13977 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
13978 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13979 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13980 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13981 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13982 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13983 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
13984 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13985 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
13986 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13987 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
13988 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13989 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}% U+00E3
13990 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13991 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
13992 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13993 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
13994 % U+00E6 LATIN SMALL LETTER AE; ae
13995 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
13996 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13997 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
13998 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13999 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
14000 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14001 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14002 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14003 \DeclareTextCompositeCommand{\~}{PU}{e}{\80\352}% U+00EA
14004 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14005 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14006 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14007 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14008 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14009 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14010 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14011 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14012 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

14013 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
 14014 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 14015 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 14016 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 14017 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
 14018 % U+00F0 LATIN SMALL LETTER ETH; eth
 14019 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 14020 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 14021 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 14022 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 14023 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 14024 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 14025 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 14026 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 14027 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 14028 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 14029 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 14030 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 14031 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 14032 % U+00F7 DIVISION SIGN; divide
 14033 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 14034 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 14035 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 14036 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 14037 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 14038 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 14039 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 14040 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 14041 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 14042 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 14043 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 14044 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14045 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 14046 % U+00FE LATIN SMALL LETTER THORN; thorn
 14047 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14048 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14049 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

14050 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14051 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14052 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14053 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14054 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14055 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14056 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14057 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14058 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14059 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14060 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14061 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14062 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14063 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 14064 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14065 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 14066 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex

14067 \DeclareTextCompositeCommand{\~}{PU}{C}{\81\010}% U+0108
14068 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
14069 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
14070 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
14071 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
14072 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
14073 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
14074 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
14075 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
14076 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
14077 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
14078 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
14079 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
14080 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
14081 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
14082 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14083 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14084 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14085 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14086 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14087 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14088 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14089 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14090 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14091 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14092 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14093 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14094 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14095 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14096 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14097 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14098 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14099 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14100 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14101 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14102 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14103 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14104 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14105 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14106 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14107 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14108 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14109 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14110 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14111 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14112 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14113 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14114 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14115 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14116 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14117 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14118 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
14119 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14120 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14121 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14122 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex

14123 \DeclareTextCompositeCommand{\~}{PU}{H}{\81\044}% U+0124
14124 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14125 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14126 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14127 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14128 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14129 \DeclareTextCommand{\textthslash}{PU}{\81\047}% U+0127
14130 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14131 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14132 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14133 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
14134 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
14135 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14136 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14137 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14138 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14139 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14140 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14141 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14142 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14143 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14144 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14145 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14146 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14147 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14148 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14149 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14150 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14151 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14152 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14153 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14154 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14155 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14156 % U+0133 LATIN SMALL LIGATURE IJ; ij
14157 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14158 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14159 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
14160 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14161 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14162 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14163 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
14164 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14165 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14166 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be \textkgreenlandic, following
the glyph naming convention. However latex/base/inputenc.dtx has choosen \tex-
tkra.
14167 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14168 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14169 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14170 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14171 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14172 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14173 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
14174 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B

14175 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
14176 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
14177 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
14178 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
14179 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
14180 \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.
14181 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
14182 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
14183 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
14184 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
14185 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14186 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
14187 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14188 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
14189 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
14190 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
14191 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
14192 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
14193 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
14194 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
14195 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
14196 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
14197 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
14198 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
14199 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
14200 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
14201 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
14202 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
14203 % U+014A LATIN CAPITAL LETTER ENG; Eng
14204 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
14205 % U+014B LATIN SMALL LETTER ENG; eng
14206 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
14207 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
14208 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
14209 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
14210 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
14211 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
14212 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
14213 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
14214 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
14215 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
14216 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
14217 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
14218 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
14219 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14220 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
14221 % U+0153 LATIN SMALL LIGATURE OE; oe
14222 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
14223 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
14224 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
14225 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

14226 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14227 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14228 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14229 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14230 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14231 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14232 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14233 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14234 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14235 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14236 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14237 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14238 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14239 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14240 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14241 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14242 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14243 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14244 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14245 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14246 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14247 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14248 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14249 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14250 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14251 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14252 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14253 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14254 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14255 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14256 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14257 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14258 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14259 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14260 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14261 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14262 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14263 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14264 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14265 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14266 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14267 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14268 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14269 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14270 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14271 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14272 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14273 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14274 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14275 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14276 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14277 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14278 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14279 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut

14280 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14281 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhun-
 garumlaut
 14282 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14283 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14284 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14285 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14286 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14287 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14288 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14289 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14290 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14291 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14292 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14293 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14294 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14295 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14296 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14297 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14298 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14299 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14300 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14301 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14302 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14303 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14304 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14305 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14306 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14307 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14308 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14309 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14310 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

14311 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14312 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14313 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14314 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14315 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14316 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14317 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14318 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14319 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14320 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14321 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14322 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14323 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14324 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14325 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14326 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14327 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14328 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 14329 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14330 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14331 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14332 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14333 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

14334 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14335 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14336 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14337 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14338 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14339 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14340 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14341 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14342 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14343 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14344 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14345 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14346 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14347 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14348 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14349 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14350 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14351 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14352 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14353 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14354 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14355 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14356 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14357 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14358 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
14359 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14360 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
14361 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14362 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
14363 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14364 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
14365 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14366 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14367 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14368 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14369 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14370 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14371 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14372 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14373 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14374 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14375 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14376 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14377 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14378 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14379 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14380 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
14381 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
14382 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
14383 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
14384 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
14385 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
14386 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
14387 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
14388 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave

14389 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14390 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14391 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14392 % U+021F LATIN SMALL LETTER H WITH CARON
 14393 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14394 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14395 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14396 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14397 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14398 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14399 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14400 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14401 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14402 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14403 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14404 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14405 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14406 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14407 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14408 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14409 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14410 % U+0237 LATIN SMALL LETTER DOTLESS J
 14411 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14412 % U+02C7 CARON; caron
 14413 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14414 % U+02D8 BREVE; breve
 14415 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14416 % U+02D9 DOT ABOVE; dotaccent
 14417 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14418 % U+02DA RING ABOVE; ring
 14419 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14420 % U+02DB OGONEK; ogonek
 14421 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14422 % U+02DC SMALL TILDE; ilde, *tilde
 14423 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14424 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14425 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14426 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14427 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14428 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14429 % U+02F7 MODIFIER LETTER LOW TILDE
 14430 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14431 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14432 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14433 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14434 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14435 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14436 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14437 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14438 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14439 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14440 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14441 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
14442 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
14443 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
14444 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
14445 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
14446 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
14447 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
14448 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
14449 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
14450 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
14451 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
14452 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
14453 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
crintonos
14454 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
14455 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
14456 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
14457 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
14458 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
14459 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
tadiesisistonos
14460 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
14461 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
14462 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
14463 % U+0392 GREEK CAPITAL LETTER BETA; Beta
14464 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
14465 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
14466 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
14467 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
14468 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
14469 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
14470 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
14471 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14472 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14473 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14474 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14475 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14476 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14477 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14478 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14479 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14480 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14481 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14482 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14483 % U+039C GREEK CAPITAL LETTER MU; Mu
14484 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14485 % U+039D GREEK CAPITAL LETTER NU; Nu
14486 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14487 % U+039E GREEK CAPITAL LETTER XI; Xi
14488 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14489 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14490 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14491 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14492 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14493 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14494 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1

14495 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14496 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14497 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14498 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14499 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14500 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14501 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14502 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14503 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14504 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14505 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14506 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14507 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14508 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14509 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14510 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14511 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14512 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
14513 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14514 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14515 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14516 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
14517 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14518 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
14519 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14520 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
14521 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14522 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
14523 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
14524 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14525 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14526 % U+03B2 GREEK SMALL LETTER BETA; beta
14527 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
14528 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14529 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14530 % U+03B4 GREEK SMALL LETTER DELTA; delta
14531 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14532 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14533 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14534 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14535 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14536 % U+03B7 GREEK SMALL LETTER ETA; eta
14537 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14538 % U+03B8 GREEK SMALL LETTER THETA; theta
14539 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14540 % U+03B9 GREEK SMALL LETTER IOTA; iota
14541 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14542 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14543 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14544 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14545 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14546 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14547 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14548 % U+03BD GREEK SMALL LETTER NU; nu
14549 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD

14550 % U+03BE GREEK SMALL LETTER XI; xi
14551 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14552 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14553 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14554 % U+03C0 GREEK SMALL LETTER PI; pi
14555 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14556 % U+03C1 GREEK SMALL LETTER RHO; rho
14557 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14558 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14559 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14560 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14561 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14562 % U+03C4 GREEK SMALL LETTER TAU; tau
14563 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14564 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14565 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14566 % U+03C6 GREEK SMALL LETTER PHI; phi
14567 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14568 % U+03C7 GREEK SMALL LETTER CHI; chi
14569 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14570 % U+03C8 GREEK SMALL LETTER PSI; psi
14571 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14572 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14573 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14574 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iodadieresis
14575 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14576 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silonudieresis
14577 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14578 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14579 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14580 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14581 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14582 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14583 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
14584 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
14585 % U+03DA GREEK LETTER STIGMA; Stigmagreek
14586 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
14587 % U+03DB GREEK SMALL LETTER STIGMA
14588 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
14589 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
14590 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
14591 % U+03DD GREEK SMALL LETTER DIGAMMA
14592 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
14593 % U+03DE GREEK LETTER KOPPA; Koppagreek
14594 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
14595 % U+03DF GREEK SMALL LETTER KOPPA
14596 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
14597 % U+03E0 GREEK LETTER SAMPI; Sampigreek
14598 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
14599 % U+03E1 GREEK SMALL LETTER SAMPI
14600 \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.

14601 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE

14602 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14603 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
14604 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14605 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
14606 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14607 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14608 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14609 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14610 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
14611 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14612 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14613 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14614 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
14615 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14616 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
14617 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14618 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
14619 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14620 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14621 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14622 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14623 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14624 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14625 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14626 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14627 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14628 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14629 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14630 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14631 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
14632 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14633 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14634 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrrillic, *afii10145
14635 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14636 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14637 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14638 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14639 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14640 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14641 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14642 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14643 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14644 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14645 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14646 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14647 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14648 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14649 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14650 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14651 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14652 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrillic, *afii10026
14653 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14654 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrrillic, *afii10027
14655 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14656 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14657 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrrillic, *afii10028

14658 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14659 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14660 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14661 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14662 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14663 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14664 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14665 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14666 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14667 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14668 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14669 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14670 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14671 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14672 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14673 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14674 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14675 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14676 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14677 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14678 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14679 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14680 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14681 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14682 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14683 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14684 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14685 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14686 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14687 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14688 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14689 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14690 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14691 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14692 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14693 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14694 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14695 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14696 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14697 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14698 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14699 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14700 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14701 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14702 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14703 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14704 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14705 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14706 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14707 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14708 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14709 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14710 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14711 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14712 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14713 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
14714 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436

14715 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14716 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14717 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14718 \DeclareTextCommand{\cyrj}{PU}{\84\070}% U+0438
14719 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14720 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14721 \DeclareTextCompositeCommand{\U}{PU}{\cyrj}{\84\071}% U+0439
14722 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14723 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14724 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14725 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
14726 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14727 \DeclareTextCommand{\cyrmm}{PU}{\84\074}% U+043C
14728 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14729 \DeclareTextCommand{\cyrnn}{PU}{\84\075}% U+043D
14730 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14731 \DeclareTextCommand{\cyrro}{PU}{\84\076}% U+043E
14732 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14733 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14734 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14735 \DeclareTextCommand{\cyrre}{PU}{\84\100}% U+0440
14736 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14737 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
14738 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14739 \DeclareTextCommand{\cyrte}{PU}{\84\102}% U+0442
14740 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14741 \DeclareTextCommand{\cyrue}{PU}{\84\103}% U+0443
14742 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14743 \DeclareTextCommand{\cyrfe}{PU}{\84\104}% U+0444
14744 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14745 \DeclareTextCommand{\cyrhe}{PU}{\84\105}% U+0445
14746 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14747 \DeclareTextCommand{\cyrte}{PU}{\84\106}% U+0446
14748 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14749 \DeclareTextCommand{\cyrche}{PU}{\84\107}% U+0447
14750 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14751 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14752 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14753 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14754 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14755 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14756 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14757 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14758 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14759 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
14760 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14761 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14762 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14763 \DeclareTextCommand{\cyrue}{PU}{\84\116}% U+044E
14764 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14765 \DeclareTextCommand{\cyrue}{PU}{\84\117}% U+044F
14766 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14767 \DeclareTextCompositeCommand{\`}{PU}{\cyrre}{\84\120}% U+0450
14768 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14769 \DeclareTextCommand{\cyrjo}{PU}{\84\121}% U+0451
14770 \DeclareTextCompositeCommand{\"}{PU}{\cyrre}{\84\121}% U+0451
14771 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic

14772 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14773 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14774 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14775 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14776 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14777 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14778 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14779 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14780 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14781 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14782 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14783 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
14784 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14785 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14786 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14787 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14788 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14789 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14790 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14791 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14792 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14793 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14794 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14795 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
14796 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14797 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14798 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14799 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14800 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14801 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14802 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14803 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14804 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14805 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14806 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14807 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14808 \DeclareTextCommand{\cyr yat}{PU}{\84\143}% U+0463
14809 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14810 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14811 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14812 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14813 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14814 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14815 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14816 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14817 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14818 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14819 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14820 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14821 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14822 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14823 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14824 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B

14825 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-cyrillic
 14826 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14827 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbgiotifiedcyrillic
 14828 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14829 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14830 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14831 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14832 \DeclareTextCommand{\cyrkxi}{PU}{\84\157}% U+046F
 14833 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14834 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14835 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14836 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14837 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 14838 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14839 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 14840 \DeclareTextCommand{\cyrfiti}{PU}{\84\163}% U+0473
 14841 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 14842 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14843 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 14844 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14845 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 14846 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14847 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 14848 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14849 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14850 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14851 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14852 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14853 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 14854 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14855 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14856 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14857 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 14858 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14859 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 14860 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14861 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14862 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14863 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14864 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14865 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14866 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14867 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14868 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14869 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14870 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumata-

cyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14871 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14872 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14873 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14874 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14875 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14876 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14877 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14878 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14879 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14880 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14881 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14882 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14883 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 14884 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14885 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14886 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14887 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14888 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14889 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14890 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14891 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14892 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14893 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14894 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14895 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14896 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14897 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14898 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14899 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14900 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14901 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14902 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14903 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 14904 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14905 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14906 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14907 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 14908 \DeclareTextCommand{\cyrkds}{PU}{\84\233}% U+049B
 14909 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic

14910 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
14911 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
tikalstrokecyrillic
14912 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
14913 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
14914 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
14915 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
14916 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
14917 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
14918 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
14919 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
14920 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
14921 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
14922 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
14923 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
14924 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
14925 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
14926 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
14927 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
14928 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
14929 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
14930 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
14931 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
14932 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
14933 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
14934 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
14935 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
14936 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14937 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
14938 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14939 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14940 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
cyrillic
14941 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
14942 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
14943 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
14944 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14945 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-
cyrillic
14946 \DeclareTextCommand{\cyrttdsc}{PU}{\84\255}% U+04AD
14947 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14948 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14949 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14950 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
14951 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
14952 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14953 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
14954 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

14955 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hades-
cercyrillic
14956 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
14957 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
cyrillic
14958 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
14959 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
14960 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
14961 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
14962 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
14963 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescen-
dercyrillic
14964 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
14965 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
dercyrillic
14966 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
14967 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
erticalstrokecyrillic
14968 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
14969 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
erticalstrokecyrillic
14970 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
14971 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
14972 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
14973 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
14974 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
14975 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
14976 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
14977 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
lic
14978 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
14979 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
DER; Chedescenderabkhasiancyrillic
14980 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
14981 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
14982 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
DER; chedescenderabkhasiancyrillic
14983 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
14984 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
14985 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
14986 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
14987 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
14988 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
14989 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
14990 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
14991 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
14992 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
14993 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
14994 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
14995 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
14996 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
14997 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
14998 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
14999 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
15000 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
15001 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic

15002 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15003 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 15004 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15005 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 15006 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15007 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15008 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15009 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15010 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15011 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15012 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15013 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15014 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15015 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15016 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 15017 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15018 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 15019 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15020 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15021 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15022 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15023 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 15024 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15025 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 15026 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15027 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15028 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15029 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 15030 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15031 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 15032 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 15033 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
 15034 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 15035 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
 15036 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 15037 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-cyrillic
 15038 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 15039 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-cyrillic
 15040 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 15041 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 15042 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 15043 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 15044 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15045 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15046 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15047 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15048 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2

15049 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 15050 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
 15051 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 15052 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 15053 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 15054 \DeclareTextCompositeCommand{\'} {PU}{\cyri}{\84\345}% U+04E5
 15055 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 15056 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 15057 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 15058 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 15059 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 15060 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 15061 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 15062 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 15063 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
 15064 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 15065 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
 15066 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 15067 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 15068 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 15069 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 15070 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 15071 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 15072 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
 15073 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 15074 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
 15075 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 15076 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 15077 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 15078 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15079 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 15080 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 15081 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 15082 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15083 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 15084 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 15085 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 15086 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 15087 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15088 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15089 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15090 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15091 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 15092 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 15093 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 15094 \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

15095 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15096 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15097 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15098 \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

15099 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15100 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15101 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15102 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15103 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15104 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15105 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15106 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15107 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15108 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15109 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15110 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15111 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15112 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15113 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15114 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15115 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15116 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15117 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15118 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 15119 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 15120 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 15121 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 15122 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 15123 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 15124 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 15125 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 15126 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 15127 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 15128 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 15129 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 15130 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 15131 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 15132 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 15133 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 15134 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 15135 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 15136 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 15137 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 15138 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 15139 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
 15140 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
 15141 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 15142 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 15143 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 15144 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31

15145 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15146 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15147 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15148 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15149 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15150 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15151 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15152 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15153 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15154 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15155 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15156 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15157 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15158 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15159 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15160 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15161 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15162 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15163 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15164 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15165 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15166 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15167 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15168 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15169 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15170 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15171 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15172 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15173 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15174 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15175 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15176 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15177 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15178 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15179 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15180 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15181 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15182 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15183 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15184 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15185 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15186 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15187 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15188 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15189 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15190 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15191 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15192 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15193 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15194 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15195 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15196 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15197 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15198 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\200}% U+1E80
15199 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15200 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
15201 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute

15202 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\202}% U+1E82
 15203 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 15204 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\203}% U+1E83
 15205 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 15206 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
 15207 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 15208 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
 15209 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 15210 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
 15211 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 15212 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
 15213 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 15214 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
 15215 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 15216 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
 15217 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 15218 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 15219 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 15220 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 15221 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 15222 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
 15223 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 15224 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
 15225 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15226 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
 15227 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15228 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
 15229 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15230 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15231 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15232 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15233 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15234 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15235 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15236 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15237 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15238 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15239 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15240 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15241 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15242 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15243 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15244 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15245 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15246 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15247 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15248 \DeclareTextCompositeCommand{'}{PU}{Y}{\9036\362}% U+1EF2
 15249 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15250 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}% U+1EF3
 15251 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15252 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15253 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15254 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15255 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner

15256 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
15257 % U+2013 EN DASH; endash
15258 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
15259 % U+2014 EM DASH; emdash
15260 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
15261 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
15262 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
15263 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15264 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
15265 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
15266 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
15267 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
15268 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
15269 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15270 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
15271 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15272 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
15273 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15274 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
15275 % U+2020 DAGGER; dagger
15276 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
15277 % U+2021 DOUBLE DAGGER; daggerdbl
15278 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
15279 % U+2022 BULLET; bullet
15280 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
15281 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15282 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
15283 % U+2030 PER MILLE SIGN; perthousand
15284 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
15285 % U+2031 PER TEN THOUSAND SIGN
15286 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
15287 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
15288 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
15289 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
15290 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
15291 % U+203B REFERENCE MARK; referencemark
15292 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
15293 % U+203D INTERROBANG
15294 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
15295 % U+2044 FRACTION SLASH; fraction
15296 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
15297 % U+2045 LEFT SQUARE BRACKET WITH QUILL
15298 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
15299 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
15300 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
15301 % U+2052 COMMERCIAL MINUS SIGN
15302 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15303 % U+2070 SUPERSCRIPT ZERO; zerosuperior
15304 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
15305 % U+2074 SUPERSCRIPT FOUR; foursuperior
15306 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
15307 % U+2075 SUPERSCRIPT FIVE; fivesuperior
15308 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075

15309 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15310 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15311 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15312 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15313 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15314 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15315 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15316 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15317 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15318 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15319 % U+207B SUPERSCRIPT MINUS
 15320 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15321 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15322 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 15323 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15324 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15325 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15326 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15327 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15328 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15329 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15330 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15331 % U+2081 SUBSCRIPT ONE; oneinferior
 15332 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15333 % U+2082 SUBSCRIPT TWO; twoinferior
 15334 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15335 % U+2083 SUBSCRIPT THREE; threeinferior
 15336 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15337 % U+2084 SUBSCRIPT FOUR; fourinferior
 15338 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15339 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15340 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15341 % U+2086 SUBSCRIPT SIX; sixinferior
 15342 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15343 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15344 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15345 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15346 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15347 % U+2089 SUBSCRIPT NINE; nineinferior
 15348 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15349 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15350 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15351 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15352 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15353 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15354 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15355 % U+20A4 LIRA SIGN; afi08941, *lira
 15356 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15357 % U+20A6 NAIRA SIGN
 15358 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15359 % U+20A7 PESETA SIGN; peseta
 15360 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15361 % U+20A9 WON SIGN; won
 15362 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15363 % U+20AB DONG SIGN; dong

15364 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15365 % U+20AC EURO SIGN; *Euro, euro
 15366 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15367 % U+20B1 PESO SIGN
 15368 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15369 % U+20B2 GUARANI SIGN
 15370 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15371 % U+2103 DEGREE CELSIUS; centigrade
 15372 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15373 % U+2116 NUMERO SIGN; *afi61352, numero
 15374 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15375 % U+2117 SOUND RECORDING COPYRIGHT
 15376 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15377 % U+211E PRESCRIPTION TAKE; prescription
 15378 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15379 % U+2120 SERVICE MARK
 15380 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15381 % U+2122 TRADE MARK SIGN; trademark
 15382 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15383 % U+2126 OHM SIGN; Ohm, Omega
 15384 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15385 % U+2127 INVERTED OHM SIGN
 15386 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15387 % U+212B ANGSTROM SIGN; angstrom
 15388 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15389 % U+212E ESTIMATED SYMBOL; estimated
 15390 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15391 % U+2135 ALEF SYMBOL; aleph
 15392 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15393 % U+2190 LEFTWARDS ARROW; arrowleft
 15394 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15395 % U+2191 UPWARDS ARROW; arrowup
 15396 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15397 % U+2192 RIGHTWARDS ARROW; arrowright
 15398 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15399 % U+2193 DOWNWARDS ARROW; arrowdown
 15400 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15401 % U+2212 MINUS SIGN; minus
 15402 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15403 % U+221A SQUARE ROOT; radical
 15404 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15405 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15406 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15407 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15408 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15409 % U+2422 BLANK SYMBOL
 15410 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422

15411 % U+2423 OPEN BOX; blank
 15412 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15413 % U+2460 CIRCLED DIGIT ONE; onecircle
 15414 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15415 % U+2461 CIRCLED DIGIT TWO; twocircle
 15416 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15417 % U+2462 CIRCLED DIGIT THREE; threecircle
 15418 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15419 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15420 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15421 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15422 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15423 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15424 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15425 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 15426 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15427 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15428 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15429 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15430 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15431 % U+2469 CIRCLED NUMBER TEN; tencircle
 15432 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15433 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15434 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15435 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15436 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15437 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15438 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15439 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15440 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15441 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15442 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15443 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15444 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15445 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15446 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15447 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15448 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15449 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15450 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15451 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15452 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15453 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15454 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15455 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15456 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15457 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15458 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15459 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15460 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15461 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15462 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15463 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15464 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15465 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

15466 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 15467 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 15468 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 15469 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 15470 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 15471 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 15472 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 15473 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 15474 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 15475 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 15476 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 15477 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 15478 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 15479 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 15480 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 15481 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 15482 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 15483 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 15484 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 15485 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 15486 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 15487 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 15488 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 15489 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 15490 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 15491 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 15492 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 15493 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 15494 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 15495 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 15496 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 15497 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 15498 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 15499 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 15500 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 15501 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 15502 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 15503 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 15504 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 15505 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 15506 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 15507 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 15508 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 15509 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 15510 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 15511 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 15512 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 15513 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 15514 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 15515 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 15516 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 15517 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 15518 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 15519 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 15520 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 15521 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 15522 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

15523 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15524 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15525 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15526 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15527 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15528 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15529 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15530 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15531 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15532 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15533 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15534 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15535 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15536 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15537 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15538 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15539 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15540 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15541 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15542 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15543 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15544 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15545 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15546 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15547 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15548 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15549 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15550 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15551 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15552 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15553 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15554 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15555 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15556 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15557 % U+24EA CIRCLED DIGIT ZERO
 15558 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15559 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15560 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15561 % U+25EF LARGE CIRCLE; largecircle
 15562 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15563 % U+266A EIGHTH NOTE; musicalnote
 15564 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15565 % U+26AD MARRIAGE SYMBOL
 15566 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15567 % U+26AE DIVORCE SYMBOL
 15568 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15569 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15570 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15571 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15572 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
15573 % U+FB01 LATIN SMALL LIGATURE FI; fi
15574 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
15575 % U+FB02 LATIN SMALL LIGATURE FL; fl
15576 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
15577 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
15578 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15579 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15580 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15581 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15582 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15583 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15584 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15585 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
15586 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15587 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15588 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15589 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15590 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
15591 </puenc>
```

50.3 PU encoding, additions for VnT_EX

This file is provided by Han The Thanh.

```
15592 <*puvnenc>
15593 \DeclareTextCommand{\abreve}{PU}{\81\003}
15594 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15595 \DeclareTextCommand{\dj}{PU}{\81\021}
15596 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15597 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15598 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15599 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15600 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15601 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15602 \DeclareTextCommand{\DJ}{PU}{\81\020}
15603 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15604 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15605 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15606 \DeclareTextCommand{\UHORN}{PU}{\81\257}
15607 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15608 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15609 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15610 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15611 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15612 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15613 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15614 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15615 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
```

15616 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15617 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15618 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15619 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15620 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15621 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15622 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15623 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15624 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15625 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15626 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15627 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15628 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15629 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15630 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15631 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15632 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15633 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15634 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15635 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15636 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15637 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15638 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15639 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15640 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15641 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15642 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15643 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15644 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15645 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15646 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15647 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15648 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15649 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15650 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15651 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15652 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15653 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15654 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15655 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15656 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15657 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15658 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15659 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15660 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15661 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15662 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15663 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15664 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15665 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15666 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15667 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15668 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15669 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15670 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15671 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15672 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}

15673 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15674 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15675 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15676 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15677 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15678 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15679 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15680 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15681 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15682 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15683 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15684 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15685 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15686 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15687 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15688 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15689 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15690 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15691 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15692 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15693 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15694 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15695 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15696 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15697 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15698 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15699 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15700 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15701 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15702 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
15703 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15704 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15705 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15706 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15707 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15708 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15709 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15710 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15711 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15712 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15713 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15714 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15715 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15716 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15717 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15718 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15719 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15720 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15721 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
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15726 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15727 </puvnenc>

50.4 PU encoding, additions for Arabi

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15728 \DeclareTextCommand{\puarenc}
15729 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
TER HAMZA
15730 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15731 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15732 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15733 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15734 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15735 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
15736 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
15737 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
15738 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
15739 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
TER THEH
15740 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
TER JEEM
15741 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
15742 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
15743 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
15744 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
15745 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
15746 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
15747 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
15748 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
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15749 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
15750 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
15751 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
15752 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
15753 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
15754 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
TER GHAIN
15755 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
15756 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
15757 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
15758 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
15759 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
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15761 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
15762 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
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15765 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
15766 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
15767 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
15768 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
15769 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
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15772 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15773 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

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15777 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
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15778 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15779 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
    TER YEH

15780 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15781 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15782 \puarenc

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15784 \typeout{}
15785 \begin{document}
15786 \end{document}
15787 \check)

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