

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 hycheck.tex

Many commands of L^AT_EX 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 L^AT_EX'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 L^AT_EX.

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

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

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

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

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

`\HyC@checkPackage`

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

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

```

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

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

```

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

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

```

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

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

```

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

`\HyC@noValue`

```

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

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


```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

216 \x\)%
217 \x\[%
218 \x\]%
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{keyval}[1997/11/10]
233 \RequirePackage{ifpdf}[2006/02/20]
234 \RequirePackage{ifvtex}
235 \RequirePackage{ifxetex}[2006/08/21]
236 \RequirePackage{hycolor}
237 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
238 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
239 \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`.

```

240 \@ifundefined{AfterBeginDocument}{%
241   \def\AfterBeginDocument{\AtBeginDocument}%
242 }{}%

```

4.3 Switches

```

243 \newif\ifHy@typexml
244 \newif\ifHy@activeanchor
245 \newif\ifHy@backref
246 \newif\ifHy@bookmarks
247 \newif\ifHy@bookmarksnumbered
248 \newif\ifHy@bookmarksopen
249 \newif\ifHy@breaklinks
250 \newif\ifHy@centerwindow
251 \newif\ifHy@CJKbookmarks
252 \newif\ifHy@colorlinks
253 \newif\ifHy@draft
254 \let\Hy@finaltrue\Hy@draftfalse
255 \let\Hy@finalfalse\Hy@drafttrue

```

```

256 \newif\ifHy@escapeform
257 \newif\ifHy@figures
258 \newif\ifHy@fitwindow
259 \newif\ifHy@frenchlinks
260 \newif\ifHy@hyperfootnotes
261 \newif\ifHy@hyperindex
262 \newif\ifHy@hypertextnames
263 \newif\ifHy@implicit
264 \newif\ifHy@linktocpage
265 \newif\ifHy@menubar
266 \newif\ifHy@naturalnames
267 \newif\ifHy@nesting
268 \newif\ifHy@newwindowset
269 \newif\ifHy@newwindow
270 \newif\ifHy@ocgcolorlinks
271 \newif\ifHy@pageanchor
272 \newif\ifHy@pagelabels
273 \newif\ifHy@pdfpagehidden
274 \newif\ifHy@pdfstring
275 \newif\ifHy@plainpages
276 \newif\ifHy@psize
277 \newif\ifHy@raiselinks
278 \newif\ifHy@seminarslides
279 \newif\ifHy@setpagesize
280 \newif\ifHy@texht
281 \newif\ifHy@toolbar
282 \newif\ifHy@unicode
283 \newif\ifHy@usetitle
284 \newif\ifHy@verbose
285 \newif\ifHy@windowui
286 \newif\ifHy@displaydoctitle
287 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

288 \Hy@backreffalse
289 \Hy@bookmarksnumberedfalse
290 \Hy@bookmarksopenfalse
291 \Hy@bookmarkstrue
292 \Hy@breaklinksfalse
293 \Hy@centerwindowfalse
294 \Hy@CJKbookmarksfalse
295 \Hy@escapeformfalse
296 \Hy@figuresfalse
297 \Hy@fitwindowfalse
298 \Hy@hyperfootnotetrue
299 \Hy@hyperindextrue
300 \Hy@hypertextnametrue
301 \Hy@implicittrue
302 \Hy@linktocpagefalse
303 \Hy@menubartrue
304 \Hy@naturalnamesfalse
305 \Hy@nestingfalse
306 \Hy@newwindowsetfalse
307 \Hy@newwindowfalse
308 \Hy@pageanchortrue
309 \Hy@pagelabelstrue
310 \Hy@pdfpagehiddenfalse
311 \Hy@pdfstringfalse

```

```

312 \Hy@plainpagesfalse
313 \Hy@raiselinksfalse
314 \Hy@setpagesizetrue
315 \Hy@texhtfalse
316 \Hy@toolbartrue
317 \Hy@typexmlfalse
318 \Hy@unicodetrue
319 \Hy@usetitlefalse
320 \Hy@verbosefalse
321 \Hy@windowuitrue
322 \Hy@displaydoctitlefalse
323 \Hy@pdfafalse

```

5 Common help macros

`\Hy@StepCount`

```

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

```

`\Hy@GlobalStepCount`

```

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

326 \newdimen\@linkdim
327 \let\Hy@driver\@empty
328 \let\MaybeStopEarly\relax
329 \newcount\Hy@linkcounter
330 \newcount\Hy@pagecounter
331 \Hy@linkcounter0
332 \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.

```

333 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
334 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

335 \let\Hy@ReturnEnd\@empty
336 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
337 \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.

```

338 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
339 \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).

`\hypercalcbp` The user macro `\hypercalcbp` can be used, for example, inside option values:
`pdfstartview={FitBH \hypercalcbp{\paperheight-\topmargin-1in}}`

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

Example (T_EX):

```

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

\hypercalcbp
340 \begingroup\expandafter\expandafter\expandafter\endgroup
341 \expandafter\ifx\csname dimexpr\endcsname\relax
342   \def\hypercalcbpdef#1#2{%
343     \begingroup
344       \toks@{}%
345       \HyCal@scan#2\hypercalcbp\@nil
346       \expandafter\endgroup
347       \expandafter\def\expandafter#1\expandafter{\the\toks@}%
348   }%
349   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
350     \toks@\expandafter{\the\toks@ #1}%
351     \ifx\#2\%
352       \else
353         \Hy@ReturnAfterFi{%
354           \HyCal@do#2\@nil
355         }%
356       \fi
357     }%
358     \def\HyCal@do#1#2\@nil{%
359       \@ifpackageloaded{calc}{-}{%
360         \Hy@Warning{%
361           For calculations \string\hypercalcbp\space needs\MessageBreak
362           package calc or e-TeX%
363         }%
364       }%
365       \setlength{\dimen@}{#1}%
366       \setlength{\dimen@}{0.99626401\dimen@}%
367       \edef\x{%
368         \toks@{%
369           \the\toks@
370           \strip@pt\dimen@
371         }%
372       }\x
373       \HyCal@scan#2\@nil

```

```

374 }%
375 \else
376 \def\hypercalcbp#1{%
377 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
378 }%
379 \def\hypercalcbpdef{\def}%
380 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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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 `ISOLatin1` 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 processed by \TeX , because the tokens have only catcodes 10 until 12.

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

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

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

```
382 \begingroup
```

6.2.1 Preprocessing

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

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

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

```
383 \escapechar'\%
```

From the view of \TeX a octal sequence consists of the command tokens `\0` until `\3` and two digits. For saving tokens `\0`, `\1`, `\2`, and `\3` are directly used without a preceding `\string` in the glyph definitions. This is done here locally by defining the `\0` until `\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.

```
384 \edef\0{\string\0}%
```

```
385 \edef\1{\string\1}%
```

```
386 \edef\2{\string\2}%
```

```
387 \edef\3{\string\3}%
```

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

The encoding is set by `\enc@update` for optimizing reasons.

```
388 \ifHy@unicode
```

```
389 \edef\8{\string\8}%
```

```
390 \edef\9{\string\9}%
```

```
391 \fontencoding{PU}%
```

```
392 \HyPsd@UTFviii
```

```
393 \def\ifpdfstringunicode##1##2{##1}%
```

```
394 \else
```

```
395 \fontencoding{PD1}%
```

```
396 \def\ifpdfstringunicode##1##2{##2}%
```

```
397 \fi
```

```
398 \enc@update
```

Internal encoding commands. `\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 `\@inmathwarn` will be disabled (see below).

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

```
400 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
401 \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.

```
402 \let\{\textbraceleft
403 \let\}\textbraceright
404 \let\\textbackslash
405 \let\#\textnumbersign
406 \let\$\textdollar
407 \let\%\textpercent
408 \let\&\textampersand
409 % \let\~\textasciitilde
410 \let\_ \textunderscore
411 \let\textparagraph
412 \let\ldots\textellipsis
413 \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.

```
414 \def\{\pdfstringdefWarn\\}%
415 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
416 \def\TeX{\TeX}%
417 \def\LaTeX{La\TeX}%
418 \def\LaTeXe{LaTeX2e}%
419 \def\eTeX{e-\TeX}%
420 \def\SliTeX{Sli\TeX}%
421 \def\MF{Metafont}%
422 \def\MP{Metapost}%
```

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

```

423 \let\emph\@firstofone
424 \let\textnormal\@firstofone
425 \let\textrm\@firstofone
426 \let\textsf\@firstofone
427 \let\texttt\@firstofone
428 \let\textbf\@firstofone
429 \let\textmd\@firstofone
430 \let\textit\@firstofone
431 \let\textsc\@firstofone
432 \let\textsl\@firstofone
433 \let\textup\@firstofone
434 \let\normalfont\@empty
435 \let\rmfamily\@empty
436 \let\sffamily\@empty
437 \let\ttfamily\@empty
438 \let\bfseries\@empty
439 \let\mdseries\@empty
440 \let\itshape\@empty
441 \let\scshape\@empty
442 \let\slshape\@empty
443 \let\upshape\@empty
444 \let\em\@empty
445 \let\rm\@empty
446 \let\Huge\@empty
447 \let\LARGE\@empty
448 \let\Large\@empty
449 \let\footnotesize\@empty
450 \let\huge\@empty
451 \let\large\@empty
452 \let\normalsize\@empty
453 \let\scriptsize\@empty
454 \let\small\@empty
455 \let\tiny\@empty
456 \let\mathversion\@gobble
457 \let\phantom\@gobble
458 \let\vphantom\@gobble
459 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

461 \def\MakeUppercase{\MakeUppercaseIsNotSupportedInPdfStrings}%
462 \def\MakeLowercase{\MakeLowercaseIsNotSupportedInPdfStrings}%

```

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

```

463 \let\textlatin\@firstofone
464 \@ifundefined{language@group}{\}%
465 \csname HyPsd@babel@language@group\endcsname
466 }%
467 \HyPsd@GreekPatch

```

```

468 \let\@safe@activetrue\relax
469 \let\@safe@activesfalse\relax
    Disable \cyr, used in russianb.ldf.
470 \let\cyr\relax
    Redefine \es@roman, used in spanish.ldf.
471 \let\es@roman\@Roman

```

Package german.

```

472 \let\glqq\textglqq
473 \let\grqq\textgrqq
474 \let\glq\textglq
475 \let\grq\textgrq
476 \let\flqq\textflqq
477 \let\frqq\textfrqq
478 \let\flq\textflq
479 \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}
480 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

481 \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.

```

482 \let\hspace\HyPsd@hspace

```

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

```

483 \let\label\@gobble
484 \let\index\@gobble
485 \let\glossary\@gobble
486 \let\href\@secondoftwo
487 \let\@mkboth\@gobbletwo

```

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

```

488 \let\ref\HyPsd@ref
489 \let\pageref\HyPsd@pageref
490 \let\nameref\HyPsd@nameref
491 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

492 \let\leavevmode\@empty
493 \let\mbox\@empty

```

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

```

494 \def\halign{\pdfstringdefWarn\halign\@gobble}%
495 \let\ignorespaces\HyPsd@ignorespaces

```

Patch for cjk bookmarks.

```
496 \ifHy@CJKbookmarks
497 \HyPsd@CJKhook
498 \fi
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typeset 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`).

```
499 \Hy@pdfstringtrue
500 \pdfstringdefPreHook
```

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

```
501 \HyPsd@LetUnexpandableSpace\space
502 \HyPsd@LetUnexpandableSpace\ %
503 \HyPsd@LetUnexpandableSpace~%
504 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
505 \@ifundefined{@xspace}{%
506 \let\xspace\HyPsd@ITALCORR
507 }{%
508 \let\xspace\HyPsd@XSPACE
509 }%
510 \let\/\HyPsd@ITALCORR
511 \let\bgroup\/%
512 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
513 \let\discretionary\@gobbletwo
\@ifstar is defined in  $\text{\LaTeX}$  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:

```
514 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
515 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
516 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
517 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

```
519 \begingroup
520 \let\GenericError\@gobblefour
521 \let\GenericWarning\@gobbletwo
522 \let\GenericInfo\@gobbletwo
```

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

```
523 \ifx\nofrenchguillemets\@undefined
524 \else
525 \nofrenchguillemets
526 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.10). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
527 \let\Hy@temp\xdef
528 \let\def\HyPsd@DefCommand
529 \let\gdef\HyPsd@DefCommand
```

```

530      \let\edef\HyPsd@DefCommand
531      \let\xdef\HyPsd@DefCommand
532      \let\futurelet\HyPsd@LetCommand
533      \let\let\HyPsd@LetCommand
534      \Hy@temp#1{#2}%
535  \endgroup

```

6.2.3 Postprocessing

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

```

536      \ifx#1\@empty
537      \else

```

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

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

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

```

538      \HyPsd@ProtectSpaces#1%
539      \let\HyPsd@String\@empty
540      \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
541      \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 $\text{\HyPsd@CheckCatcodes}$ 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 $\text{\HyPsd@CheckCatcodes}$ is called.

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

```

542 \let\HyPsd@SPACEOPTI\relax
543 {%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
546 \global\let#1\HyPsd@String
547 }%
548 \expandafter\HyPsd@RemoveMask\expandafter
549 |\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.

```

550 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
551 \let\HyPsd@String\@empty
552 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
553 \global\let#1\HyPsd@String

```

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

```
554 \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.1df can produce an additional space before \guillemotright, because \lastskip and \unskip do not work. Therefore it is removed here.

```

555 \ifHy@unicode
556 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
557 \HyPsd@SPACEOPTI#1%
558 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
559 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
560 {\HyPsd@SPACEOPTI\80\273}#1%
561 \else
562 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
563 \expandafter\HyPsd@Subst\expandafter{%
564 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
565 \string\273}\HyPsd@SPACEOPTI\273}#1%
566 \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.


```

567 \ifHy@unicode
568 \HyPsd@StringSubst{\}){\80\051}#1%
569 \HyPsd@Subst){\80\051}#1%
570 \let\HyPsd@empty\relax
571 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
572 {\HyPsd@empty\80\051}#1%
573 \else
574 \HyPsd@StringSubst{\}){\051}#1%
575 \HyPsd@Subst){\051}#1%
576 \let\HyPsd@empty\relax
577 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})#1%
578 \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`.

```

579 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
580 \@ifundefined{@xspace}{%
581 }{%
582 \let\HyPsd@xspace\relax
583 \expandafter\HyPsd@Subst\expandafter
584 {\HyPsd@XSPACE}\HyPsd@xspace#1%
585 \let\HyPsd@xspace\HyPsd@doxspace
586 }%
587 \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.

```

588 \HyPsd@Subst{---}\textemdash#1%
589 \HyPsd@Subst{--}\textendash#1%
590 % \HyPsd@Subst{fi}\textfi#1%
591 % \HyPsd@Subst{fl}\textfl#1%
592 \HyPsd@Subst{!'}\texttexclamdown#1%
593 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

594 \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.

```

595     \ifHy@unicode
596         \HyPsd@StringSubst\(\textparenleft#1%
597         \HyPsd@Subst(\textparenleft#1%
598     \else
599         \HyPsd@StringSubst\({\050}#1%
600         \HyPsd@Subst({\050}#1%
601         \HyPsd@StringSubst{\050}{\string\()}#1%
602     \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.

```

603     \ifHy@unicode
604         \edef\HyPsd@SPACEOPTI{\80\040}%
605     \else
606         \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
607     \fi
608     \xdef#1{#1\@empty}%
609 \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.

```

610 \endgroup
611 \begingroup
612     \ifHy@unicode
613         \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

614     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
615         \ifundefined{StringEncodingConvertTest}{%
616             {%
617                 \EdefUnescapeString\HyPsd@temp#1%
618                 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
619                                     {utf16be}{pdfdoc}{%
620                     \EdefEscapeString\HyPsd@temp\HyPsd@temp
621                     \global\let#1\HyPsd@temp
622                     \Hy@unicodedefalse
623                 }{}%
624             }%
625         \fi
626     \fi

```

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

```

627     \pdfstringdefPostHook#1%
628 \endgroup
629 }

```

`\Hy@pdfstringdef`

```
630 \def\Hy@pdfstringdef#1#2{%
631   \pdfstringdef\Hy@gtemp{#2}%
632   \let#1\Hy@gtemp
633 }
```

6.3 Encodings

6.3.1 Workaround for package linguex

```
634 \@ifpackageloaded{linguex}{%
635   \let\HyLinguex@OrgB\b
636   \let\HyLinguex@OrgC\c
637   \let\HyLinguex@OrgD\d
638   \def\HyLinguex@Restore{%
639     \let\b\HyLinguex@OrgB
640     \let\c\HyLinguex@OrgC
641     \let\d\HyLinguex@OrgD
642   }%
643   \AtEndOfPackage{%
644     \pdfstringdefDisableCommands{%
645       \@ifundefined{oldb}{\let\b\oldb}%
646       \@ifundefined{oldc}{\let\c\oldc}%
647       \@ifundefined{oldd}{\let\d\oldd}%
648     }%
649   }%
650 }{%
651   \let\HyLinguex@Restore\relax
652 }%
```

6.3.2 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 interpreting 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.

```
653 \@ifundefined{T@PD1}{%
654   \input{pd1enc.def}%
655   \HyLinguex@Restore
656 }{}
657 \DeclareFontFamily{PD1}{pdf}{}
658 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
659 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.3 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.

```
660 \def\HyPsd@InitUnicode{%
661   \@ifundefined{T@PU}{%
```

```

662 \input{puenc.def}%
663 \HyLinguex@Restore
664 }{}%
665 \DeclareFontFamily{PU}{pdf}{}%
666 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
667 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
668 \let\HyPsd@InitUnicode\relax
669 }

```

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.

```

670 \def\texorpdfstring{%
671 \ifHy@pdfstring
672 \expandafter\@secondoftwo
673 \else
674 \expandafter\@firstoftwo
675 \fi
676 }

```

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`.

```

677 \@ifundefined{pdfstringdefPreHook}{%
678 \let\pdfstringdefPreHook\@empty
679 }{}
680 \@ifundefined{pdfstringdefPostHook}{%
681 \let\pdfstringdefPostHook\@gobble
682 }{}

```

`\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`.

```

683 \def\pdfstringdefDisableCommands{%
684 \begingroup
685 \makeatletter
686 \HyPsd@DisableCommands
687 }

```

`\HyPsd@DisableCommands`

```
688 \long\def\HyPsd@DisableCommands#1{%
689   \toks0=\expandafter{\pdfstringdefPreHook}%
690   \toks1={#1}%
691   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
692 \endgroup
693 }
```

`\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`.

```
694 \def\pdfstringdefWarn#1{%
695   \expandafter\noexpand\csname\<>-string#1\endcsname
696 }
```

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.

```
697 \begingroup
698   \catcode0=12 %
699   \def\x{\endgroup
700     \def\HyPsd@ignorespaces{%
701       \romannumeral\expandafter'\expandafter^^@%
702       \romannumeral'^^@%
703     }%
704   }%
705 \x
```

6.5.2 Babel languages

```
706 \newif\ifHy@next

Nothing to do for english.
707 \@ifundefined{danish@sh@"@sel}{-}{-}%
708 \def\HyPsd@babel@danish{%
709   \declare@shorthand{danish}{-}{-}%
710   \declare@shorthand{danish}{-}{-}%
711 }%
712 }
713 \@ifundefined{dutch@sh@"@sel}{-}{-}%
714 \def\HyPsd@babel@dutch{%
715   \declare@shorthand{dutch}{-}{-}%
716   \declare@shorthand{dutch}{-}{-}%
717 }%
718 }
```

```

719 \@ifundefined{finnish@sh@"@sel}{-}{%
720   \def\HyPsd@babel@finnish{%
721     \declare@shorthand{finnish}{-}{-}%
722   }%
723 }
724 \@ifundefined{french@sh@"@sel}{-}{%
725   \def\HyPsd@babel@frenchb{%
726     \def\guill@spacing{ }%
727   }%
728 }
729 \@ifundefined{german@sh@"@sel}{-}{%
730   \def\HyPsd@babel@german{%
731     \declare@shorthand{german}{-f}{-f}%
732     \declare@shorthand{german}{-}{-}%
733     \declare@shorthand{german}{-~}{-}%
734   }%
735 }
736 \@ifundefined{macedonian@sh@"@sel}{-}{%
737   \def\HyPsd@babel@macedonian{%
738     \declare@shorthand{macedonian}{-}{-}%
739     \declare@shorthand{macedonian}{-~}{-}%
740   }%
741 }{-}
742 \@ifundefined{ngerman@sh@"@sel}{-}{%
743   \def\HyPsd@babel@ngerman{%
744     \declare@shorthand{ngerman}{-}{-}%
745     \declare@shorthand{ngerman}{-~}{-}%
746   }%
747 }
748 \@ifundefined{portuges@sh@"@sel}{-}{%
749   \def\HyPsd@babel@portuges{%
750     \declare@shorthand{portuges}{-}{-}%
751   }%
752 }
753 \@ifundefined{russian@sh@"@sel}{-}{%
754   \def\HyPsd@babel@russian{%
755     \declare@shorthand{russian}{-}{-}%
756     \declare@shorthand{russian}{-~}{-}%
757   }%
758 }
759 \@ifundefined{slovene@sh@"@sel}{-}{%
760   \def\HyPsd@babel@slovene{%
761     \declare@shorthand{slovene}{-}{-}%
762   }%
763 }

```

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

```

764 \@ifundefined{spanish@sh@>@sel}{-}{%
765   \def\HyPsd@babel@spanish{%
766     \declare@shorthand{spanish}{<<}{\guillemotleft}%
767     \declare@shorthand{spanish}{>>}{\guillemotright}%
768     \declare@shorthand{spanish}{=}{-}%
769     \declare@shorthand{spanish}{~}{-}%
770     \declare@shorthand{spanish}{!}{\textexclamdown}%
771     \declare@shorthand{spanish}{?}{\textquestiondown}%
772   }%
773 }
774 \@ifundefined{swedish@sh@"@sel}{-}{%

```

```

775 \def\HyPsd@babel@swedish{%
776   \declare@shorthand{swedish}{"}{|}%
777   \declare@shorthand{swedish}{"}{|}%
778 }%
779 }
780 \@ifundefined{ukrainian@sh@"@sel}{|}%
781 \def\HyPsd@babel@ukrainian{%
782   \declare@shorthand{ukrainian}{"}{|}%
783   \declare@shorthand{ukrainian}{"}{|}%
784 }%
785 }
786 \@ifundefined{usorbian@sh@"@sel}{|}%
787 \def\HyPsd@babel@usorbian{%
788   \declare@shorthand{usorbian}{"}{|}%
789   \declare@shorthand{usorbian}{"}{|}%
790 }%
791 }
792 \@ifundefined{greek@sh@\string~@sel}{|}%
793 \let\HyPsd@GreekPatch\empty
794 }{|}%
795 \def\HyPsd@GreekPatch{%
796   \let\greeknumeral\HyPsd@greeknumeral
797   \let\Greeknumeral\HyPsd@Greeknumeral
798 }%
799 }
800 \def\HyPsd@greeknumeral#1{%
801   \HyPsd@GreekNum\@firstoftwo{#1}%
802 }
803 \def\HyPsd@Greeknumeral#1{%
804   \HyPsd@GreekNum\@secondoftwo{#1}%
805 }
806 \def\HyPsd@GreekNum#1#2{%
807   \ifHy@unicode
808     \ifnum#2<\@one
809       \@arabic{#2}%
810     \else
811       \ifnum#2<1000000 %
812         \HyPsd@@GreekNum#1{#2}%
813       \else
814         \@arabic{#2}%
815       \fi
816     \fi
817   \else
818     \@arabic{#2}%
819   \fi
820 }
821 \def\HyPsd@@GreekNum#1#2{%
822   \ifnum#2<\@m
823     \ifnum#2<10 %
824       \expandafter\HyPsd@GreekNumI
825       \expandafter\@gobble\expandafter#1\number#2%
826     \else
827       \ifnum#2<100 %
828         \expandafter\HyPsd@GreekNumII
829         \expandafter\@gobble\expandafter#1\number#2%
830       \else
831         \expandafter\HyPsd@GreekNumIII

```

```

832         \expandafter\@gobble\expandafter#1\number#2%
833     \fi
834 \fi
835 \ifnum#2>\z@
836     \textnumeralsigngreek
837 \fi
838 \else
839     \ifnum#2<\@M
840         \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
841     \else
842         \ifnum#2<100000 %
843             \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
844         \else
845             \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
846         \fi
847     \fi
848 \fi
849 }
850 \def\HyPsd@GreekNumI#1#2#3{%
851     #1{%
852         \ifnum#3>\z@
853             \textnumeralsignlowergreek
854         \fi
855     }%
856     \expandafter#2%
857     \ifcase#3 %
858         {}{}%
859     \or\textalpha\textAlpha
860     \or\textbeta\textBeta
861     \or\textgamma\textGamma
862     \or\textdelta\textDelta
863     \or\textepsilon\textEpsilon
864     \or\textstigmagreek\textStigmagreek
865     \or\textzeta\textZeta
866     \or\texteta\textEta
867     \or\texttheta\textTheta
868     \else
869         {}{}%
870     \fi
871 }
872 \def\HyPsd@GreekNumII#1#2#3#4{%
873     #1{%
874         \ifnum#3>\z@
875             \textnumeralsignlowergreek
876         \fi
877     }%
878     \expandafter#2%
879     \ifcase#3 %
880         {}{}%
881     \or\textiota\textIota
882     \or\textkappa\textKappa
883     \or\textlambda\textLambda
884     \or\textmu\textMu
885     \or\textnu\textNu
886     \or\textxi\textXi
887     \or\textomicron\textOmicron
888     \or\textpi\textPi

```



```

889 \or\textkoppagreek\textKoppagreek
890 \else
891   {}{}%
892 \fi
893 \HyPsd@GreekNumI#1#2#4%
894 }
895 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
896   #1{%
897     \ifnum#3>\z@
898       \textnumeralsignlowergreek
899     \fi
900   }%
901   \expandafter#2%
902   \ifcase#3 %
903     {}{}%
904   \or\textrho\textRho
905   \or\textsigma\textSigma
906   \or\texttau\textTau
907   \or\textupsilon\textUpsilon
908   \or\textphi\textPhi
909   \or\textchi\textChi
910   \or\textpsi\textPsi
911   \or\textomega\textOmega
912   \or\textsampigreek\textSampigreek
913   \else
914     {}{}%
915   \fi
916   \HyPsd@GreekNumII#1#2#4#5%
917 }
918 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
919   \HyPsd@GreekNumI\@firstofone#1#2%
920   \HyPsd@GreekNum#1{#3#4#5}%
921 }
922 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
923   \HyPsd@GreekNumII\@firstofone#1#2#3%
924   \HyPsd@GreekNum#1{#4#5#6}%
925 }
926 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
927   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
928   \HyPsd@GreekNum#1{#5#6#7}%
929 }

```

6.5.3 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 ($\geq 0x40$).

```

930 \begingroup
931   \catcode"7F=\active
932   \toks@{%
933     \let\CJK@ignorespaces\empty

```

```

934 \def\CJK@char#1{\@gobbletwo}%
935 \let\CJK@charx\@gobblefour
936 \let\CJK@punctchar\@gobblefour
937 \def\CJK@punctcharx#1{\@gobblefour}%
938 \catcode"7F=\active
939 \def^^7f#1^^7f#2^^7f{%
940   \string #1\HyPsd@DecimalToOctal{#2}%
941 }%
942 % ... ?
943 \ifHy@unicode
944   \def\Hy@cjkpu{\80}%
945   \else
946     \let\Hy@cjkpu\@empty
947   \fi
948   \HyPsd@CJKActiveChars
949 }%
950 \count@=127 %
951 \@whilenum\count@<255 \do{%
952   \advance\count@ by 1 %
953   \lccode'\~=\count@
954   \lowercase{%
955     \toks@\expandafter{\the\toks@ ~}%
956   }%
957 }%
958 \toks@\expandafter{\the\toks@ !}%
959 \xdef\HyPsd@CJKhook{\the\toks@}%
960 \endgroup

```

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

```

961 \def\HyPsd@CJKActiveChars#1{%
962   \ifx#1!%
963     \let\HyPsd@CJKActiveChars\relax
964   \else
965     \edef#1{\noexpand\Hy@cjkpu\string#1}%
966   \fi
967   \HyPsd@CJKActiveChars
968 }

```

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

```

969 \def\HyPsd@DecimalToOctal#1{%
970   \ifcase #1 %
971     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
972     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
973     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
974     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
975     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
976     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
977     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
978     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
979     \or @\or A\or B\or C\or D\or E\or F\or G%
980     \or H\or I\or J\or K\or L\or M\or N\or O%
981     \or P\or Q\or R\or S\or T\or U\or V\or W%
982     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
983     \or \140\or a\or b\or c\or d\or e\or f\or g%
984     \or h\or i\or j\or k\or l\or m\or n\or o%
985     \or p\or q\or r\or s\or t\or u\or v\or w%

```

```

986 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
987 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
988 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
989 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
990 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
991 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
992 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
993 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
994 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
995 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
996 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
997 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
998 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
999 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1000 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1001 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1002 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1003 \fi
1004 }

```

6.5.4 \@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 L^AT_EX 2_ε 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 (L^AT_EX 2_ε 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}

1005 \def\HyPsd@inmathwarn#1#2{%
1006   \ifx#2\expandafter
1007     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1008       \HyPsd@GLYPHERR
1009       \expandafter\@gobble\string#1%
1010       >%
1011       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1012     \else
1013       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1014     \fi
1015   \else
1016     \expandafter#2%
1017   \fi
1018 }
1019 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1020 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1021 \def\HyPsd@add@accent#1#2{%
1022   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1023   #2%
1024 }%

```

6.5.5 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, dimen, and skip assignments.

These properties are used in \HyPsd@CheckCatcodes.

```

1025 \def\HyPsd@LetUnexpandableSpace#1{%
1026   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1027 }

```

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

```

1028 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 Marker for commands

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

```

1029 \edef\HyPsd@XSPACE{\string#\string X}
1030 \edef\HyPsd@ITALCORR{\string#\string I}
1031 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 \hspace fix

\HyPsd@hspace

```
1032 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1033 \def\HyPsd@@hspace#1*#2\END{%
1034   \ifx\#2\%
1035     \HyPsd@hspacetest{#1}%
1036   \else
1037     \expandafter\HyPsd@hspacetest
1038   \fi
1039 }
```

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

```
1040 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.8 Fix for AMS classes

```
1041 \@ifundefined{tocsection}{%
1042   \let\HyPsd@AMSclassfix\relax
1043 }{%
1044   \def\HyPsd@AMSclassfix{%
1045     \let\tocpart\HyPsd@tocsection
1046     \let\tocchapter\HyPsd@tocsection
1047     \let\tocappendix\HyPsd@tocsection
1048     \let\tocsection\HyPsd@tocsection
1049     \let\tocsubsection\HyPsd@tocsection
1050     \let\tocsubsubsection\HyPsd@tocsection
1051     \let\tocparagraph\HyPsd@tocsection
1052   }%
1053   \def\HyPsd@tocsection#1#2#3{%
1054     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1055     #3%
1056   }%
1057 }
```

6.5.9 Reference commands

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

```
1058 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1059 \def\HyPsd@@ref#1*#2\END{%
1060   \ifx\#2\%
1061     \HyPsd@@@ref{#1}%
1062   \else
1063     \expandafter\HyPsd@@@ref
1064   \fi
1065 }
```

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

```
1066 \def\HyPsd@@@ref#1{%
1067   \expandafter\ifx\csname r@#1\endcsname\relax
1068     ??%
```

```

1069 \else
1070   \expandafter\expandafter\expandafter
1071   \@car\csname r@#1\endcsname\@nil
1072 \fi
1073 }

\HyPsd@pageref Macro \HyPsd@pageref calls the macro \HyPsd@@pageref for star checking. The same
methods like in \HyPsd@hspace is used.
1074 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

\HyPsd@@pageref Macro \HyPsd@@pageref checks if a star is present.
1075 \def\HyPsd@@pageref#1*#2\END{%
1076   \ifx\#2\%
1077     \HyPsd@@@pageref{#1}%
1078   \else
1079     \expandafter\HyPsd@@@pageref
1080   \fi
1081 }

\HyPsd@@@pageref \HyPsd@@@pageref does the work and extracts the second argument.
1082 \def\HyPsd@@@pageref#1{%
1083   \expandafter\ifx\csname r@#1\endcsname\relax
1084     ??%
1085   \else
1086     \expandafter\expandafter\expandafter\expandafter
1087     \expandafter\expandafter\expandafter\@car
1088     \expandafter\expandafter\expandafter\@gobble
1089     \csname r@#1\endcsname{}\@nil
1090   \fi
1091 }

\HyPsd@nameref Macro \HyPsd@nameref calls the macro \HyPsd@@nameref for star checking. The same
methods like in \HyPsd@hspace is used.
1092 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

\HyPsd@@nameref Macro \HyPsd@@nameref checks if a star is present.
1093 \def\HyPsd@@nameref#1*#2\END{%
1094   \ifx\#2\%
1095     \HyPsd@@@nameref{#1}%
1096   \else
1097     \expandafter\HyPsd@@@nameref
1098   \fi
1099 }

\HyPsd@@@nameref \HyPsd@@@nameref does the work and extracts the third argument.
1100 \def\HyPsd@@@nameref#1{%
1101   \expandafter\ifx\csname r@#1\endcsname\relax
1102     ??%
1103   \else
1104     \expandafter\expandafter\expandafter\expandafter
1105     \expandafter\expandafter\expandafter\@car
1106     \expandafter\expandafter\expandafter\@gobbletwo
1107     \csname r@#1\endcsname{}\@nil
1108   \fi
1109 }

```

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

```
1110 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1111 \def\HyPsd@@autoref#1*#2\END{%
1112   \ifx\#2\%
1113     \HyPsd@@@autoref{#1}%
1114   \else
1115     \expandafter\HyPsd@@@autoref
1116   \fi
1117 }
```

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

```
1118 \def\HyPsd@@@autoref#1{%
1119   \expandafter\ifx\csname r@#1\endcsname\relax
1120     ??%
1121   \else
1122     \expandafter\expandafter\expandafter\HyPsd@autorefname
1123       \csname r@#1\endcsname{}{}{}{}\@nil
1124     \expandafter\expandafter\expandafter
1125       \@car\csname r@#1\endcsname\@nil
1126   \fi
1127 }
```

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

```
1128 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1129   \ifx\#4\%
1130   \else
1131     \HyPsd@@autorefname#4.\@nil
1132   \fi
1133 }
```

`\HyPsd@@autorefname`

```
1134 \def\HyPsd@@autorefname#1.#2\@nil{%
1135   \@ifundefined{#1autorefname}{%
1136     \@ifundefined{#1name}{%
1137       }{%
1138         \csname#1name\endcsname\space
1139       }%
1140     }{%
1141       \csname#1autorefname\endcsname\space
1142     }%
1143 }
```

6.5.10 Redefining the defining commands

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

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side

effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

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

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

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

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

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1144 \begingroup
1145   \def\x#1#2{%
1146     \endgroup
1147     \let#1\def
1148     \def\HyPsd@DefCommand##1##2##{%
1149       #1%
1150       \expandafter\noexpand
1151       \csname\expandafter@gobble\string##1\@empty\endcsname
1152       \@gobble
1153     }%
1154     \let#2\let
1155     \def\HyPsd@@LetCommand##1{%
1156       \expandafter\ifx\csname##1\expandafter\endcsname
1157         \csname iftrue\endcsname
1158         \pdfstringdefWarn\let
1159         \expandafter@gobble
1160       \else
1161         \expandafter\ifx\csname##1\expandafter\endcsname
1162           \csname iffalse\endcsname
1163           \pdfstringdefWarn\let
1164           \expandafter\expandafter\expandafter@gobble
1165         \else
1166           #2%
1167           \expandafter\noexpand
1168           \csname##1\expandafter\expandafter\expandafter\endcsname
1169         \fi
1170       \fi
1171     }%
1172   }%
1173   \expandafter\x\csname <def>-command\expandafter\endcsname
1174     \csname <let>-command\endcsname
1175   \def\HyPsd@LetCommand#1{%
1176     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1177     \expandafter\expandafter\expandafter{%
1178       \expandafter@gobble\string#1\@empty
```



```

1179 }%
1180 }

```

6.5.11 \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).

```

1181 \def\HyPsd@ifnextchar#1{%
1182   \pdfstringdefWarn#1%
1183   \expandafter\@gobbletwo\@gobble
1184 }

```

6.5.12 \@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`.

```

1185 \def\HyPsd@protected@testopt#1{%
1186   \pdfstringdefWarn#1%
1187   \@gobbletwo
1188 }

```

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:

```

1189 \def\HyPsd@Warning#1{%
1190   \begingroup
1191     \def\space{ }%
1192     \Hy@Warning{#1}%
1193   \endgroup
1194 }

```

6.6.2 Protecting spaces

```

1195 \RequirePackage{etexcmds}[2007/09/09]
1196 \ifetex@unexpanded
1197   \expandafter\@secondoftwo
1198 \else
1199   \expandafter\@firstoftwo
1200 \fi
1201 {%

```

`\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`.

```

1202 \def\HyPsd@ProtectSpaces#1{%
1203   \iftrue
1204     \expandafter\HyPsd@@ProtectSpacesFi
1205     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1206   \fi
1207 }%

```

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

```

1208 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1209   \fi
1210   \ifx\scrollmode#2\scrollmode
1211     \HyPsd@RemoveMask#1\HyPsd@End#3%
1212   \else
1213     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1214     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1215   \fi
1216 }%

```

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.

```

1217 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1218   \toks@{\expandafter{#1}}%
1219   \xdef#2{\the\toks@}%
1220 }%

1221 }{%
1222 \let\HyPsd@fi\fi
1223 \def\HyPsd@ProtectSpaces#1{%
1224   \xdef#1{%
1225     \iftrue
1226       \expandafter\HyPsd@@ProtectSpacesFi
1227       \expandafter|\expandafter\@empty#1| %
1228     \HyPsd@fi
1229   }%
1230   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1231 }%
1232 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1233   \fi
1234   \etex@unexpanded{#1}%
1235   \ifx\scrollmode#2\scrollmode
1236   \else
1237     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1238   \HyPsd@fi
1239 }%
1240 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1241   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1242 }%
1243 }

```

6.6.3 Remove grouping braces

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

```

1244 \def\HyPsd@RemoveBraces#1{%
1245   \ifx\scrollmode#1\scrollmode
1246   \else
1247     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1248   \fi
1249 }

```

`\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`.

```

1250 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1251   \fi
1252   \def\Hy@temp@A{#1#2}%
1253   \def\Hy@temp@B{#3}%
1254   \ifx\Hy@temp@A\Hy@temp@B
1255     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1256       \HyPsd@String#1%
1257     }%
1258     \ifx\scrollmode#2\scrollmode
1259     \else
1260       \Hy@ReturnAfterFiFiEnd{%
1261         \HyPsd@RemoveBraces{#2}%
1262       }%
1263     \fi
1264   \else
1265     \def\Hy@temp@A{#1}%
1266     \HyPsd@AppendItalcorr\HyPsd@String
1267     \ifx\Hy@temp@A\@empty
1268       \Hy@ReturnAfterElseFiFiEnd{%
1269         \HyPsd@RemoveBraces{#2}%
1270       }%
1271     \else
1272       \HyPsd@ProtectSpaces\Hy@temp@A
1273       \HyPsd@AppendItalcorr\Hy@temp@A
1274       \Hy@ReturnAfterFiFiEnd{%
1275         \expandafter\HyPsd@RemoveBraces\expandafter
1276           {\Hy@temp@A#2}%
1277       }%
1278     \fi
1279   \fi
1280   \Hy@ReturnEnd
1281 }

```

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

```

1282 \def\HyPsd@AppendItalcorr#1{%
1283   \expandafter\HyPsd@@AppendItalcorr\expandafter{/}#1%
1284 }
1285 \def\HyPsd@@AppendItalcorr#1#2{%
1286   \expandafter\def\expandafter#2\expandafter{#2#1}%
1287 }

```

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`).

```

1288 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1289   \global\let\HyPsd@Rest\relax
1290   \ifcat\relax\noexpand#1\relax
1291     \ifx#1\protect
1292     \else
1293       \ifx#1\penalty
1294         \setbox\z@=\hbox{%
1295           \afterassignment\HyPsd@AfterCountRemove
1296           \count@=#2\HyPsd@End
1297         }%
1298       \else
1299         \ifx#1\kern
1300         \setbox\z@=\hbox{%
1301           \afterassignment\HyPsd@AfterDimenRemove
1302           \dimen@=#2\HyPsd@End
1303         }%
1304       \else
1305         \ifx#1\hskip
1306         \setbox\z@=\hbox{%
1307           \afterassignment\HyPsd@AfterSkipRemove
1308           \skip@=#2\HyPsd@End
1309         }%
1310       \else
1311         \HyPsd@CatcodeWarning{#1}%
1312       \fi
1313     \fi
1314   \fi
1315 \fi
1316 \else
1317   \ifcat#1A% letter
1318   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1319     \HyPsd@String#1%
1320   }%
1321 \else
1322   \ifcat#1 % SPACE
1323   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1324     \HyPsd@String\HyPsd@SPACEOPTI
1325   }%
1326 \else
1327   \ifcat$#1%
1328   \HyPsd@CatcodeWarning{math shift}%
1329 \else
1330   \ifcat&#1%
1331   \HyPsd@CatcodeWarning{alignment tab}%

```

```

1332         \else
1333         \ifcat^#1%
1334         \HyPsd@CatcodeWarning{superscript}%
1335         \else
1336         \ifcat_#1%
1337         \HyPsd@CatcodeWarning{subscript}%
1338         \else
1339         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1340         \HyPsd@String#1%
1341         }%
1342         \fi
1343     \fi
1344 \fi
1345 \fi
1346 \fi
1347 \fi
1348 \fi
1349 \ifx\HyPsd@Rest\relax
1350 \ifx\scrollmode#2\scrollmode
1351 \else
1352 \Hy@ReturnAfterFiFiEnd{%
1353 \HyPsd@CheckCatcodes#2\HyPsd@End
1354 }%
1355 \fi
1356 \else
1357 \ifx\HyPsd@Rest\@empty
1358 \else
1359 \Hy@ReturnAfterFiFiEnd{%
1360 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1361 }%
1362 \fi
1363 \fi
1364 \Hy@ReturnEnd
1365 }

```

Remove counts, dimens, skips.

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

```

1366 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1367 \gdef\HyPsd@Rest{#1}%
1368 }

```

\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.

```

1369 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1370 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@ \fi>1ex %
1371 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1372 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1373 \else
1374 \ifdim\dimen@=\z@
1375 \else
1376 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1377 \fi
1378 \gdef\HyPsd@Rest{#1}%
1379 \fi

```

1380 }

`\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).

```
1381 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1382   \ifdim\ifx\HyPsd@String\@empty\z@else\skip@fi>1ex %
1383     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1384     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1385   \else
1386     \ifdim\skip@=\z@
1387     \else
1388       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1389     \fi
1390     \gdef\HyPsd@Rest{#1}%
1391   \fi
1392 }
```

Catcode warnings.

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

```
1393 \def\HyPsd@CatcodeWarning#1{%
1394   \HyPsd@Warning{%
1395     Token not allowed in a PDF string (%
1396     \ifHy@unicode
1397       Unicode%
1398     \else
1399       PDFDocEncoding%
1400     \fi
1401     ):%
1402     \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1403   }%
1404 }
1405 \begingroup
1406   \catcode'\|=0 %
1407   \catcode'\|=12 %
1408   \gdef\HyPsd@RemoveCmdPrefix#1{%
1409     \expandafter\HyPsd@@RemoveCmdPrefix
1410     \string#1\@empty\<>-|@empty|@empty
1411   }%
1412   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1413 \endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1414 \def\HyPsd@RemoveSpaceWarning#1{%
1415   \HyPsd@Warning{%
1416     Token not allowed in a PDF string (%
1417     \ifHy@unicode
1418       Unicode%
1419     \else
1420       PDFDocEncoding%
1421     \fi
1422     ):%
1423     \MessageBreak #1\MessageBreak
1424     removed%
1425   }%
1426 }
```

\HyPsd@ReplaceSpaceWarning

```
1427 \def\HyPsd@ReplaceSpaceWarning#1{%
1428   \HyPsd@Warning{%
1429     Token not allowed in a PDF string (%)
1430     \ifHy@unicode
1431       Unicode%
1432     \else
1433       PDFDocEncoding%
1434     \fi
1435   }:%
1436   \MessageBreak #1\MessageBreak
1437   replaced by space%
1438 }%
1439 }
```

6.6.5 Check for wrong glyphs

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

```
1440 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1441   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1442     \HyPsd@String#1%
1443   }%
1444   \ifx\#2\%
1445   \else
1446     \Hy@ReturnAfterFi{%
1447       \HyPsd@GlyphProcessWarning#2\@empty
1448     }%
1449   \fi
1450 }
1451 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1452   \HyPsd@@GlyphProcessWarning#1++>%
1453   \HyPsd@GlyphProcess#2\@empty
1454 }
1455 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1456   \ifx\#2\%
1457     \HyPsd@Warning{%
1458       Glyph not defined in %
1459       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1460       removing ‘\@backslashchar#1’%
1461     }%
1462   \else
1463     \HyPsd@Warning{%
1464       Composite letter ‘\@backslashchar#1+#2’\MessageBreak
1465       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1466       \MessageBreak
1467       removing ‘\@backslashchar#1’%
1468     }%
1469   \fi
1470 }
```

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.

```

1471 \def\HyPsd@spaceopti#1{ % first space
1472   \ifx\HyPsd@spaceopti#1%
1473     \040%
1474   \else
1475     #1%
1476   \fi
1477 }%

```

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.

```

1478 \def\HyPsd@Subst#1#2#3{%
1479   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1480     \fi
1481     ##1%
1482     \ifx\scrollmode##2\scrollmode
1483     \else
1484       #2%
1485       \HyPsd@@ReplaceFi##2\END
1486     \fi
1487   }%
1488   \xdef#3{%
1489     \iftrue
1490       \expandafter\HyPsd@@ReplaceFi#3#1\END
1491     \fi
1492   }%
1493 }

```

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

```

1494 \def\HyPsd@StringSubst#1{%
1495   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1496 }

```

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.

```

1497 \def\HyPsd@doxspace#1{%
1498   \ifx#1\relax\else
1499   \ifx#1.\else
1500   \ifx#1:\else
1501   \ifx#1,\else
1502   \ifx#1;\else
1503   \ifx#1!\else
1504   \ifx#1?\else
1505   \ifx#1/\else
1506   \ifx#1-\else
1507   \ifx#1'\else
1508     \HyPsd@SPACEOPTI
1509   \fi

```



```

1510         \fi
1511         \fi
1512         \fi
1513         \fi
1514         \fi
1515         \fi
1516         \fi
1517         \fi
1518         \fi
1519         #1%
1520 }%

```

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.

```

1521 \begingroup
1522   \catcode'\|=0 %
1523   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1524 |gdef|HyPsd@ConvertToUnicode#1{%
1525   |xdef#1{%
1526     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1527   }%
1528   |ifx#1|@empty
1529   |else
1530     |xdef#1{%
1531       \376\377%
1532       #1%
1533     }%
1534   |fi
1535 }%

```

\HyPsd@DoConvert

```

1536 |gdef|HyPsd@DoConvert#1{%
1537   |ifx#1|@empty
1538   |else
1539     |Hy@ReturnAfterFi{%
1540       |ifx#1\%%
1541       \%%
1542       |expandafter|HyPsd@DoEscape
1543     |else
1544       \000#1%
1545       |expandafter|HyPsd@DoConvert
1546     |fi
1547   }%
1548   |fi
1549 }%

```

\HyPsd@DoEscape

```

1550 |gdef|HyPsd@DoEscape#1{%
1551   |ifx#19%
1552   |expandafter|HyPsd@GetTwoBytes
1553   |else

```

```

1554 |Hy@ReturnAfterFi{%
1555 |ifx#18%
1556 00%
1557 |expandafter|HyPsd@GetTwoBytes
1558 |else
1559 #1%
1560 |expandafter|HyPsd@GetOneByte
1561 |fi
1562 }%
1563 |fi
1564 }%

```

`\HyPsd@GetTwoBytes`

```

1565 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1566 #1\#2#3#4%
1567 |HyPsd@DoConvert
1568 }%

```

`\HyPsd@GetOneByte`

```

1569 |gdef|HyPsd@GetOneByte#1#2{%
1570 #1#2%
1571 |HyPsd@DoConvert
1572 }%
1573 |endgroup

```

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

```

1574 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1575 \xdef#4{#4#1#2}%
1576 \HyPsd@@ConvertToUnicode#3\END#4%
1577 }

```

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 `e \TeX 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`

```

1578 \begingroup\expandafter\expandafter\expandafter\endgroup
1579 \expandafter\ifx\cename numexpr\endcename\relax
1580 \let\HyPsd@UTFviii\relax
1581 \else
1582 \begingroup
1583 \lccode'\~='^^f4\relax
1584 \lowercase{\endgroup
1585 \def\HyPsd@UTFviii{%
1586 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1587 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1588 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1589 \ifx~\HyPsd@UTFviii@ccxliv@undef
1590 \let~\HyPsd@UTFviii@ccxliv@def

```

```

1591 \fi
1592 \let\unichar\HyPsd@unichar
1593 }%
1594 }%
1595 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1596 \edef\HyPsd@UTFviii@ccxliv@def{%
1597 \noexpand\UTFviii@four@octets\string ^f4%
1598 }%

```

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.

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

$$b := A - 4 * (A/4) \quad (2)$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \quad (3)$$

$$d := B - 8 * (B/8) \quad (4)$$

$$(5)$$

```

1599 \def\HyPsd@UTFviii@two#1#2{%
1600 \expandafter\HyPsd@UTFviii@@two
1601 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1602 \number'#1\expandafter|
1603 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
1604 \number'#2 \@nil
1605 }%
1606 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1607 \expandafter\8%
1608 \number\numexpr #1-48\expandafter\relax
1609 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1610 \number\numexpr #3-8*%
1611 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1612 \number\numexpr #4-8*#3\relax
1613 }%

```

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

$$a := A/4 - 56 \quad (6)$$

$$b := 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) \quad (7)$$

$$c := B/4 - 32 - ((B - 128 < 32)?0 : 8) \quad (8)$$

$$d := B - 4 * (B/4) \quad (9)$$

$$e := C/8 - 16 \quad (10)$$

$$f := C - 8 * (C/8) \quad (11)$$

$$(12)$$

```

1614 \def\HyPsd@UTFviii@three#1#2#3{%
1615 \expandafter\HyPsd@UTFviii@@three
1616 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1617 \number'#1\expandafter|
1618 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
1619 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
1620 \number'#2\expandafter|
1621 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
1622 \number'#3 \@nil

```

```

1623 }%
1624 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1625   \expandafter\9%
1626   \number\numexpr #1-56\expandafter\relax
1627   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1628   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1629   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1630   \number\numexpr #6-16\expandafter\relax
1631   \number\numexpr #7-8*#6\relax
1632 }%

```

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

```

```

1633 \def\HyPsd@UTFviii@four#1#2{%
1634   \expandafter\HyPsd@UTFviii@four\number
1635   \numexpr-1+(' #1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1636   \expandafter|\number
1637   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1638 }%
1639 \def\HyPsd@UTFviii@four#1|#2|#3{%
1640   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1641   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1642   \ifodd#2 %
1643     \number\numexpr(#2-1)/2\relax
1644   \else
1645     \number\numexpr#2/2\relax
1646   \fi
1647   \number\numexpr\ifodd#2 4+\fi
1648   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1649   \933%
1650   \expandafter\HyPsd@UTFviii@four\number
1651   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1652 }%
1653 \def\HyPsd@UTFviii@four#1|#2{%
1654   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1655   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1656   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1657   \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1658 }%

```

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

```

1659 \def\HyPsd@unichar#1{%
1660   \ifHy@unicode
1661     \ifnum#1>"10FFFF %
1662       \HyPsd@UnicodeReplacementCharacter % illegal
1663     \else
1664       \ifnum#1>"FFFF %

```

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

```

1665   \expandafter\HyPsd@unichar\expandafter{%
1666     \number\numexpr 55296+%
1667     \dimexpr.0009765625\dimexpr\number#1sp-\p@

```

```

1668             \relax\relax\relax
1669         }%
Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)
1670         \expandafter\HyPsd@unichar\expandafter{%
1671             \number\numexpr#1-9216%
1672             -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1673             \relax\relax\relax
1674     }%
1675     \else
1676         \ifnum#1>"7FF %
1677             \9%
1678             \expandafter\HyPsd@unichar@first@byte\expandafter{%
1679                 \number
1680                 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1681             }%
1682         \else
1683             \8%
1684             \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1685         \fi
1686         \expandafter\HyPsd@unichar@second@byte\expandafter{%
1687             \number
1688             \numexpr#1-256*\number
1689             \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1690         }%
1691     \fi
1692 \fi
1693 \else
1694 .% unsupported (Unicode -> PDF Doc Encoding)
1695 \fi
1696 }%
1697 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1698 \def\HyPsd@unichar@first@byte#1{%
1699     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1700     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1701         \number
1702         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1703         \relax\relax\relax
1704     }%
1705 }%
1706 \def\HyPsd@unichar@second@byte#1{%
1707     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1708     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1709         \number
1710         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1711         \relax\relax\relax
1712     }%
1713 }%
1714 \def\HyPsd@unichar@octtwo#1{%
1715     \number\dimexpr.125\dimexpr#1sp\relax\relax
1716     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1717     \relax\relax\relax
1718 }%
1719 \fi

```

7 Support of other packages

7.1 Class memoir

```
1720 \@ifclassloaded{memoir}{%
1721   \AtEndOfPackage{\RequirePackage{memhfixc}}%
1722 }{}
```

7.2 Package subfigure

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

```
1723 \@ifpackageloaded{subfigure}{%
1724   \@ifundefined{sub@label}{%
1725     \Hy@hypertextnamesfalse
1726   }{%
1727     \renewcommand*{\sub@label}[1]{%
1728       \@bsphack
1729       \subfig@oldlabel{#1}%
1730       \if@filesw
1731         \begin{group}
1732           \edef\@currentlabstr{%
1733             \expandafter\strip@prefix\meaning\@currentlabelname
1734           }%
1735           \protected@write\@auxout{}{%
1736             \string\newlabel{sub@#1}{%
1737               {\@nameuse{@@thesub}\@capttype}}%
1738             {\thepage}%
1739             {%
1740               \expandafter\strip@period\@currentlabstr
1741               \relax.\relax\@@%
1742             }%
1743             {\@currentHref}%
1744             {}%
1745           }%
1746         }%
1747       \end{group}
1748       \fi
1749       \@esphack
1750     }%
1751     \@ifpackagelater{subfigure}{2002/03/26}{%
1752       \providecommand*{\toclevel@subfigure}{1}%
1753       \providecommand*{\toclevel@subtable}{1}%
1754     }%
1755   }%
1756 }{}
```

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:

```
1757 \@ifundefined{XR@addURL}{%
1758 }{}
```

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.

```
1759 \def\xr@addURL#1{\xr@dURL#1{}{}{}{}\\}%
1760 \def\xr@dURL#1#2#3#4#5\\{%
1761   {#1}{#2}%
1762 }
```

```

1762 \if!#4!%
1763 \else
1764   {#3}{#4}{\XR@URL}%
1765 \fi
1766 }%
1767 }

1768 \def\Hy@true{true}
1769 \def\Hy@false{false}

    Providing dummy definitions.

1770 \let\literalps@out\@gobble
1771 \newcommand\pdfbookmark[3][]{ }
1772 \def\Acrobatmenu#1#2{\leavevmode#2}
1773 \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

```

1774 \let\HyperRaiseLinkHook\@empty
1775 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

1776 \def\Hy@raisedlink#1{%
1777   \ifvmode
1778     #1%
1779   \else
1780     \penalty\@M
1781     \smash{%
1782       \begingroup
1783         \let\HyperRaiseLinkLength\@tempdima
1784         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1785         \HyperRaiseLinkHook
1786       \expandafter\endgroup
1787       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1788     }%
1789   \fi
1790 }

```

```

\Hy@SaveLastskip Inserting a \special command to set a destination destroys the \lastskip value.
\Hy@RestoreLastskip
1791 \def\Hy@SaveLastskip{%
1792   \let\Hy@RestoreLastskip\relax
1793   \ifvmode
1794     \ifdim\lastskip=\z@
1795       \let\Hy@RestoreLastskip\nobreak
1796     \else

```

```

1797     \begingroup
1798     \skip@=-\lastskip
1799     \edef\x{%
1800     \endgroup
1801     \def\noexpand\Hy@RestoreLastskip{%
1802     \noexpand\ifvmode
1803     \noexpand\nobreak
1804     \vskip\the\skip@
1805     \vskip\the\lastskip\relax
1806     \noexpand\fi
1807     }%
1808     }%
1809     \x
1810     \fi
1811 \else
1812     \ifhmode
1813     \ifdim\lastskip=\z@
1814     \let\Hy@RestoreLastskip\nobreak
1815     \else
1816     \begingroup
1817     \skip@=-\lastskip
1818     \edef\x{%
1819     \endgroup
1820     \def\noexpand\Hy@RestoreLastskip{%
1821     \noexpand\ifhmode
1822     \noexpand\nobreak
1823     \hskip\the\skip@
1824     \hskip\the\lastskip\relax
1825     \noexpand\fi
1826     }%
1827     }%
1828     \x
1829     \fi
1830     \fi
1831 \fi
1832 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1833 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
1834 \def\Hy@@boolkey[#1]#2#3{%
1835     \edef\Hy@tempa{#3}%
1836     \lowercase\expandafter{%
1837         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
1838     }%
1839     \ifx\Hy@tempa\@empty
1840         \let\Hy@tempa\Hy@true
1841     \fi
1842     \ifx\Hy@tempa\Hy@true
1843     \else
1844         \ifx\Hy@tempa\Hy@false
1845         \else
1846             \let\Hy@tempa\relax

```



```

1847   \fi
1848 \fi
1849 \ifx\Hy@tempa\relax
1850   \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1851 \else
1852   \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1853   \csname Hy@#2\Hy@tempa\endcsname
1854 \fi
1855 }

```

\Hy@WarnOptionValue

```

1856 \def\Hy@WarnOptionValue#1#2#3{%
1857   \Hy@Warning{%
1858     Unexpected value ‘#1’\MessageBreak
1859     of option ‘#2’ instead of\MessageBreak
1860     #3%
1861   }%
1862 }

```

\Hy@DisableOption

```

1863 \def\Hy@DisableOption#1{%
1864   \@ifundefined{KV@Hyp@#1@default}{%
1865     \define@key{Hyp}{#1}%
1866   }{%
1867     \define@key{Hyp}{#1}[]%
1868   }%
1869   {\Hy@WarnOptionDisabled{#1}}%
1870 }

```

\Hy@WarnOptionDisabled

```

1871 \def\Hy@WarnOptionDisabled#1{%
1872   \Hy@Warning{%
1873     Option ‘#1’ has already been used,\MessageBreak
1874     setting the option has no effect%
1875   }%
1876 }

```

\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.

```

1877 \def\Hy@CheckOptionValue#1#2#3{%
1878   \begingroup
1879   \edef\x{#1}%
1880   \@onelevel@sanitize\x
1881   \let\y=y%
1882   \def\do##1##2{%
1883     \def\z{##1}%
1884     \@onelevel@sanitize\z
1885     \ifx\x\z
1886       \let\y=n%
1887       \let\do\@gobbletwo
1888     \fi
1889   }%
1890   #3%
1891   \ifx\y y%
1892     \def\do##1##2{%
1893       * ‘##1’%
1894     \ifx\\##2\\\else\space(##2)\fi

```

```

1895         \MessageBreak
1896     }%
1897     \Hy@Warning{%
1898         Values of option '#2':\MessageBreak
1899         #3%
1900         * An empty value disables the option.\MessageBreak
1901         Unknown value '\x'%
1902     }%
1903     \fi
1904 \endgroup
1905 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
1906 \def\Hy@DefNameKey#1{%
1907     \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1908 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
1909 \def\Hy@@DefNameKey#1#2#3{%
1910     \define@key{Hyp}{#2}{%
1911         \edef#1{##1}%
1912         \ifx#1\@empty
1913             \else
1914                 \Hy@CheckOptionValue{##1}{#2}{#3}%
1915             \fi
1916     }%
1917     \let#1\@empty
1918 }

\Hy@UseNameKey
1919 \def\Hy@UseNameKey#1#2{%
1920     \ifx#2\@empty
1921     \else
1922         /#1/#2%
1923     \fi
1924 }

```

9.2 Defining the options

```

1925 \define@key{Hyp}{implicit}[true]{%
1926     \Hy@boolkey{implicit}{#1}%
1927 }
1928 \define@key{Hyp}{draft}[true]{%
1929     \Hy@boolkey{draft}{#1}%
1930 }
1931 \define@key{Hyp}{final}[true]{%
1932     \Hy@boolkey{final}{#1}%
1933 }
1934 \let\KV@Hyp@nolinks\KV@Hyp@draft
1935 \define@key{Hyp}{a4paper}[true]{%
1936     \def\special@paper{210mm,297mm}%
1937     \def\Hy@pageheight{842}%

```

```

1938 }
1939 \define@key{Hyp}{a5paper}[true]{%
1940   \def\special@paper{148mm,210mm}%
1941   \def\Hy@pageheight{595}%
1942 }
1943 \define@key{Hyp}{b5paper}[true]{%
1944   \def\special@paper{176mm,250mm}%
1945   \def\Hy@pageheight{709}%
1946 }
1947 \define@key{Hyp}{letterpaper}[true]{%
1948   \def\special@paper{8.5in,11in}%
1949   \def\Hy@pageheight{792}%
1950 }
1951 \define@key{Hyp}{legalpaper}[true]{%
1952   \def\special@paper{8.5in,14in}%
1953   \def\Hy@pageheight{1008}%
1954 }
1955 \define@key{Hyp}{executivepaper}[true]{%
1956   \def\special@paper{7.25in,10.5in}%
1957   \def\Hy@pageheight{720}%
1958 }
1959 \define@key{Hyp}{setpagesize}[true]{%
1960   \Hy@boolkey{setpagesize}{#1}%
1961 }
1962 \define@key{Hyp}{debug}[true]{%
1963   \Hy@boolkey[debug]{verbose}{#1}%
1964 }
1965 \define@key{Hyp}{linktocpage}[true]{%
1966   \Hy@boolkey{linktocpage}{#1}%
1967   \ifHy@linktocpage
1968     \let\Hy@linktoc\Hy@linktoc@page
1969   \else
1970     \let\Hy@linktoc\Hy@linktoc@section
1971   \fi
1972 }
1973 \chardef\Hy@linktoc@none=0 %
1974 \chardef\Hy@linktoc@section=1 %
1975 \chardef\Hy@linktoc@page=2 %
1976 \chardef\Hy@linktoc@all=3 %
1977 \ifHy@linktocpage
1978   \let\Hy@linktoc\Hy@linktoc@page
1979 \else
1980   \let\Hy@linktoc\Hy@linktoc@section
1981 \fi
1982 \define@key{Hyp}{linktoc}{%
1983   \@ifundefined{Hy@linktoc@#1}{%
1984     \Hy@Warning{%
1985       Unexpected value ‘#1’ of\MessageBreak
1986       option ‘linktoc’ instead of ‘none’,\MessageBreak
1987       ‘section’, ‘page’ or ‘all’%
1988     }%
1989   }{%
1990     \expandafter\let\expandafter\Hy@linktoc
1991     \csname Hy@linktoc@#1\endcsname
1992   }%
1993 }
1994 \define@key{Hyp}{extension}{\def\XR@ext{#1}}

```

```

1995 \let\XR@ext\relax
1996 \define@key{Hyp}{verbose}[true]{%
1997   \Hy@boolkey{verbose}{#1}%
1998 }
1999 \define@key{Hyp}{typexml}[true]{%
2000   \Hy@boolkey{typexml}{#1}%
2001 }

```

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.

```

2002 \define@key{Hyp}{raiselinks}[true]{%
2003   \Hy@boolkey{raiselinks}{#1}%
2004 }

```

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

```

2005 \def\Hy@setbreaklinks#1{%
2006   \csname breaklinks#1\endcsname
2007 }

2008 \def\Hy@breaklinks@unsupported{%
2009   \ifx\Hy@setbreaklinks\@gobble
2010     \ifHy@breaklinks
2011       \Hy@WarningNoLine{%
2012         You have enabled option 'breaklinks'.\MessageBreak
2013         But driver '\Hy@driver.def' does not support this.\MessageBreak
2014         Expect trouble with the link areas of broken links%
2015       }%
2016     \fi
2017   \fi
2018 }

2019 \define@key{Hyp}{breaklinks}[true]{%
2020   \Hy@boolkey{breaklinks}{#1}%
2021   \let\Hy@setbreaklinks\@gobble
2022 }

```

Determines whether an automatic anchor is put on each page

```

2023 \define@key{Hyp}{pageanchor}[true]{%
2024   \Hy@boolkey{pageanchor}{#1}%
2025 }

```

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.

```

2026 \define@key{Hyp}{plainpages}[true]{%
2027   \Hy@boolkey{plainpages}{#1}%
2028 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what L^AT_EX provides?

```

2029 \define@key{Hyp}{naturalnames}[true]{%
2030   \Hy@boolkey{naturalnames}{#1}%
2031 }

```

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

```

2032 \define@key{Hyp}{hypertextnames}[true]{%
2033   \Hy@boolkey{hypertextnames}{#1}%
2034 }

```

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

```

2035 \define@key{Hyp}{nesting}[true]{%
2036   \Hy@boolkey{nesting}{#1}%
2037 }

2038 \define@key{Hyp}{unicode}[true]{%
2039   \Hy@boolkey{unicode}{#1}%
2040   \ifHy@unicode
2041     \def\HyPsd@pdfencoding{unicode}%
2042   \else
2043     \def\HyPsd@pdfencoding{pdfdoc}%
2044   \fi
2045   \HyPsd@LoadUnicode
2046 }

2047 \def\HyPsd@LoadUnicode{%
2048   \@ifundefined{T@PU}{%
2049     \input{puenc.def}%
2050     \HyLinguex@Restore
2051   }{}%
2052   \DeclareFontFamily{PU}{pdf}{}%
2053   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2054   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2055   \global\let\HyPsd@LoadUnicode\relax
2056 }

2057 \AtBeginDocument{%
2058   \ifx\HyPsd@LoadUnicode\relax
2059   \else
2060     \def\HyPsd@LoadUnicode{%
2061       \PackageError{hyperref}{%
2062         Unicode support for bookmarks is not available.\MessageBreak
2063         Activate unicode support by using one of the options\MessageBreak
2064         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2065         in the preamble%
2066       }{\@ehc
2067         \global\let\HyPsd@LoadUnicode\relax
2068         \global\Hy@unicodetrue
2069         \global\let\Hy@unicodetrue\Hy@unicodetrue
2070       }%
2071     \fi
2072 }

2073 \define@key{Hyp}{pdfencoding}{%
2074   \edef\HyPsd@temp{#1}%
2075   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2076     \let\HyPsd@pdfencoding\HyPsd@temp
2077     \Hy@unicodetrue
2078   \else
2079     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2080       \z@
2081     \else
2082       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2083         \z@
2084       \else
2085         \@ne
2086       \fi
2087     \fi
2088     \let\HyPsd@pdfencoding\HyPsd@temp
2089     \hypersetup{unicode}%
2090     \ifHy@unicode
2091       \def\HyPsd@pdfencoding{#1}%

```

```

2092         \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2093         \HyPsd@LoadStringEnc
2094     \fi
2095 \else
2096     \Hy@Warning{Cannot switch to unicode bookmarks}%
2097     \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2098 \fi
2099 \else
2100     \@onelevel@sanitize\HyPsd@temp
2101     \Hy@Warning{%
2102         Values of option 'pdfencoding':\MessageBreak
2103         'pdfdoc', 'unicode', 'auto'.\MessageBreak
2104         Ignoring unknown value '\HyPsd@temp'%
2105     }%
2106 \fi
2107 \fi
2108 }
2109 \def\HyPsd@pdfencoding@auto{auto}
2110 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2111 \def\HyPsd@pdfencoding@unicode{unicode}
2112 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2113 \def\HyPsd@LoadStringEnc{%
2114     \RequirePackage{stringenc}[2007/06/14]%
2115     \let\HyPsd@LoadStringEnc\relax
2116 }
2117 \AtBeginDocument{%
2118     \@ifpackageloaded{stringenc}{%
2119         \let\HyPsd@LoadStringEnc\relax
2120     }{%
2121         \def\HyPsd@LoadStringEnc{%
2122             \Hy@WarningNoLine{%
2123                 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2124                 in the preamble or load the package there%
2125             }%
2126         }%
2127     }%
2128 }
2129 \newif\ifHy@setpdfversion
2130 \define@key{Hyp}{pdfversion}{%
2131     \@ifundefined{Hy@pdfversion@#1}{%
2132         \PackageWarning{hyperref}{%
2133             Unsupported PDF version '#1'.\MessageBreak
2134             Valid values: 1.2 until 1.9%
2135         }%
2136     }{%
2137         \Hy@setpdfversiontrue
2138         \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2139     }%
2140 }
2141 \@namedef{Hy@pdfversion@1.2}{2}%
2142 \@namedef{Hy@pdfversion@1.3}{3}%
2143 \@namedef{Hy@pdfversion@1.4}{4}%
2144 \@namedef{Hy@pdfversion@1.5}{5}%
2145 \@namedef{Hy@pdfversion@1.6}{6}%
2146 \@namedef{Hy@pdfversion@1.7}{7}%
2147 \@namedef{Hy@pdfversion@1.8}{8}%
2148 \@namedef{Hy@pdfversion@1.9}{9}%

```

```
2149 \def\Hy@pdfversion{2}
```

10 Options for different drivers

```
2150 \define@key{Hyp}{hyperref}[true]{}
2151 \define@key{Hyp}{tex4ht}[true]{%
2152   \Hy@texhttrue
2153   \setkeys{Hyp}{colorlinks=true}%
2154   \def\BeforeTeXIVht{\usepackage{color}}%
2155   \def\Hy@driver{htex4ht}%
2156   \def\MaybeStopEarly{%
2157     \typeout{Hyperref stopped early}%
2158     \AfterBeginDocument{%
2159       \PDF@FinishDoc
2160       \gdef\PDF@FinishDoc{}%
2161     }%
2162   \endinput
2163 }%
2164 }
2165 \define@key{Hyp}{pdftex}[true]{%
2166   \def\Hy@driver{hpdftex}%
2167 }
2168 \define@key{Hyp}{nativepdf}[true]{%
2169   \def\Hy@driver{hdvips}%
2170 }
2171 \define@key{Hyp}{dvipdfm}[true]{%
2172   \def\Hy@driver{hdvipdfm}%
2173 }
2174 \define@key{Hyp}{dvipdfmx}[true]{%
2175   \def\Hy@driver{hdvipdfm}%
2176 }
2177 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2178   \expandafter\ifx\csname if#1\expandafter\endcsname
2179     \csname iftrue\endcsname
2180     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2181   \else
2182     \chardef\SpecialDvipdfmxOutlineOpen\z@
2183   \fi
2184 }
2185 \define@key{Hyp}{xetex}[true]{%
2186   \def\Hy@driver{hdvipdfm}%
2187 }
2188 \define@key{Hyp}{pdfmark}[true]{%
2189   \def\Hy@driver{hdvips}%
2190 }
2191 \define@key{Hyp}{dvips}[true]{%
2192   \def\Hy@driver{hdvips}%
2193 }
2194 \define@key{Hyp}{hypertex}[true]{%
2195   \def\Hy@driver{hypertex}%
2196 }
2197 \let\Hy@MaybeStopNow\relax
2198 \define@key{Hyp}{vtex}[true]{%
2199   \begingroup\expandafter\expandafter\expandafter\endgroup
2200   \expandafter\ifx\csname OpMode\endcsname\relax
2201     \@latex@error{Non-VTeX processor}{}%
2202     \global\let\Hy@MaybeStopNow\endinput
```

```

2203 \endinput
2204 \else
2205 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2206 \def\Hy@driver{hvtex}%
2207 \else
2208 \ifnum\OpMode=10\relax
2209 \def\Hy@driver{hvtexhtm}%
2210 \def\MaybeStopEarly{%
2211 \typeout{Hyperref stopped early}%
2212 \AfterBeginDocument{%
2213 \PDF@FinishDoc
2214 \gdef\PDF@FinishDoc{}}%
2215 }%
2216 \endinput
2217 }%
2218 \else
2219 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2220 \global\let\Hy@MaybeStopNow\endinput
2221 \endinput
2222 \fi
2223 \fi
2224 \fi
2225 }
2226 \define@key{Hyp}{vtexpdfmark}[true]{%
2227 \begingroup\expandafter\expandafter\expandafter\endgroup
2228 \expandafter\ifx\cscname OpMode\endcscname\relax
2229 \@latex@error{Non-VTeX processor}{}%
2230 \let\Hy@MaybeStopNow\endinput
2231 \endinput
2232 \else
2233 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2234 \def\Hy@driver{hvtexmrk}%
2235 \else
2236 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2237 \let\Hy@MaybeStopNow\endinput
2238 \endinput
2239 \fi
2240 \fi
2241 }
2242 \define@key{Hyp}{dviwindo}[true]{%
2243 \def\Hy@driver{hdviwind}%
2244 \setkeys{Hyp}{colorlinks}%
2245 \PassOptionsToPackage{dviwindo}{color}%
2246 }
2247 \define@key{Hyp}{dvipsone}[true]{%
2248 \def\Hy@driver{hdvipson}%
2249 }
2250 \define@key{Hyp}{textures}[true]{%
2251 \def\Hy@driver{htexture}%
2252 }
2253 \define@key{Hyp}{latex2html}[true]{%
2254 \AtBeginDocument{\@@latextohtmlX}%
2255 }

```

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

```

2256 \define@key{Hyp}{ps2pdf}[true]{%
2257 \def\Hy@driver{hdvips}%
2258 \providecommand*\@pdfborder{0 0 1}%

```


2259 }

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.

```
2260 \define@key{Hyp}{hyperfigures}[true]{%
2261   \Hy@boolkey[hyperfigures]{figures}{#1}%
2262 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2263 \define@key{Hyp}{hyperfootnotes}[true]{%
2264   \Hy@boolkey{hyperfootnotes}{#1}%
2265 }
```

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

```
2266 \def\back@none{none}
2267 \def\back@section{section}
2268 \def\back@page{page}
2269 \def\back@slide{slide}
2270 \define@key{Hyp}{backref}[section]{%
2271   \lowercase{\def\Hy@tempa{#1}}%
2272   \ifx\Hy@tempa\@empty
2273     \let\Hy@tempa\back@section
2274   \fi
2275   \ifx\Hy@tempa\Hy@false
2276     \let\Hy@tempa\back@none
2277   \fi
2278   \ifx\Hy@tempa\back@slide
2279     \let\Hy@tempa\back@section
2280   \fi
2281   \ifx\Hy@tempa\back@page
2282     \PassOptionsToPackage{hyperpageref}{backref}%
2283     \Hy@backreftrue
2284   \else
2285     \ifx\Hy@tempa\back@section
2286       \PassOptionsToPackage{hyperref}{backref}%
2287       \Hy@backreftrue
2288     \else
2289       \ifx\Hy@tempa\back@none
2290         \Hy@backreffalse
2291       \else
2292         \Hy@WarnOptionValue{#1}{backref}{%
2293           'section', 'slide', 'page', 'none', \MessageBreak
2294           or 'false'}%
2295       \fi
2296     \fi
2297   \fi
2298 }
2299 \define@key{Hyp}{pagebackref}[true]{%
2300   \edef\Hy@tempa{#1}%
2301   \lowercase\expandafter{%
2302     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2303   }%
2304   \ifx\Hy@tempa\@empty
2305     \let\Hy@tempa\Hy@true
2306   \fi
2307   \ifx\Hy@tempa\Hy@true
```

```

2308 \PassOptionsToPackage{hyperpageref}{backref}%
2309 \Hy@backreftrue
2310 \else
2311 \ifx\Hy@tempa\Hy@false
2312 \Hy@backreffalse
2313 \else
2314 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
2315 \fi
2316 \fi
2317 }

```

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

```

2318 \define@key{Hyp}{hyperindex}[true]{%
2319 \Hy@boolkey{hyperindex}{#1}%
2320 }

```

Configuration of encap char.

```

2321 \define@key{Hyp}{encap}[\|]{%
2322 \def\HyInd@EncapChar{#1}%
2323 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2324 \def\HyLang@afrikaans{%
2325 \def\equationautorefname{Vergelyking}%
2326 \def\footnoteautorefname{Voetnota}%
2327 \def\itemautorefname{Item}%
2328 \def\figureautorefname{Figuur}%
2329 \def\tableautorefname{Tabel}%
2330 \def\partautorefname{Deel}%
2331 \def\appendixautorefname{Bylae}%
2332 \def\chapterautorefname{Hoofstuk}%
2333 \def\sectionautorefname{Afdeling}%
2334 \def\subsectionautorefname{Subafdeling}%
2335 \def\subsubsectionautorefname{Subsubafdeling}%
2336 \def\paragraphautorefname{Paragraaf}%
2337 \def\subparagraphautorefname{Subparagraaf}%
2338 \def\FancyVerbLineautorefname{Lyn}%
2339 \def\theoremautorefname{Teorema}%
2340 \def\pageautorefname{Bladsy}%
2341 }
2342 \def\HyLang@english{%
2343 \def\equationautorefname{Equation}%
2344 \def\footnoteautorefname{footnote}%
2345 \def\itemautorefname{item}%
2346 \def\figureautorefname{Figure}%
2347 \def\tableautorefname{Table}%
2348 \def\partautorefname{Part}%
2349 \def\appendixautorefname{Appendix}%
2350 \def\chapterautorefname{chapter}%
2351 \def\sectionautorefname{section}%
2352 \def\subsectionautorefname{subsection}%
2353 \def\subsubsectionautorefname{subsubsection}%
2354 \def\paragraphautorefname{paragraph}%
2355 \def\subparagraphautorefname{subparagraph}%

```

```

2356 \def\FancyVerbLineautorefname{line}%
2357 \def\theoremautorefname{Theorem}%
2358 \def\pageautorefname{page}%
2359 }
2360 \def\HyLang@french{%
2361 \def\equationautorefname{'Equation}%
2362 \def\footnoteautorefname{note}%
2363 \def\itemautorefname{item}%
2364 \def\figureautorefname{Figure}%
2365 \def\tableautorefname{Tableau}%
2366 \def\partautorefname{Partie}%
2367 \def\appendixautorefname{Appendice}%
2368 \def\chapterautorefname{chapitre}%
2369 \def\sectionautorefname{section}%
2370 \def\subsectionautorefname{sous-section}%
2371 \def\subsubsectionautorefname{sous-sous-section}%
2372 \def\paragraphautorefname{paragraphe}%
2373 \def\subparagraphautorefname{sous-paragraphe}%
2374 \def\FancyVerbLineautorefname{ligne}%
2375 \def\theoremautorefname{Th\'eor\'eme}%
2376 \def\pageautorefname{page}%
2377 }
2378 \def\HyLang@german{%
2379 \def\equationautorefname{Gleichung}%
2380 \def\footnoteautorefname{Fu\ss note}%
2381 \def\itemautorefname{Punkt}%
2382 \def\figureautorefname{Abbildung}%
2383 \def\tableautorefname{Tabelle}%
2384 \def\partautorefname{Teil}%
2385 \def\appendixautorefname{Anhang}%
2386 \def\chapterautorefname{Kapitel}%
2387 \def\sectionautorefname{Abschnitt}%
2388 \def\subsectionautorefname{Unterabschnitt}%
2389 \def\subsubsectionautorefname{Unterunterabschnitt}%
2390 \def\paragraphautorefname{Absatz}%
2391 \def\subparagraphautorefname{Unterabsatz}%
2392 \def\FancyVerbLineautorefname{Zeile}%
2393 \def\theoremautorefname{Theorem}%
2394 \def\pageautorefname{Seite}%
2395 }
2396 \def\HyLang@italian{%
2397 \def\equationautorefname{Equazione}%
2398 \def\footnoteautorefname{nota}%
2399 \def\itemautorefname{punto}%
2400 \def\figureautorefname{Figura}%
2401 \def\tableautorefname{Tabella}%
2402 \def\partautorefname{Parte}%
2403 \def\appendixautorefname{Appendice}%
2404 \def\chapterautorefname{Capitolo}%
2405 \def\sectionautorefname{sezione}%
2406 \def\subsectionautorefname{sottosezione}%
2407 \def\subsubsectionautorefname{sottosottosezione}%
2408 \def\paragraphautorefname{paragrafo}%
2409 \def\subparagraphautorefname{sottoparagrafo}%
2410 \def\FancyVerbLineautorefname{linea}%
2411 \def\theoremautorefname{Teorema}%
2412 \def\pageautorefname{Pag.\@}%

```

```

2413 }
2414 \def\HyLang@magyar{%
2415   \def\equationautorefname{Egyenlet}%
2416   \def\footnoteautorefname{l\'abjegyzet}%
2417   \def\itemautorefname{Elem}%
2418   \def\figureautorefname{\'Abra}%
2419   \def\tableautorefname{T\'abl\'azat}%
2420   \def\partautorefname{R\'esz}%
2421   \def\appendixautorefname{F\'uggel\'ek}%
2422   \def\chapterautorefname{fejezet}%
2423   \def\sectionautorefname{szakasz}%
2424   \def\subsectionautorefname{alszakasz}%
2425   \def\subsubsectionautorefname{alalszakasz}%
2426   \def\paragraphautorefname{bekezd\'es}%
2427   \def\subparagraphautorefname{albekezd\'es}%
2428   \def\FancyVerbLineautorefname{sor}%
2429   \def\theoremautorefname{T\'etel}%
2430   \def\pageautorefname{oldal}%
2431 }
2432 \def\HyLang@portuges{%
2433   \def\equationautorefname{Equa\c c\~ao}%
2434   \def\footnoteautorefname{Nota de rodap\'e}%
2435   \def\itemautorefname{Item}%
2436   \def\figureautorefname{Figura}%
2437   \def\tableautorefname{Tabela}%
2438   \def\partautorefname{Parte}%
2439   \def\appendixautorefname{Ap\~endice}%
2440   \def\chapterautorefname{Cap\'itulo}%
2441   \def\sectionautorefname{Se\c c\~ao}%
2442   \def\subsectionautorefname{Subse\c c\~ao}%
2443   \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2444   \def\paragraphautorefname{par\'agrafo}%
2445   \def\subparagraphautorefname{subpar\'agrafo}%
2446   \def\FancyVerbLineautorefname{linha}%
2447   \def\theoremautorefname{Teorema}%
2448   \def\pageautorefname{P\'agina}%
2449 }

```

Next commented section for Russian is provided by Olga Lapko.

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

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

```

2450 \def\HyLang@russian{%

```

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

```

2451   \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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

```

2452 %   \def\equationautorefname{%
2453 %     \cyr\cyrv\cyrery\cyr\cyrzh\cyre\cyrn\cyri\cyre
2454 %   }%

```

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

```
2455 \def\footnoteautorefname{%
2456   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2457 }%
```

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

```
2458 % \def\footnoteautorefname{%
2459 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2460 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2461 % }%
```

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

```
2462 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2463 % \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.

```
2464 \def\itemautorefname{\cyr\cyrp.}%
2465 % \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.

```
2466 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2467 \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.

```
2468 \def\partautorefname{\cyr\cyrch.}%
2469 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2470 \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.

```
2471 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2472 % \def\appendixautorefname{%
2473 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrzh\cyre\cyrn\cyri\cyre
2474 % }%
```

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.

```
2475 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2476 \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.

```
2477 \def\paragraphautorefname{\cyr\cyrp.}%
2478 \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.

```
2479 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2480 % \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.

```
2481 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2482 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
2483 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2484 % \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 ...

```
2485 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2486 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2487 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2488 \def\pageautorefname{\cyr\cyrs.}%
```

```
2489 }
```

```
2490 \def\HyLang@spanish{%
```

```
2491 \def\equationautorefname{Ecuaci\'}on}%
```

```
2492 \def\footnoteautorefname{Nota a pie de p\'}agina}%
```

```
2493 \def\itemautorefname{Elemento}%
```

```
2494 \def\figureautorefname{Figura}%
```

```
2495 \def\tableautorefname{Tabla}%
```

```
2496 \def\partautorefname{Parte}%
```

```
2497 \def\appendixautorefname{Ap\'}endice}%
```

```
2498 \def\chapterautorefname{Cap\'}itulo}%
```

```
2499 \def\sectionautorefname{Secci\'}on}%
```

```
2500 \def\subsectionautorefname{Subsecci\'}on}%
```

```
2501 \def\subsubsectionautorefname{Subsubsecci\'}on}%
```

```
2502 \def\paragraphautorefname{P\'}arrafo}%
```

```
2503 \def\subparagraphautorefname{Subp\'}arrafo}%
```

```
2504 \def\FancyVerbLineautorefname{L\'}inea}%
```

```
2505 \def\theoremautorefname{Teorema}%
```

```
2506 \def\pageautorefname{P\'}agina}%
```

```
2507 }
```

```
2508 \def\HyLang@vietnamese{%
```

```
2509 \def\equationautorefname{Ph\}uhorn{\}ohorn{\}ng tr\'}inh}%
```

```
2510 \def\footnoteautorefname{Ch\'}u th\'}ich}%
```

```
2511 \def\itemautorefname{m\}d\}u\}c}%
```

```
2512 \def\figureautorefname{H\'}inh}%
```

```
2513 \def\tableautorefname{B\}h\}a\}ng}%
```

```
2514 \def\partautorefname{Ph\'}acircumflex{\}n}%
```

```
2515 \def\appendixautorefname{Ph\}d\}u\} l\}d\}u\}c}%
```

```
2516 \def\chapterautorefname{ch\}uhorn{\}ohorn{\}ng}%
```

```
2517 \def\sectionautorefname{m\}d\}u\}c}%
```

```
2518 \def\subsectionautorefname{m\}d\}u\}c}%
```

```
2519 \def\subsubsectionautorefname{m\}d\}u\}c}%
```

```
2520 \def\paragraphautorefname{\}d\}j\}o\}d\}a\}n}%
```

```

2521 \def\subparagraphautorefname{\dj{ }o{d}{a}{n}}%
2522 \def\FancyVerbLineautorefname{d\'ong}%
2523 \def\theoremautorefname{\DJ{ }\d{i}{nh} 1\'y}%
2524 \def\pageautorefname{Trang}%
2525 }

```

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

```

2526 \def\HyLang@addto#1#2{%
2527   #2%
2528   \@temptokena{#2}%
2529   \ifx#1\relax
2530     \let#1\@empty
2531   \fi
2532   \ifx#1\undefined
2533     \edef#1{\the\@temptokena}%
2534   \else
2535     \toks@\expandafter{#1}%
2536     \edef#1{\the\toks@\the\@temptokena}%
2537   \fi
2538   \@temptokena{}\toks@\@temptokena
2539 }

2540 \def\HyLang@DeclareLang#1#2#3{%
2541   \begingroup
2542     \edef\x##1##2{%
2543       \noexpand\ifx##2\relax
2544         \errmessage{No definitions for language #2' found!}%
2545       \noexpand\fi
2546     \endgroup
2547     \noexpand\define@key{Hyp}{#1}[]{%
2548       \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2549       #3%
2550     }%
2551   }%
2552   \expandafter\x\csname extras#1\expandafter\endcsname
2553     \csname HyLang@#2\endcsname
2554 }

2555 \HyLang@DeclareLang{english}{english}{}
2556 \HyLang@DeclareLang{UKenglish}{english}{}
2557 \HyLang@DeclareLang{british}{english}{}
2558 \HyLang@DeclareLang{USenglish}{english}{}
2559 \HyLang@DeclareLang{american}{english}{}
2560 \HyLang@DeclareLang{german}{german}{}
2561 \HyLang@DeclareLang{austrian}{german}{}
2562 \HyLang@DeclareLang{ngerman}{german}{}
2563 \HyLang@DeclareLang{naustrian}{german}{}
2564 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2565 \HyLang@DeclareLang{brazil}{portuges}{}
2566 \HyLang@DeclareLang{brazilian}{portuges}{}
2567 \HyLang@DeclareLang{portuguese}{portuges}{}
2568 \HyLang@DeclareLang{spanish}{spanish}{}
2569 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2570 \HyLang@DeclareLang{french}{french}{}
2571 \HyLang@DeclareLang{frenchb}{french}{}
2572 \HyLang@DeclareLang{francais}{french}{}
2573 \HyLang@DeclareLang{acadian}{french}{}
2574 \HyLang@DeclareLang{canadien}{french}{}

```

```

2575 \HyLang@DeclareLang{italian}{italian}{%
2576 \HyLang@DeclareLang{magyar}{magyar}{%
2577 \HyLang@DeclareLang{hungarian}{magyar}{%

```

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

```

2578 \define@key{Hyp}{vietnamese}[]{%
2579 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2580 \AtEndOfPackage{%
2581 \ifundefined{T@PU}{%
2582 \input{puvnenc.def}%
2583 }%
2584 }%
2585 }
2586 \define@key{Hyp}{vietnam}[]{%
2587 \HyLang@addto\extravietnam\HyLang@vietnamese
2588 \AtEndOfPackage{%
2589 \ifundefined{T@PU}{%
2590 \input{puvnenc.def}%
2591 }%
2592 }%
2593 }

```

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

```

2594 \define@key{Hyp}{arabic}[]{%
2595 \AtEndOfPackage{%
2596 \ifundefined{T@PU}{%
2597 \input{puarenc.def}%
2598 }%
2599 }%
2600 }

```

13 Options to change appearance of links

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

```

2601 \define@key{Hyp}{colorlinks}[true]{%
2602 \Hy@boolkey{colorlinks}{#1}%
2603 }
2604 \define@key{Hyp}{ocgcolorlinks}[true]{%
2605 \Hy@boolkey{ocgcolorlinks}{#1}%
2606 }
2607 \AtBeginDocument{%
2608 \begingroup
2609 \ifundefined{OBJ@OCG@view}{%
2610 \ifHy@ocgcolorlinks
2611 \Hy@Warning{%
2612 Driver does not support ‘ocgcolorlinks’,\MessageBreak
2613 using ‘colorlinks’ instead%
2614 }%
2615 \fi
2616 }{}%
2617 \endgroup
2618 }
2619 \define@key{Hyp}{frenchlinks}[true]{%
2620 \Hy@boolkey{frenchlinks}{#1}%
2621 }

```


14 Bookmarking

```

2622 \begingroup\expandafter\expandafter\expandafter\endgroup
2623 \expandafter\ifx\csname chapter\endcsname\relax
2624   \def\toclevel@part{0}%
2625 \else
2626   \def\toclevel@part{-1}%
2627 \fi
2628 \def\toclevel@chapter{0}
2629 \def\toclevel@section{1}
2630 \def\toclevel@subsection{2}
2631 \def\toclevel@subsubsection{3}
2632 \def\toclevel@paragraph{4}
2633 \def\toclevel@subparagraph{5}
2634 \def\toclevel@figure{0}
2635 \def\toclevel@table{0}
2636 \@ifpackageloaded{listings}{%
2637   \providecommand*\theHlstlisting{\thelstlisting}%
2638   \providecommand*\toclevel@lstlisting{0}%
2639 }{}
2640 \@ifpackageloaded{listing}{%
2641   \providecommand*\theHlisting{\thelisting}%
2642   \providecommand*\toclevel@listing{0}%
2643 }{}

2644 \define@key{Hyp}{bookmarks}[true]{%
2645   \Hy@boolkey{bookmarks}{#1}%
2646 }

2647 \define@key{Hyp}{bookmarksopen}[true]{%
2648   \Hy@boolkey{bookmarksopen}{#1}%
2649 }

```

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.

```

2650 \let\Hy@bookmarksdepth\c@tocdepth
2651 \define@key{Hyp}{bookmarksdepth}[]{%
2652   \begingroup
2653     \edef\x{#1}%
2654     \ifx\x\empty
2655       \global\let\Hy@bookmarksdepth\c@tocdepth
2656     \else
2657       \@ifundefined{toclevel@\x}{%
2658         \@onelevel@sanitize\x
2659         \edef\y{\expandafter\@car\x\@nil}%
2660         \ifcase 0\expandafter\ifx\y-1\fi
2661           \expandafter\ifnum\expandafter\y>47 %
2662             \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
2663           \Hy@Warning{Unknown document division name (\x)}%
2664         \else
2665           \setbox\z@=\hbox{%

```

```

2666         \count@=\x
2667         \xdef\Hy@bookmarksdepth{\the\count@}%
2668     }%
2669     \fi
2670 }{%
2671     \setbox\z@=\hbox{%
2672         \count@=\csname toclevel@\x\endcsname
2673         \xdef\Hy@bookmarksdepth{\the\count@}%
2674     }%
2675 }%
2676 \fi
2677 \endgroup
2678 }

```

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

```

2679 \define@key{Hyp}{bookmarksopenlevel}{%
2680   \def\@bookmarksopenlevel{#1}%
2681 }
2682 \def\@bookmarksopenlevel{\maxdimen}
2683 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2684 \define@key{Hyp}{bookmarkstype}{%
2685   \def\Hy@bookmarkstype{#1}%
2686 }
2687 \def\Hy@bookmarkstype{toc}

```

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

```

2688 \define@key{Hyp}{bookmarksnumbered}[true]{%
2689   \Hy@boolkey{bookmarksnumbered}{#1}%
2690 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2691 \define@key{Hyp}{CJKbookmarks}[true]{%
2692   \Hy@boolkey{CJKbookmarks}{#1}%
2693 }

2694 \def\Hy@temp#1{%
2695   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2696 }
2697 \def\Hy@@temp#1#2#3{%
2698   \define@key{Hyp}{#2color}{%
2699     \HyColor@HyperrefColor{##1}{#1}%
2700   }%
2701   \def#1{#3}%
2702 }

2703 \Hy@temp{link}{red}
2704 \Hy@temp{anchor}{black}
2705 \Hy@temp{cite}{green}
2706 \Hy@temp{file}{cyan}
2707 \Hy@temp{url}{magenta}
2708 \Hy@temp{menu}{red}
2709 \Hy@temp{run}{\@filecolor}
2710 \define@key{Hyp}{pagecolor}{%
2711   \Hy@WarningPageColor
2712 }
2713 \def\Hy@WarningPageColor{%
2714   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
2715   \global\let\Hy@WarningPageColor\relax
2716 }

```

```

2717 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2718 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2719 \let\@baseurl\@empty
2720 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2721 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2722 \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.

```

2723 \let\pdfpagetransition\relax
2724 \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.

```

2725 \let\pdfpageduration\relax
2726 \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.

```

2727 \newif\ifHy@useHidKey
2728 \Hy@useHidKeyfalse
2729 \define@key{Hyp}{pdfpagehidden}[true]{%
2730   \Hy@boolkey{pdfpagehidden}{#1}%
2731   \ifHy@pdfpagehidden
2732     \global\Hy@useHidKeytrue
2733   \fi
2734 }

```

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).

```

2735 \def\Hy@ColorList{cite,file,link,menu,run,url}
2736 \@for\Hy@temp:=\Hy@ColorList\do{%
2737   \edef\Hy@temp{%
2738     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2739       \noexpand\HyColor@HyperrefBorderColor
2740       {##1}%
2741       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2742       {hyperref}%
2743       {\Hy@temp bordercolor}%
2744     }%
2745   }%
2746   \Hy@temp
2747 }
2748 \define@key{Hyp}{pagebordercolor}{%
2749   \Hy@WarningPageBorderColor

```

```

2750 }
2751 \def\Hy@WarningPageBorderColor{%
2752   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2753   \global\let\Hy@WarningPageBorderColor\relax
2754 }

2755 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2756 \Hy@DefNameKey{pdfhighlight}{%
2757   \do{/I}{Invert}%
2758   \do{/N}{None}%
2759   \do{/O}{Outline}%
2760   \do{/P}{Push}%
2761 }
2762 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2763 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2764 \def\Hy@setpdfborder{%
2765   \ifx\@pdfborder\@empty
2766   \else
2767     /Border[\@pdfborder]%
2768   \fi
2769   \ifx\@pdfborderstyle\@empty
2770   \else
2771     /BS<<\@pdfborderstyle>>%
2772   \fi
2773 }
2774 \Hy@DefNameKey{pdfpagemode}{%
2775   \do{UseNone}{}%
2776   \do{UseOutlines}{}%
2777   \do{UseThumbs}{}%
2778   \do{FullScreen}{}%
2779   \do{UseOC}{PDF 1.5}%
2780   \do{UseAttachments}{PDF 1.6}%
2781 }
2782 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2783   \do{UseNone}{}%
2784   \do{UseOutlines}{}%
2785   \do{UseThumbs}{}%
2786   \do{FullScreen}{}%
2787   \do{UseOC}{PDF 1.5}%
2788   \do{UseAttachments}{PDF 1.6}%
2789 }
2790 \Hy@DefNameKey{pdfdirection}{%
2791   \do{L2R}{Left to right}%
2792   \do{R2L}{Right to left}%
2793 }
2794 \Hy@DefNameKey{pdfviewarea}{%
2795   \do{MediaBox}{}%
2796   \do{CropBox}{}%
2797   \do{BleedBox}{}%
2798   \do{TrimBox}{}%
2799   \do{ArtBox}{}%
2800 }
2801 \Hy@DefNameKey{pdfviewclip}{%
2802   \do{MediaBox}{}%
2803   \do{CropBox}{}%
2804   \do{BleedBox}{}%
2805   \do{TrimBox}{}%
2806   \do{ArtBox}{}%

```

```

2807 }
2808 \Hy@DefNameKey{pdfprintarea}{%
2809   \do{MediaBox}{}%
2810   \do{CropBox}{}%
2811   \do{BleedBox}{}%
2812   \do{TrimBox}{}%
2813   \do{ArtBox}{}%
2814 }
2815 \Hy@DefNameKey{pdfprintclip}{%
2816   \do{MediaBox}{}%
2817   \do{CropBox}{}%
2818   \do{BleedBox}{}%
2819   \do{TrimBox}{}%
2820   \do{ArtBox}{}%
2821 }
2822 \Hy@DefNameKey{pdfprintscaling}{%
2823   \do{AppDefault}{}%
2824   \do{None}{}%
2825 }
2826 \Hy@DefNameKey{pdfduplex}{%
2827   \do{Simplex}{}%
2828   \do{DuplexFlipShortEdge}{}%
2829   \do{DuplexFlipLongEdge}{}%
2830 }
2831 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2832   \do{true}{}%
2833   \do{false}{}%
2834 }
2835 \define@key{Hyp}{pdfprintpagerange}{%
2836   \def\@pdfprintpagerange{#1}%
2837 }
2838 \Hy@DefNameKey{pdfnumcopies}{%
2839   \do{2}{two copies}%
2840   \do{3}{three copies}%
2841   \do{4}{four copies}%
2842   \do{5}{five copies}%
2843 }
2844 \define@key{Hyp}{pdfusetitle}[true]{%
2845   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2846 }
2847 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2848 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2849 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2850 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2851 \define@key{Hyp}{pdfcreationdate}{%
2852   \begingroup
2853     \Hy@unicodetofalse
2854     \pdfstringdef\@pdfcreationdate{#1}%
2855   \endgroup
2856 }
2857 \define@key{Hyp}{pdfmoddate}{%
2858   \begingroup
2859     \Hy@unicodetofalse
2860     \pdfstringdef\@pdfmoddate{#1}%
2861   \endgroup
2862 }
2863 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}

```

```

2864 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2865 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2866 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2867 \let\setpdflinkmargin\@gobble
2868 \def\calculate@pdfview#1 #2\{%
2869   \def\@pdfview{#1}%
2870   \ifx\#2\%
2871     \def\@pdfviewparams{ -32768}%
2872   \else
2873     \def\@pdfviewparams{ #2}%
2874   \fi
2875 }
2876 \begingroup\expandafter\expandafter\expandafter\endgroup
2877 \expandafter\ifx\csname numexpr\endcsname\relax
2878   \def\Hy@number#1{%
2879     \expandafter\@firstofone\expandafter{\number#1}%
2880   }%
2881 \else
2882   \def\Hy@number#1{%
2883     \the\numexpr#1\relax
2884   }%
2885 \fi
2886 \define@key{Hyp}{pdfstartpage}{%
2887   \ifx\#1\%
2888     \def\@pdfstartpage{%
2889       \edef\@pdfstartpage{\Hy@number{#1}}%
2890     }%
2891   \fi
2892 }%
2893 \define@key{Hyp}{pdfstartview}{%
2894   \ifx\#1\%
2895     \def\@pdfstartview{%
2896       \hypercalcbpdef\@pdfstartview{ /#1 }%
2897     }%
2898   \fi
2899 }
2900 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2901 \define@key{Hyp}{pdftoolbar}[true]{%
2902   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2903 }
2904 \define@key{Hyp}{pdfmenubar}[true]{%
2905   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2906 }
2907 \define@key{Hyp}{pdfwindowui}[true]{%
2908   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2909 }
2910 \define@key{Hyp}{pdffitwindow}[true]{%
2911   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2912 }
2913 \define@key{Hyp}{pdfcenterwindow}[true]{%
2914   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2915 }
2916 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2917   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2918 }
2919 \define@key{Hyp}{pdfa}[true]{%
2920   \Hy@boolkey[pdfa]{#1}%

```

```

2921 }
2922 \define@key{Hyp}{pdfnewwindow}[true]{%
2923   \def\Hy@temp{#1}%
2924   \ifx\Hy@temp\@empty
2925     \Hy@newwindowsetfalse
2926   \else
2927     \Hy@newwindowsettrue
2928     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2929   \fi
2930 }
2931 \def\Hy@SetNewWindow{%
2932   \ifHy@newwindowset
2933     /NewWindow %
2934     \ifHy@newwindow true\else false\fi
2935   \fi
2936 }
2937 \Hy@DefNameKey{pdfpagelayout}{%
2938   \do{SinglePage}{}%
2939   \do{OneColumn}{}%
2940   \do{TwoColumnLeft}{}%
2941   \do{TwoColumnRight}{}%
2942   \do{TwoPageLeft}{PDF 1.5}%
2943   \do{TwoPageRight}{PDF 1.5}%
2944 }
2945 \define@key{Hyp}{pdflang}{%
2946   \def\@pdflang{#1}%
2947 }
2948 \define@key{Hyp}{pdfpagelabels}[true]{%
2949   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2950 }
2951 \define@key{Hyp}{pdfescapeform}[true]{%
2952   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2953 }

```

Default values:

```

2954 \def\@linkbordercolor{1 0 0}
2955 \def\@urlbordercolor{0 1 1}
2956 \def\@menubordercolor{1 0 0}
2957 \def\@filebordercolor{0 .5 .5}
2958 \def\@runbordercolor{0 .7 .7}
2959 \def\@citebordercolor{0 1 0}
2960 \def\@pdfhighlight{/I}
2961 \def\@pdftitle{}
2962 \def\@pdfauthor{}
2963 \let\@pdfproducer\relax
2964 \def\@pdfcreator{LaTeX with hyperref package}
2965 \def\@pdfcreationdate{}
2966 \def\@pdfmoddate{}
2967 \def\@pdfsubject{}
2968 \def\@pdfkeywords{}
2969 \def\@pdfpagescrop{}
2970 \def\@pdfstartview{ /Fit }
2971 \def\@pdfstartpage{1}
2972 \def\@pdfprintpagerange{}
2973 \def\@pdflang{}
2974 \let\PDF@SetupDoc\@empty
2975 \let\PDF@FinishDoc\@empty
2976 \let\phantomsection\@empty

```

```

2977 \let\special@paper\@empty
2978 \def\HyperDestNameFilter#1{#1}
2979 \@ifundefined{stockwidth}{%
2980   \ifdim\paperwidth>\z@
2981     \ifdim\paperheight>\z@
2982       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2983     \fi
2984   \fi
2985 }{%
2986   \ifdim\stockwidth>\z@
2987     \ifdim\stockheight>\z@
2988       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2989     \fi
2990   \fi
2991 }
2992 \begingroup
2993   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2994   \dimen@=\x\relax
2995   \ifdim\dimen@>\z@
2996   \else
2997     \dimen@=11in\relax
2998     \Hy@WarningNoLine{%
2999       Height of page (\expandafter\string\x) %
3000       is invalid (\the\x),\MessageBreak
3001       using 11in%
3002     }%
3003   \fi
3004   \dimen@=0.99626401\dimen@
3005   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3006 \endgroup
3007 \def\HyInd@EncapChar{||}
3008 \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.

```

3009 \let\hyper@normalise\ExecuteOptions
3010 \let\ExecuteOptions\hypersetup
3011 \Hy@RestoreCatcodes
3012 \InputIfFileExists{hyperref.cfg}{-}{-}
3013 \Hy@SetCatcodes
3014 \let\ExecuteOptions\hyper@normalise
3015 \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`.

```

3016 \RequirePackage{kvoptions}[2006/08/17]

```

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

```

3017 \@ifpackageloaded{tex4ht}{%
3018   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
3019   \PassOptionsToPackage{tex4ht}{hyperref}%
3020 }%
3021 }{-}
3022 \let\ReadBookmarks\relax
3023 \ProcessKeyvalOptions{Hyp}

```


After processing options.

```
3024 \AtBeginDocument{%
3025   \ifHy@draft
3026     \let\hyper@@anchor\@gobble
3027     \gdef\hyper@link#1#2#3{#3}%
3028     \let\hyper@anchorstart\@gobble
3029     \let\hyper@anchorend\@empty
3030     \let\hyper@linkstart\@gobbletwo
3031     \let\hyper@linkend\@empty
3032     \def\hyper@linkurl#1#2{#1}%
3033     \def\hyper@linkfile#1#2#3{#1}%
3034     \def\hyper@link@{#1}#2#3{#1}%
3035     \def\Acrobatmenu#1#2{\leavevmode#2}%
3036     \let\PDF@SetupDoc\@empty
3037     \let\PDF@FinishDoc\@empty
3038     \let\@fifthoffive\@secondoftwo
3039     \let\@secondoffive\@secondoftwo
3040     \let\ReadBookmarks\relax
3041     \let\WriteBookmarks\relax
3042     \Hy@WarningNoLine{ draft mode on}%
3043   \fi
3044   \Hy@DisableOption{draft}%
3045   \Hy@DisableOption{nolinks}%
3046   \Hy@DisableOption{final}%
3047 }
```

15.1 PDF/A

```
3048 \Hy@DisableOption{pdfa}
3049 \ifHy@pdfa
3050   \setkeys{Hyp}{pdfversion=1.4}%
3051   \def\Hy@Acrobatmenu#1#2{%
3052     \leavevmode
3053     \begingroup
3054       \edef\x{#1}%
3055       \@onelevel@sanitize\x
3056       \ifx\x\Hy@NextPage
3057         \let\y=Y%
3058       \else
3059         \ifx\x\Hy@PrevPage
3060           \let\y=Y%
3061         \else
3062           \ifx\x\Hy@FirstPage
3063             \let\y=Y%
3064           \else
3065             \ifx\x\Hy@LastPage
3066               \let\y=Y%
3067             \else
3068               \let\y=N%
3069             \fi
3070           \fi
3071         \fi
3072       \fi
3073     \expandafter\endgroup
3074     \ifx\y Y%
3075     \else
```

```

3076     \PackageError{hyperref}{%
3077         PDF/A: Named action ‘#1’ is not permitted%
3078     }\@ehc
3079     {#2}%
3080     \expandafter\@gobble
3081 \fi
3082 }%
3083 \def\Hy@temp#1{%
3084     \expandafter\def\csname Hy@#1\endcsname{#1}%
3085     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3086 }%
3087 \Hy@temp{NextPage}%
3088 \Hy@temp{PrevPage}%
3089 \Hy@temp{FirstPage}%
3090 \Hy@temp{LastPage}%
3091 \else
3092     \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3093 \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.

```

3094 \Hy@nextfalse
3095 \@ifundefined{spanish@sh@"@sel}{-}{\Hy@nexttrue}
3096 \@ifundefined{galician@sh@"@sel}{-}{\Hy@nexttrue}
3097 \@ifundefined{estonian@sh@"@sel}{-}{\Hy@nexttrue}
3098 \ifHy@next
3099     \let\texttilde\~%
3100 \fi

```

15.3 Patch for babel 3.8j

Babel 2008/03/16 v3.8j adds a patch to disable shorthands for bookmarks. That reduces warnings, but the bookmarks are ugly. Therefore the following patch tries to undo this.

```

3101 \@ifpackageloaded{babel}{%
3102     \ifpackagelater{babel}{2008/03/16}{%
3103         \def\Hy@PatchLanguageShorthands#1{%
3104             \begingroup
3105                 \edef\x{#1}%
3106                 \@onelevel@sanitize\x
3107                 \def\y{system}%
3108                 \@onelevel@sanitize\y
3109             \expandafter\endgroup
3110             \ifx\x\y
3111             \else
3112                 \HyOrg@languageshorthands{#1}%
3113             \fi
3114         }%
3115         \AtBeginDocument{%
3116             \begingroup
3117                 \toks0=\expandafter{\pdfstringdefPreHook}%
3118                 \xdef\pdfstringdefPreHook{%
3119                     \let\noexpand\HyOrg@languageshorthands
3120                     \noexpand\languageshorthands
3121                     \let\noexpand\languageshorthands
3122                     \noexpand\Hy@PatchLanguageShorthands

```

```

3123         \the\toks0 %
3124         \let\noexpand\languageshorthands
3125         \noexpand\HyOrg@languageshorthands
3126     }%
3127 \endgroup
3128 }%
3129 }{}%
3130 }{}

3131 \ifHy@figures
3132   \Hy@Info{Hyper figures ON}%
3133 \else
3134   \Hy@Info{Hyper figures OFF}%
3135 \fi
3136 \ifHy@nesting
3137   \Hy@Info{Link nesting ON}%
3138 \else
3139   \Hy@Info{Link nesting OFF}%
3140 \fi
3141 \ifHy@hyperindex
3142   \Hy@Info{Hyper index ON}%
3143 \else
3144   \Hy@Info{Hyper index OFF}%
3145 \fi
3146 \ifHy@plainpages
3147   \Hy@Info{Plain pages ON}%
3148 \else
3149   \Hy@Info{Plain pages OFF}%
3150 \fi
3151 \ifHy@backref
3152   \Hy@Info{Backreferencing ON}%
3153 \else
3154   \Hy@Info{Backreferencing OFF}%
3155 \fi
3156 \ifHy@typexml
3157   \AtEndOfPackage{%
3158     \RequirePackage{color}%
3159     \RequirePackage{nameref}%
3160   }%
3161 \fi
3162 \Hy@DisableOption{typexml}
3163 \ifHy@implicit
3164   \typeout{Implicit mode ON; LaTeX internals redefined}%
3165 \else
3166   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3167   \def\MaybeStopEarly{%
3168     \typeout{Hyperref stopped early}%
3169     \AfterBeginDocument{%
3170       \PDF@FinishDoc
3171       \gdef\PDF@FinishDoc{}}%
3172   }%
3173   \endinput
3174 }%
3175 \AtBeginDocument{%
3176   \let\autoref\ref
3177   \let\autopageref\pageref
3178   \ifx\@pdfpagemode\@empty
3179     \gdef\@pdfpagemode{UseNone}%

```

```

3180 \fi
3181 \global\Hy@backreffalse
3182 }%
3183 \AtEndOfPackage{%
3184 \global\let\ReadBookmarks\relax
3185 \global\let\WriteBookmarks\relax
3186 }%
3187 \fi
3188 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3189 \AtEndOfPackage{%
3190 \ifpackageloaded{tex4ht}{%
3191 \def\Hy@driver{htex4ht}%
3192 \Hy@texhttrue
3193 }{}%

```

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.

```

3194 \ifx\Hy@driver\@empty
3195 \else
3196 \def\Hy@temp{hpdftex}%
3197 \ifpdf
3198 \ifx\Hy@driver\Hy@temp
3199 \else
3200 \Hy@WarningNoLine{%
3201 Wrong driver '\Hy@driver.def';\MessageBreak
3202 pdfTeX is running in PDF mode.\MessageBreak
3203 Forcing driver '\Hy@temp.def'%
3204 }%
3205 \let\Hy@driver\Hy@temp
3206 \fi
3207 \else
3208 \ifx\Hy@driver\Hy@temp
3209 \Hy@WarningNoLine{%
3210 Wrong driver '\Hy@driver.def';\MessageBreak
3211 pdfTeX is not running in PDF mode.\MessageBreak
3212 Using default driver%
3213 }%
3214 \let\Hy@driver\@empty
3215 \fi
3216 \fi
3217 \fi
3218 \ifx\Hy@driver\@empty
3219 \else
3220 \def\Hy@temp{hdvipdfm}%
3221 \ifxetex
3222 \ifx\Hy@driver\Hy@temp
3223 \else
3224 \Hy@WarningNoLine{%
3225 Wrong driver '\Hy@driver.def';\MessageBreak
3226 XeTeX is running.\MessageBreak
3227 Forcing driver '\Hy@temp.def' for XeTeX%
3228 }%
3229 \let\Hy@driver\Hy@temp
3230 \fi
3231 \fi

```

```

3232 \fi
3233 \ifx\Hy@driver\@empty
3234 \else
3235   \def\Hy@temp{hvtexhtm}%
3236   \ifvtexhtml
3237     \ifx\Hy@driver\Hy@temp
3238     \else
3239       \Hy@WarningNoLine{%
3240         Wrong driver '\Hy@driver.def';\MessageBreak
3241         VTeX is running in HTML mode.\MessageBreak
3242         Forcing driver '\Hy@temp.def'%
3243       }%
3244       \let\Hy@driver\Hy@temp
3245     \fi
3246   \else
3247     \ifx\Hy@driver\Hy@temp
3248     \Hy@WarningNoLine{%
3249       Wrong driver '\Hy@driver.def';\MessageBreak
3250       VTeX is not running in HTML mode.\MessageBreak
3251       Using default driver%
3252     }%
3253     \let\Hy@driver\@empty
3254   \fi
3255 \fi
3256 \fi

```

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

```

3257 \ifx\Hy@driver\@empty
3258   \providecommand*{\Hy@defaultdriver}{hypertex}%
3259   \ifpdf
3260     \def\Hy@driver{hpdftex}%
3261   \else
3262     \ifxetex
3263       \def\Hy@driver{hdvipdfm}%
3264     \else
3265       \ifvtexhtml
3266         \def\Hy@driver{hvtexhtm}%
3267         \def\MaybeStopEarly{%
3268           \typeout{Hyperref stopped early}%
3269           \AfterBeginDocument{%
3270             \PDF@FinishDoc
3271             \gdef\PDF@FinishDoc{}}%
3272         }%
3273         \endinput
3274       }%
3275     \else
3276       \ifvtexpdf
3277         \def\Hy@driver{hvtex}%
3278       \else
3279         \ifvtexps
3280           \def\Hy@driver{hvtex}%
3281         \else
3282           \let\Hy@driver\Hy@defaultdriver
3283         \fi
3284       \fi
3285     \fi
3286   \fi
3287 \fi

```

```

3288 \ifx\Hy@driver\Hy@defaultdriver
3289 \def\Hy@temp{hdvwind}%
3290 \ifx\Hy@temp\Hy@driver
3291 \setkeys{Hyp}{colorlinks}%
3292 \PassOptionsToPackage{dviwindo}{color}%
3293 \fi
3294 \fi
3295 \typeout{*hyperref using default driver \Hy@driver*}%
3296 \else
3297 \typeout{*hyperref using driver \Hy@driver*}%
3298 \fi
3299 \input{\Hy@driver.def}%
3300 \let\@unprocessedoptions\relax
3301 \Hy@RestoreCatcodes
3302 }

```

Support for open outlines is enabled for XeTeX $\zeta = 0.9995$. 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.

```

3303 \newif\ifHy@DvipdfmxOutlineOpen
3304 \ifxetex
3305 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3306 \else
3307 \Hy@DvipdfmxOutlineOpentrue
3308 \fi
3309 \fi
3310 \begingroup\expandafter\expandafter\expandafter\endgroup
3311 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3312 \else
3313 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3314 \Hy@DvipdfmxOutlineOpentrue
3315 \fi
3316 \fi
3317 \Hy@DisableOption{tex4ht}
3318 \Hy@DisableOption{pdftex}
3319 \Hy@DisableOption{nativepdf}
3320 \Hy@DisableOption{dvipdfm}
3321 \Hy@DisableOption{dvipdfmx}
3322 \Hy@DisableOption{dvipdfmx-outline-open}
3323 \Hy@DisableOption{pdfmark}
3324 \Hy@DisableOption{dvips}
3325 \Hy@DisableOption{hypertex}
3326 \Hy@DisableOption{vtex}
3327 \Hy@DisableOption{vtexpdfmark}
3328 \Hy@DisableOption{dviwindo}
3329 \Hy@DisableOption{dvipsone}
3330 \Hy@DisableOption{textures}
3331 \Hy@DisableOption{latex2html}
3332 \Hy@DisableOption{ps2pdf}
3333 \Hy@DisableOption{xetex}
3334 \AtEndOfPackage{%
3335 \Hy@DisableOption{pdfversion}%
3336 }

```

15.3.2 Bookmarks

```

3337 \def\WriteBookmarks{0}
3338 \def\@bookmarkopenstatus#1{%
3339 \ifHy@bookmarksopen

```

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

```

3340 \ifnum#1<\expandafter\@firstofone\expandafter
3341      {\number\@bookmarkopenlevel} % explicit space
3342 \else
3343     -%
3344 \fi
3345 \else
3346     -%
3347 \fi
3348 }
3349 \ifHy@bookmarks
3350 \Hy@Info{Bookmarks ON}%
3351 \ifx\@pdfpagemode\@empty
3352 \def\@pdfpagemode{UseOutlines}%
3353 \fi
3354 \else
3355 \def\@bookmarkopenstatus#1{%
3356 \Hy@Info{Bookmarks OFF}%
3357 \AtEndOfPackage{%
3358 \global\let\ReadBookmarks\relax
3359 \global\let\WriteBookmarks\relax
3360 }%
3361 \ifx\@pdfpagemode\@empty
3362 \def\@pdfpagemode{UseNone}%
3363 \fi
3364 \fi
3365 \Hy@DisableOption{bookmarks}

```

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

```

3366 \def\Hy@CatcodeWrapper#1{%
3367 \def\Hy@EndWrap{}%
3368 \def\TMP@EnsureCode##1##2{%
3369 \edef\Hy@EndWrap{%
3370 \Hy@EndWrap
3371 \catcode##1 \the\catcode##1\relax
3372 }%
3373 \catcode##1 ##2\relax
3374 }%
3375 \TMP@EnsureCode{10}{12}% ^^J
3376 \TMP@EnsureCode{33}{12}% !
3377 \TMP@EnsureCode{34}{12}% "
3378 \TMP@EnsureCode{36}{3}% $ (math)
3379 \TMP@EnsureCode{38}{4}% & (alignment)
3380 \TMP@EnsureCode{39}{12}% '
3381 \TMP@EnsureCode{40}{12}% (
3382 \TMP@EnsureCode{41}{12}% )
3383 \TMP@EnsureCode{42}{12}% *
3384 \TMP@EnsureCode{43}{12}% +
3385 \TMP@EnsureCode{44}{12}% ,
3386 \TMP@EnsureCode{45}{12}% -
3387 \TMP@EnsureCode{46}{12}% .
3388 \TMP@EnsureCode{47}{12}% /
3389 \TMP@EnsureCode{58}{12}% :
3390 \TMP@EnsureCode{59}{12}% ;
3391 \TMP@EnsureCode{60}{12}% <
3392 \TMP@EnsureCode{61}{12}% =
3393 \TMP@EnsureCode{62}{12}% >

```

```

3394 \TMP@EnsureCode{63}{12}% ?
3395 \TMP@EnsureCode{91}{12}% [
3396 \TMP@EnsureCode{93}{12}% ]
3397 \TMP@EnsureCode{94}{7}% ^ (superscript)
3398 \TMP@EnsureCode{95}{8}% _ (subscript)
3399 \TMP@EnsureCode{96}{12}% '
3400 \TMP@EnsureCode{124}{12}% |
3401 \TMP@EnsureCode{126}{13}% ~ (active)
3402 #1\relax
3403 \Hy@endWrap
3404 }

```

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

```

3405 \AtBeginDocument{%
3406   \ifHy@ocgcolorlinks
3407     \setkeys{Hyp}{colorlinks}%
3408     \ifHy@pdfa
3409       \Hy@Warning{%
3410         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3411         using 'colorlinks' instead of 'ocgcolorlinks'%
3412       }%
3413       \Hy@ocgcolorlinksfalse
3414     \fi
3415   \fi
3416   \ifHy@ocgcolorlinks
3417   \else
3418     \Hy@DisableOption{ocgcolorlinks}%
3419   \fi
3420   \ifHy@colorlinks
3421     \def\@pdfborder{0 0 0}%
3422     \let\@pdfborderstyle\@empty
3423     \ifHy@typexml
3424     \else
3425       \Hy@CatcodeWrapper{%
3426         \RequirePackage{color}%
3427       }%
3428     \fi
3429     \def\Hy@colorlink#1{%
3430       \begingroup
3431       \HyColor@UseColor#1%
3432     }%
3433     \def\Hy@endcolorlink{\endgroup}%
3434     \Hy@Info{Link coloring ON}%
3435   \else
3436     \ifHy@frenchlinks
3437       \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3438       \def\Hy@endcolorlink{\endgroup}%
3439       \Hy@Info{French linking ON}%
3440     \else

```

for grouping consistency:

```

3441     \def\Hy@colorlink#1{\begingroup}%
3442     \def\Hy@endcolorlink{\endgroup}%
3443     \Hy@Info{Link coloring OFF}%
3444   \fi
3445 \fi
3446 \Hy@DisableOption{colorlinks}%
3447 \Hy@DisableOption{frenchlinks}%

```



```

3448 \ifHy@texht
3449   \long\def\@firstoffive#1#2#3#4#5{#1}%
3450   \long\def\@secondoffive#1#2#3#4#5{#2}%
3451   \long\def\@thirdoffive#1#2#3#4#5{#3}%
3452   \long\def\@fourthoffive#1#2#3#4#5{#4}%
3453   \long\def\@fifthoffive#1#2#3#4#5{#5}%
3454   \providecommand*\@safe@activestruet{}%
3455   \providecommand*\@safe@activesfalse{}%
3456   \def\T@ref#1{%
3457     \Hy@safe@activestruet
3458     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3459     \Hy@safe@activesfalse
3460   }%
3461   \def\T@pageref#1{%
3462     \Hy@safe@activestruet
3463     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3464     \Hy@safe@activesfalse
3465   }%
3466 \else
3467   \ifHy@typexml
3468   \else
3469     \Hy@CatcodeWrapper{%
3470       \RequirePackage{nameref}%
3471     }%
3472   \fi
3473 \fi
3474 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3475 \DeclareRobustCommand\pageref{%
3476   \@ifstar\@pagerefstar\T@pageref
3477 }%
3478 }
3479 \AfterBeginDocument{%
3480   \ifHy@texht
3481   \else
3482     \Hy@CatcodeWrapper{%
3483       \ReadBookmarks
3484     }%
3485   \fi
3486 }
3487 \ifHy@backref
3488   \RequirePackage{backref}%
3489 \else
3490   \let\Hy@backout\@gobble
3491 \fi
3492 \Hy@DisableOption{backref}
3493 \Hy@DisableOption{pagebackref}
3494 \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`.

```

3495 \begingroup
3496 \endlinechar=-1 %
3497 \catcode'\^^A=14 %
3498 \catcode'\^^M\active
3499 \catcode'\%\active
3500 \catcode'\#\active
3501 \catcode'\_\active
3502 \catcode'\$\active
3503 \catcode'\&\active
3504 \gdef\hyper@normalise{^^A
3505   \begingroup
3506   \catcode'\^^M\active
3507   \def^^M{ }^^A
3508   \catcode'\%\active
3509   \let%\@percentchar
3510   \let%\@percentchar
3511   \catcode'\#\active
3512   \def#{\hyper@hash}^^A
3513   \def\#{\hyper@hash}^^A
3514   \@makeother\&^^A
3515   \edef&{\string&}^^A
3516   \edef\&{\string&}^^A
3517   \edef\textunderscore{\string_}^^A
3518   \let_\textunderscore
3519   \catcode'\_\active
3520   \let_\textunderscore
3521   \let~\hyper@tilde
3522   \let~\hyper@tilde
3523   \let\textasciitilde\hyper@tilde
3524   \let\\\@backslashchar
3525   \edef$\string$}^^A
3526   \Hy@safe@activestrue
3527   \hyper@n@rmalise
3528 }^^A
3529 \catcode'\#=6 ^^A
3530 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3531 \gdef\hyper@n@rmalise#1#2{^^A
3532   \def\Hy@tempa{#2}^^A
3533   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3534     \Hy@ReturnAfterElseFi{^^A
3535       \hyper@@normalise{#1}^^A
3536     }^^A
3537   \else
3538     \Hy@ReturnAfterFi{^^A
3539       \hyper@@normalise{#1}{#2}^^A
3540     }^^A
3541   \fi
3542 }^^A
3543 \gdef\hyper@@normalise#1#2{^^A
3544   \edef\Hy@tempa{^^A
3545     \endgroup
3546     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3547   }^^A
3548   \Hy@tempa
3549 }^^A
3550 \gdef\Hy@RemovePercentCr#1%\^^M#2\@nil{^^A
3551   #1^^A

```

```

3552 \ifx\limits#2\limits
3553 \else
3554 \Hy@ReturnAfterFi{^^A
3555 \Hy@RemovePercentCr #2\@nil
3556 }^^A
3557 \fi
3558 }^^A
3559 \endgroup
3560 \providecommand*\hyper@chars{%
3561 \let#\hyper@hash
3562 \let%\@percentchar
3563 \Hy@safe@activetrue
3564 }

3565 \def\hyperlink#1#2{%
3566 \hyper@@link{#1}{#2}%
3567 }

3568 \DeclareRobustCommand*\href{%
3569 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3570 }
3571 \def\Hy@href#1{%
3572 \hyper@normalise\href@
3573 }
3574 \begingroup
3575 \catcode'\$=6 %
3576 \catcode'\#=12 %
3577 \gdef\href@#1{\expandafter\href@split$1##\}%
3578 \gdef\href@split$1#$2#$3\{%
3579 \hyper@@link{$1}{$2}%
3580 }%
3581 \endgroup

```

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

```

3582 \RequirePackage{url}
3583 \let\HyOrg@url\url
3584 \def\Hurl{\begingroup \Url}
3585 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3586 \def\nolinkurl@#1{\Hurl{#1}}
3587 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3588 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

3589 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3590 \providecommand\hyper@image[2]{#2}

3591 \def\hypertarget#1#2{%
3592 \ifHy@nesting
3593 \hyper@@anchor{#1}{#2}%
3594 \else
3595 \hyper@@anchor{#1}{\relax}#2%
3596 \fi
3597 }

```

`\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.

```

3598 \DeclareRobustCommand*\hyperref{%

```

```

3599 \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3600 }
3601 \def\Hy@babelnormalise#1[#2]{%
3602   \begingroup
3603     \Hy@safe@activetrue
3604     \edef\Hy@tempa{%
3605       \endgroup
3606       \noexpand#1[#2]}%
3607   }%
3608   \Hy@tempa
3609 }
3610 \def\@hyperref{\hyper@normalise\@hyperref}
3611 \def\@hyperref#1#2#3{%
3612   \edef\ref@one{\ifx\#2\else#2.\fi#3}%
3613   \expandafter\tryhyper@link\ref@one\{#1}%
3614 }
3615 \def\tryhyper@link#1\#2{%
3616   \hyper@@link{#2}{#1}%
3617 }
3618 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
3619 \def\@hyperdef#1#2#3{%, category, name, text
3620   \ifHy@nesting
3621     \hyper@@anchor{#1.#2}{#3}%
3622   \else
3623     \hyper@@anchor{#1.#2}{\relax}#3%
3624   \fi
3625 }

```

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

```

3626 \def\label@hyperref[#1]{%
3627   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
3628 }%
3629 \def\label@@hyperref#1#2#3{%
3630   \ifx#1\relax
3631     \protect\G@refundefinedtrue
3632     \@latex@warning{%
3633       Hyper reference ‘#2’ on page \thepage \space undefined%
3634     }%
3635     \hyper@@link{}{??}{#3}%
3636   \else
3637     \hyper@@link{\expandafter\@fifthoffive#1}%
3638     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3639   \fi
3640 }
3641 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3642                               % anchor text
3643   \@bsphack
3644   \if@files@
3645     \protected@write\@auxout{%
3646       {\string\newlabel{#1}{\{#\}{}\}\@##2.#3}}%
3647   \fi
3648   \@esphack
3649   \ifHy@nesting
3650     \hyper@@anchor{#2.#3}{#4}%
3651   \else
3652     \hyper@@anchor{#2.#3}{\relax}#4%

```

```

3653 \fi
3654 }

```

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, it's an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

3655 \def\hyper@@link{\let\Hy@reserved@a\relax
3656 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3657 }
3658 \def\hyper@link@[#1]#2#3#4{%
3659 \begingroup
3660 \protected@edef\Hy@tempa{#2}%
3661 \Hy@safe@activestruer
3662 \edef\x{#3}%
3663 \ifx\Hy@tempa\@empty
3664 \toks0{\hyper@link{#1}}%
3665 \else
3666 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3667 \fi
3668 \toks2{%
3669 \Hy@safe@activesfalse
3670 #4%
3671 }%
3672 \edef\Hy@tempa{\the\toks2}%
3673 \edef\x{\endgroup
3674 \ifx\Hy@tempa\@empty
3675 \noexpand\Hy@Warning{Suppressing empty link}%
3676 \else
3677 \the\toks0 {\x}{\the\toks2}}%
3678 \fi
3679 }%
3680 \x
3681 }

```

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.

```

3682 \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.

```

3683 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
3684 }

```

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

```
3685 \def\@pdftempwordfile{file}%
3686 \def\@pdftempwordrun{run}%
3687 \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 :

```
3688 \ifx\\#6\\%
3689 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3690 \else
3691 \ifx\\#4\\%
3692 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3693 \else
```

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

```
3694 \def\@pdftempa{#4}%
3695 \ifx\@pdftempa\@pdftempwordfile
3696 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
3697 \else
```

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

```
3698 \ifx\@pdftempa\@pdftempwordrun
3699 \ifHy@pdfa
3700 \PackageError{hyperref}{%
3701 PDF/A: Launch action is prohibited%
3702 }\@ehc
3703 \begingroup
3704 \leavevmode
3705 #2%
3706 \endgroup
3707 \else
3708 \expandafter\@hyper@launch#7\\{#3}{#2}%
3709 \fi
3710 \else
```

otherwise its a URL

```
3711 \hyper@linkurl{#3}{#7\ifx\\#2\\#3\\#4\\#5\\#6\\#7}%
3712 \fi
3713 \fi
3714 \fi
3715 \fi
3716 }
```

By default, turn run: into file:

```
3717 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
3718 \hyper@linkurl{#2}{%
3719 \Hy@linkfileprefix
3720 #1%
3721 \ifx\\#3\\%
3722 \else
3723 \hyper@hash
3724 #3%
3725 \fi
3726 }%
3727 }
```

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

```

3728 \def\@hyper@linkfile file:#1\#2#3{%
3729     %file url,link string, name
3730     \filename@parse{#1}%
3731     \ifx\filename@ext\relax
3732         \edef\filename@ext{\XR@ext}%
3733     \fi
3734     \def\use@file{\filename@area\filename@base.\filename@ext}%
3735     \ifx\filename@ext\XR@ext
3736         \hyper@linkfile{#2}{\use@file}{#3}%
3737     \else
3738         \ifx\@baseurl\@empty
3739             \hyper@linkurl{#2}{%
3740                 \Hy@linkfileprefix\use@file\ifx\\#3\\#3\\else\hyper@hash#3\fi}%
3741             }%
3742         \else
3743             \hyper@linkurl{#2}{\use@file\ifx\\#3\\#3\\else\hyper@hash#3\fi}%
3744         \fi
3745     \fi
3746 }

```

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.

```

3747 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3748 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3749     \ifx\\#1\\%
3750         #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3751     \else
3752         \def\anchor@spot{#2#3}%
3753         \let\put@me@back\@empty
3754         \ifx\relax#2\relax
3755             \else
3756                 \ifHy@nesting
3757                 \else
3758                     \ifcat a\noexpand#2\relax
3759                     \else
3760                         \ifcat 0\noexpand#2 \relax
3761                         \else
3762 %                 \typeout{Anchor start is not alphanumeric %
3763 %                 on input line\the\inputlineno%
3764 %                 }%
3765                         \let\anchor@spot\@empty
3766                         \def\put@me@back{#2#3}%
3767                     \fi
3768                 \fi
3769             \fi
3770         \fi
3771         \ifHy@activeanchor
3772             \anchor@spot
3773         \else
3774             \hyper@anchor{#1}%

```

```

3775 \fi
3776 \expandafter\put@me@back
3777 \fi
3778 \let\anchor@spot@empty
3779 }

```

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.

```

3780 \let\htmladding\hyperimage
3781 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3782 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3783 \def\htmlref#1#2{% anchor text, label
3784 \label@hyperref[{#2}]{#1}%
3785 }

```

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.

```

3786 \def\@@latextohtmlX{%
3787 \let\hhyperref\hyperref
3788 \def\hyperref##1##2##3##4{% anchor text for HTML
3789 % text to print before label in print
3790 % label
3791 % post-label text in print
3792 ##2\ref{##4}##3%
3793 }%
3794 }

```

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.

```

3795 \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

```



```

3796 \def\HyField@NewFlag#1#2{%
3797   \lowercase{\HyField@NewOption{#2}}%
3798   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3799 }

```

\HyField@NewFlagOnly

```

3800 \def\HyField@NewFlagOnly#1#2{%
3801   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3802 }

```

\HyField@NewOption #1: option name

```

3803 \def\HyField@NewOption#1{%
3804   \expandafter\newif\csname ifFld@#1\endcsname
3805   \define@key{Field}{#1}[true]{%
3806     \lowercase{\Field@boolkey{##1}}{#1}%
3807   }%
3808 }

```

\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

```

3809 \def\HyField@NewBitsetFlag#1#2#3#4{%
3810   \begingroup
3811     \count@=#4\relax
3812     \advance\count@\m@ne
3813     \def\x##1{%
3814       \endgroup
3815       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3816       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
3817         \expandafter\edef\csname HyField@#3@#1\endcsname{%
3818           (\number#4) #2%
3819         }%
3820       \else
3821         \expandafter\edef\csname HyField@#3@#1\endcsname{%
3822           \csname HyField@#3@#1\endcsname
3823           /#2%
3824         }%
3825       \fi
3826     }%
3827   \expandafter\x\expandafter{\the\count@}%
3828 }

```

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

```

3829 \def\HyField@UseFlag#1#2{%
3830   \lowercase{\HyField@@UseFlag{#2}}{#1}%
3831 }

```

\HyField@@UseFlag

```

3832 \def\HyField@@UseFlag#1#2{%
3833   \bitsetSetValue{HyField@#2}{%
3834     \csname HyField@#2@#1\endcsname
3835   }{%
3836     \csname ifFld@#1\endcsname 1\else 0\fi
3837   }%
3838 }

```

```

\HyField@SetFlag The bit set is HyField@#1
3839 \def\HyField@SetFlag#1#2{%
3840   \lowercase{\HyField@@SetFlag{#2}}{#1}%
3841 }

\HyField@@SetFlag
3842 \def\HyField@@SetFlag#1#2{%
3843   \bitsetSetValue{HyField@#2}{%
3844     \csname HyField@#2@#1\endcsname
3845   }{1}%
3846 }

\HyField@PrintFlags
3847 \def\HyField@PrintFlags#1#2{%
3848   \ifHy@verbose
3849     \begingroup
3850     \let\Hy@temp\@empty
3851     \let\MessageBreak\relax
3852     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3853     \bitsetGetSetBitList{HyField@#1}\do{%
3854       \edef\Hy@temp{%
3855         \Hy@temp
3856         \csname HyField@#1@\x\endcsname\MessageBreak
3857       }%
3858     }%
3859   \edef\x{\endgroup
3860     \noexpand\Hy@Info{%
3861       Field flags: %
3862       \expandafter\ifx\@car#1\@nil S\else/\fi
3863       #1 %
3864       \bitsetGetDec{HyField@#1} %
3865       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3866       \Hy@temp
3867       for #2%
3868     }%
3869   }\x
3870 \fi
3871 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

3872 \HyField@NewFlag{Ff}{ReadOnly}{1}
3873 \HyField@NewFlag{Ff}{Required}{2}
3874 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

3875 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3876 \HyField@NewFlag{Ff}{Radio}{16}
3877 \HyField@NewFlag{Ff}{Pushbutton}{17}
3878 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

3879 \HyField@NewFlag{Ff}{Multiline}{13}
3880 \HyField@NewFlag{Ff}{Password}{14}
3881 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3882 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4

```

```

3883 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3884 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3885 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

3886 \HyField@NewFlag{Ff}{Combo}{18}
3887 \HyField@NewFlag{Ff}{Edit}{19}
3888 \HyField@NewFlag{Ff}{Sort}{20}
3889 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3890 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3891 \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.

```

3892 \newif\ifFld@popdown
3893 \define@key{Field}{popdown}[true]{%
3894   \lowercase{\Field@boolkey{#1}}{popdown}%
3895 }

```

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.

```

3896 \HyField@NewFlag{F}{Invisible}{1}
3897 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3898 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3899 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3900 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3901 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3902 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3903 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3904 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

3905 \ifHy@pdfa
3906   \def\HyField@PDFAFflagWarning#1#2{%
3907     \Hy@Warning{%
3908       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3909       be set to ‘#2’%
3910     }%
3911   }%
3912   \Fld@invisiblefalse
3913   \def\Fld@invisibletrue{%
3914     \HyField@PDFAFflagWarning{invisible}{false}%
3915   }%
3916   \Fld@hiddenfalse
3917   \def\Fld@hiddentrue{%
3918     \HyField@PDFAFflagWarning{hidden}{false}%
3919   }%
3920   \Fld@printtrue
3921   \def\Fld@printfalse{%
3922     \HyField@PDFAFflagWarning{print}{true}%
3923   }%
3924   \Fld@nozoomtrue
3925   \def\Fld@nozoomfalse{%
3926     \HyField@PDFAFflagWarning{nozoom}{true}%
3927   }%
3928   \Fld@norotatetrue

```

```

3929 \def\Fld@norotatefalse{%
3930   \HyField@PDFAFIWarning{norotate}{true}%
3931 }%
3932 \Fld@noviewfalse
3933 \def\Fld@noviewtrue{%
3934   \HyField@PDFAFIWarning{noview}{false}%
3935 }%
3936 \fi

```

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

```

3937 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3938 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3939 \HyField@NewFlag{Submit}{GetMethod}{4}
3940 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3941 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3942 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3943 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3944 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3945 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3946 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3947 \HyField@NewFlag{Submit}{ExclFKey}{12}
3948 \HyField@NewFlag{Submit}{EmbedForm}{14}

3949 \define@key{Field}{export}{%
3950   \lowercase{\def\Hy@temp{#1}}%
3951   \@ifundefined{Fld@export@Hy@temp}{%
3952     \@onelevel@sanitize\Hy@temp
3953     \PackageError{hyperref}{%
3954       Unknown export format '\Hy@temp'.\MessageBreak
3955       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
3956     }\@ehc
3957   }{%
3958     \let\Fld@export\Hy@temp
3959   }%
3960 }
3961 \def\Fld@export{fdf}
3962 \@namedef{Fld@export@fdf}{0}%
3963 \@namedef{Fld@export@html}{1}%
3964 \@namedef{Fld@export@xfdf}{2}%
3965 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3966 \def\HyField@FlagsSubmit{%
3967   \bitsetReset{HyField@Submit}%
3968   \ifcase\@nameuse{Fld@export@Fld@export} %
3969     % FDF
3970     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3971     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3972     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3973     \HyField@UseFlag{Submit}{IncludeAnnotations}%
3974     \HyField@UseFlag{Submit}{CanonicalFormat}%
3975     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3976     \HyField@UseFlag{Submit}{ExclFKey}%
3977     \HyField@UseFlag{Submit}{EmbedForm}%
3978   \or % HTML
3979     \HyField@SetFlag{Submit}{ExportFormat}%

```

```

3980 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3981 \HyField@UseFlag{Submit}{GetMethod}%
3982 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3983 \HyField@UseFlag{Submit}{CanonicalFormat}%
3984 \or % XFDF
3985 \HyField@SetFlag{Submit}{XFDF}%
3986 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3987 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3988 \HyField@UseFlag{Submit}{CanonicalFormat}%
3989 \or % PDF
3990 \HyField@SetFlag{Submit}{SubmitPDF}%
3991 \HyField@UseFlag{Submit}{GetMethod}%
3992 \fi
3993 \HyField@PrintFlags{Submit}{submit button field}%
3994 \bitsetIsEmpty{HyField@Submit}{%
3995 \def\Fld@submitflags{%
3996 }{%
3997 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3998 }%
3999 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4000 \def\HyField@FlagsAnnot#1{%
4001 \bitsetReset{HyField@F}%
4002 \HyField@UseFlag{F}{Invisible}%
4003 \HyField@UseFlag{F}{Hidden}%
4004 \HyField@UseFlag{F}{Print}%
4005 \HyField@UseFlag{F}{NoZoom}%
4006 \HyField@UseFlag{F}{NoRotate}%
4007 \HyField@UseFlag{F}{NoView}%
4008 \HyField@UseFlag{F}{Locked}%
4009 \HyField@UseFlag{F}{ToggleNoView}%
4010 \HyField@UseFlag{F}{LockedContents}%
4011 \HyField@PrintFlags{F}{#1}%
4012 \bitsetIsEmpty{HyField@F}{%
4013 \def\Fld@annotflags{%
4014 }{%
4015 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4016 }%
4017 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4018 \def\HyField@FlagsPushButton{%
4019 \HyField@FlagsAnnot{push button field}%
4020 \bitsetReset{HyField@Ff}%
4021 \HyField@UseFlag{Ff}{ReadOnly}%
4022 \HyField@UseFlag{Ff}{Required}%
4023 \HyField@UseFlag{Ff}{NoExport}%
4024 \HyField@SetFlag{Ff}{PushButton}%
4025 \HyField@PrintFlags{Ff}{push button field}%
4026 \bitsetIsEmpty{HyField@Ff}{%
4027 \def\Fld@flags{%

```

```

4028 }{%
4029     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4030 }%
4031 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4032 \def\HyField@FlagsCheckBox{%
4033     \HyField@FlagsAnnot{check box field}%
4034     \bitsetReset{HyField@Ff}%
4035     \HyField@UseFlag{Ff}{ReadOnly}%
4036     \HyField@UseFlag{Ff}{Required}%
4037     \HyField@UseFlag{Ff}{NoExport}%
4038     \HyField@PrintFlags{Ff}{check box field}%
4039     \bitsetIsEmpty{HyField@Ff}{%
4040         \def\Fld@flags{%
4041             }{%
4042                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4043             }%
4044         }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4045 \def\HyField@FlagsRadioButton{%
4046     \HyField@FlagsAnnot{radio button field}%
4047     \bitsetReset{HyField@Ff}%
4048     \HyField@UseFlag{Ff}{ReadOnly}%
4049     \HyField@UseFlag{Ff}{Required}%
4050     \HyField@UseFlag{Ff}{NoExport}%
4051     \HyField@UseFlag{Ff}{NoToggleToOff}%
4052     \HyField@SetFlag{Ff}{Radio}%
4053     \HyField@UseFlag{Ff}{RadiosInUnison}%
4054     \HyField@PrintFlags{Ff}{radio button field}%
4055     \bitsetIsEmpty{HyField@Ff}{%
4056         \def\Fld@flags{%
4057             }{%
4058                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4059             }%
4060         }

```

19.1.7 Text fields

\HyField@FlagsText

```

4061 \def\HyField@FlagsText{%
4062     \HyField@FlagsAnnot{text field}%
4063     \bitsetReset{HyField@Ff}%
4064     \HyField@UseFlag{Ff}{ReadOnly}%
4065     \HyField@UseFlag{Ff}{Required}%
4066     \HyField@UseFlag{Ff}{NoExport}%
4067     \HyField@UseFlag{Ff}{Multiline}%
4068     \HyField@UseFlag{Ff}{Password}%
4069     \HyField@UseFlag{Ff}{FileSelect}%
4070     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4071     \HyField@UseFlag{Ff}{DoNotScroll}%

```

```

4072 \ifFld@comb
4073   \ifcase0\ifFld@multiline
4074       \else\ifFld@password
4075       \else\ifFld@fileselect
4076       \else 1\fi\fi\fi\relax
4077   \PackageError{hyperref}{%
4078     Field option 'comb' cannot used together with\MessageBreak
4079     'multiline', 'password', or 'fileselect'%
4080   }\@ehc
4081   \else
4082     \HyField@UseFlag{Ff}{Comb}%
4083   \fi
4084 \fi
4085 \HyField@UseFlag{Ff}{RichText}%
4086 \HyField@PrintFlags{Ff}{text field}%
4087 \bitsetIsEmpty{HyField@Ff}{%
4088   \def\Fld@flags{%
4089 }{%
4090   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4091 }%
4092 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4093 \def\HyField@FlagsChoice{%
4094   \HyField@FlagsAnnot{choice field}%
4095   \bitsetReset{HyField@Ff}%
4096   \HyField@UseFlag{Ff}{ReadOnly}%
4097   \HyField@UseFlag{Ff}{Required}%
4098   \HyField@UseFlag{Ff}{NoExport}%
4099   \HyField@UseFlag{Ff}{Combo}%
4100   \ifFld@combo
4101     \HyField@UseFlag{Ff}{Edit}%
4102   \fi
4103   \HyField@UseFlag{Ff}{Sort}%
4104   \HyField@UseFlag{Ff}{MultiSelect}%
4105   \ifFld@combo
4106     \ifFld@edit
4107       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4108     \fi
4109   \fi
4110   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4111   \HyField@PrintFlags{Ff}{choice field}%
4112   \bitsetIsEmpty{HyField@Ff}{%
4113     \def\Fld@flags{%
4114 }{%
4115   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4116 }%
4117 }

```

19.2 Choice field

4118 \RequirePackage{kvsetkeys}[2007/09/29]

\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.

```

4119 \def\HyField@PDFChoices#1{%
4120   \begingroup
4121     \gdef\Fld@choices{}%
4122     \def\HyTmp@optlist{}%
4123     \let\HyTmp@optitem\relax
4124     \count@=0 %
4125     \kv@parse{#1}{%
4126       \Hy@pdfstringdef\kv@key\kv@key
4127       \ifx\kv@value\relax
4128         \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4129           \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4130         \else
4131           \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4132         \fi
4133       \else
4134         \Hy@pdfstringdef\kv@value\kv@value
4135         \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
4136       \fi
4137     \edef\HyTmp@optlist{%
4138       \HyTmp@optlist
4139       \HyTmp@optitem{the\count@}{\kv@key}0%
4140     }%
4141     \advance\count@ by 1 %
4142     \@gobbletwo
4143   }%
4144   \xdef\Fld@choices{/Opt[\Fld@choices]}%
4145   \ifFld@multiselect
4146     \HyField@@PDFChoices{DV}\Fld@default
4147     \HyField@@PDFChoices{V}\Fld@value
4148   \else
4149     \ifx\Fld@default\relax
4150     \else
4151       \pdfstringdef\Hy@gtemp\Fld@default
4152       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4153     \fi
4154     \ifx\Fld@value\relax
4155     \else
4156       \pdfstringdef\Hy@gtemp\Fld@value
4157       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4158     \fi
4159   \fi
4160 \endgroup
4161 }

```

\HyField@@PDFChoices

```

4162 \def\HyField@@PDFChoices#1#2{%
4163   \ifx#2\relax
4164   \else
4165     \count@=0 %
4166     \def\HyTmp@optitem##1##2##3{%
4167       \def\HyTmp@key{##2}%
4168       \ifx\HyTmp@key\Hy@gtemp
4169         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4170           \HyTmp@optlist
4171           \HyTmp@optitem{##1}{##2}1%
4172         }%

```



```

4173     \let\HyTmp@found=Y%
4174   \else
4175     \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4176       \HyTmp@optlist
4177       \HyTmp@optitem{##1}{##2}##3%
4178     }%
4179   \fi
4180 }%
4181 \expandafter\comma@parse\expandafter{#2}{%
4182   \pdfstringdef\Hy@gtemp\comma@entry
4183   \let\HyTmp@found=N %
4184   \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4185   \HyTmp@optlist
4186   \ifx\HyTmp@found Y%
4187     \advance\count@ by 1 %
4188   \else
4189     \@onelevel@sanitize\comma@entry
4190     \PackageWarning{hyperref}{%
4191       \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4192       \MessageBreak
4193       it cannot be found in the choices%
4194     }%
4195   \fi
4196   \@gobble
4197 }%
4198 \def\HyTmp@optitem##1##2##3{%
4199   \ifnum##3=1 %
4200     (##2)%
4201   \fi
4202 }%
4203 \ifcase\count@
4204 \or
4205   \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4206 \else
4207   \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4208   \ifx#1V%
4209     \def\HyTmp@optitem##1##2##3{%
4210       \ifnum##3=1 %
4211         \@firstofone{ ##1}%
4212       \fi
4213     }%
4214     \edef\HyTmp@optlist{\HyTmp@optlist}%
4215     \xdef\Fld@choices{%
4216       \Fld@choices
4217       /I[\expandafter\@firstofone\HyTmp@optlist]%
4218     }%
4219   \fi
4220 \fi
4221 \fi
4222 }

```

19.3 Forms

\HyField@SetKeys

```

4223 \def\HyField@SetKeys{%
4224   \setkeys{Field}%
4225 }

```

```

4226 \newif\ifFld@checked
4227 \newif\ifFld@disabled
4228 \Fld@checkedfalse
4229 \Fld@disabledfalse
4230 \newcount\Fld@menulength
4231 \newdimen\Fld@Width
4232 \newdimen\Fld@charsize
4233 \Fld@charsize=10\p@
4234 \def\Fld@maxlen{0}
4235 \def\Fld@align{0}
4236 \def\Fld@color{0 0 0 rg}
4237 \def\Fld@bcolor{1 1 1}
4238 \def\Fld@bordercolor{1 0 0}
4239 \def\Fld@bordersep{1\p@}
4240 \def\Fld@borderwidth{1}
4241 \def\Fld@borderstyle{S}
4242 \def\Fld@cbsymbol{4}
4243 \def\Fld@radiosymbol{H}
4244 \def\Fld@rotation{0}
4245 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4246 \def\endForm{\@endForm}
4247 \newif\ifForm@html
4248 \Form@htmlfalse
4249 \def\Form@boolkey#1#2{%
4250   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4251 }
4252 \define@key{Form}{action}{%
4253   \hyper@normalise\Hy@DefFormAction{#1}%
4254 }
4255 \def\Hy@DefFormAction{\def\Form@action}
4256 \def\enc@html{html}
4257 \define@key{Form}{encoding}{%
4258   \def\Hy@tempa{#1}%
4259   \ifx\Hy@tempa\enc@html
4260     \Form@htmltrue
4261     \def\Fld@export{html}%
4262   \else
4263     \typeout{hyperref: form 'encoding' key set to #1 %
4264     -- unknown type%
4265   }%
4266   \Form@htmlfalse
4267   \fi
4268 }
4269 \define@key{Form}{method}{%
4270   \lowercase{\def\Hy@temp{#1}}%
4271   \@ifundefined{Form@method@Hy@temp}{%
4272     \onelevel@sanitize\Hy@temp
4273     \PackageError{hyperref}{%
4274       Unknown method '\Hy@temp'.\MessageBreak
4275       Known values are 'post' and 'get'%
4276     }\@ehc
4277   }{%
4278     \let\Form@method\Hy@temp
4279     \ifcase\@nameuse{Form@method@Hy@temp} %
4280       \Fld@getmethodfalse
4281     \else
4282       \Fld@getmethodtrue

```

```

4283     \fi
4284   }%
4285 }
4286 \def\Form@method{}
4287 \@namedef{Form@method@post}{0}
4288 \@namedef{Form@method@get}{1}
4289 \def\Field@boolkey#1#2{%
4290   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4291 }
4292 \newtoks\Field@toks
4293 \Field@toks={ }%
4294 \def\Field@addtoks#1#2{%
4295   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4296   \@processme
4297 }
4298 \def\Fld@checkequals#1=#2=#3\{%
4299   \def\@currDisplay{#1}%
4300   \ifx\#2\%
4301     \def\@currValue{#1}%
4302   \else
4303     \def\@currValue{#2}%
4304   \fi
4305 }
4306 \define@key{Field}{loc}{%
4307   \def\Fld@loc{#1}%
4308 }
4309 \define@key{Field}{checked}[true]{%
4310   \lowercase{\Field@boolkey{#1}}{checked}%
4311 }
4312 \define@key{Field}{disabled}[true]{%
4313   \lowercase{\Field@boolkey{#1}}{disabled}%
4314 }
4315 \define@key{Field}{accesskey}{%
4316   \Field@addtoks{accesskey}{#1}%
4317 }
4318 \define@key{Field}{tabkey}{%
4319   \Field@addtoks{tabkey}{#1}%
4320 }
4321 \define@key{Field}{name}{%
4322   \def\Fld@name{#1}%
4323 }
4324 \define@key{Field}{width}{%
4325   \def\Fld@width{#1}%
4326   \Field@Width#1\setbox0=\hbox{m}%
4327 }
4328 \define@key{Field}{maxlen}{%
4329   \def\Fld@maxlen{#1}%
4330 }
4331 \define@key{Field}{menulength}{%
4332   \Fld@menulength=#1\relax
4333 }
4334 \define@key{Field}{height}{%
4335   \def\Fld@height{#1}%
4336 }
4337 \define@key{Field}{charsize}{%
4338   \Fld@charsize#1%
4339 }

```

```

4340 \define@key{Field}{borderwidth}{%
4341   \def\Fld@borderwidth{#1}%
4342 }
4343 \define@key{Field}{borderstyle}{%
4344   \def\Fld@borderstyle{#1}%
4345 }
4346 \define@key{Field}{bordersep}{%
4347   \def\Fld@bordersep{#1}%
4348 }
4349 \define@key{Field}{default}{%
4350   \def\Fld@default{#1}%
4351 }
4352 \define@key{Field}{align}{%
4353   \def\Fld@align{#1}%
4354 }
4355 \define@key{Field}{value}{%
4356   \def\Fld@value{#1}%
4357 }
4358 \define@key{Field}{checkboxsymbol}{%
4359   \Fld@DingDef\Fld@cbsymbol{#1}%
4360 }
4361 \define@key{Field}{radiosymbol}{%
4362   \Fld@DingDef\Fld@radiosymbol{#1}%
4363 }
4364 \def\Fld@DingDef#1#2{%
4365   \def\Fld@temp{%
4366     \Fld@@DingDef#2\ding{}\@nil
4367     \let#1\Fld@temp
4368 }
4369 \def\Fld@@DingDef#1\ding#2#3\@nil{%
4370   \expandafter\def\expandafter\Fld@temp\expandafter{%
4371     \Fld@temp
4372     #1%
4373   }%
4374   \ifx\#3\%
4375     \expandafter\@gobble
4376   \else
4377     \begingroup
4378     \lccode'0=#2\relax
4379     \lowercase{\endgroup
4380     \expandafter\def\expandafter\Fld@temp\expandafter{%
4381       \Fld@temp
4382       0%
4383     }%
4384   }%
4385   \expandafter\@firstofone
4386 \fi
4387 {%
4388   \Fld@@DingDef#3\@nil
4389 }%
4390 }

4391 \define@key{Field}{rotation}{%
4392   \def\Fld@rotation{#1}%
4393 }

4394 \define@key{Field}{backgroundcolor}{%
4395   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4396 }

```

```

4397 \define@key{Field}{bordercolor}{%
4398   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4399 }
4400 \define@key{Field}{color}{%
4401   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4402 }

4403 \def\Fld@onclick@code{}
4404 \def\Fld@format@code{}
4405 \def\Fld@validate@code{}
4406 \def\Fld@calculate@code{}
4407 \def\Fld@keystroke@code{}
4408 \def\Fld@onfocus@code{}
4409 \def\Fld@onblur@code{}
4410 \def\Fld@onmousedown@code{}
4411 \def\Fld@onmouseup@code{}
4412 \def\Fld@onenter@code{}
4413 \def\Fld@onexit@code{}
4414 \def\Hy@temp#1{%
4415   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4416 }
4417 \def\Hy@@temp#1#2{%
4418   \ifHy@pdfa
4419     \define@key{Field}{#2}{%
4420       \PackageError{hyperref}{%
4421         PDF/A: Additional action ‘#2’ is prohibited%
4422       }\@ehc
4423     }%
4424   \else
4425     \define@key{Field}{#2}{%
4426       \def#1{##1}%
4427     }%
4428   \fi
4429 }
4430 \Hy@temp{keystroke}
4431 \Hy@temp{format}
4432 \Hy@temp{validate}
4433 \Hy@temp{calculate}
4434 \Hy@temp{onfocus}
4435 \Hy@temp{onblur}
4436 \Hy@temp{onenter}
4437 \Hy@temp{onexit}
4438 \def\Hy@temp#1{%
4439   \define@key{Field}{#1}{%
4440     \Field@addtoks{#1}{##1}%
4441   }%
4442 }
4443 \Hy@temp{onselect}
4444 \Hy@temp{onchange}
4445 \Hy@temp{ondblclick}
4446 \Hy@temp{onmousedown}
4447 \Hy@temp{onmouseup}
4448 \Hy@temp{onmouseover}
4449 \Hy@temp{onmousemove}
4450 \Hy@temp{onmouseout}
4451 \Hy@temp{onkeypress}
4452 \Hy@temp{onkeydown}
4453 \Hy@temp{onkeyup}

```

```

4454 \ifHy@pdfa
4455   \define@key{Field}{onclick}{%
4456     \PackageError{hyperref}{%
4457       PDF/A: Action 'onclick' is prohibited%
4458     }\@ehc
4459   }%
4460 \else
4461   \define@key{Field}{onclick}{%
4462     \def\Fld@onclick@code{#1}%
4463     \Field@addtoks{onclick}{#1}%
4464   }%
4465 \fi

4466 \DeclareRobustCommand\TextField{%
4467   \@ifnextchar[{\@TextField}{\@TextField[]}%
4468 }
4469 \DeclareRobustCommand\ChoiceMenu{%
4470   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4471 }
4472 \DeclareRobustCommand\CheckBox{%
4473   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4474 }
4475 \DeclareRobustCommand\PushButton{%
4476   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4477 }
4478 \DeclareRobustCommand\Gauge{%
4479   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4480 }
4481 \DeclareRobustCommand\Submit{%
4482   \@ifnextchar[{\@Submit}{\@Submit[]}%
4483 }
4484 \DeclareRobustCommand\Reset{%
4485   \@ifnextchar[{\@Reset}{\@Reset[]}%
4486 }
4487 \def\LayoutTextField#1#2{% label, field
4488   #1 #2%
4489 }
4490 \def\LayoutChoiceField#1#2{% label, field
4491   #1 #2%
4492 }
4493 \def\LayoutCheckField#1#2{% label, field
4494   #1 #2%
4495 }
4496 \def\LayoutPushButtonField#1{% button
4497   #1%
4498 }
4499 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4500 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4501 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4502 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4503 \def\MakeButtonField#1{%
4504   \sbox0{%
4505     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4506   }%
4507   \@tempdima\ht0 %
4508   \advance\@tempdima by \Fld@borderwidth bp %
4509   \advance\@tempdima by \Fld@borderwidth bp %
4510   \ht0\@tempdima

```

```

4511 \@tempdima\dp0 %
4512 \advance\@tempdima by \Fld@borderwidth bp %
4513 \advance\@tempdima by \Fld@borderwidth bp %
4514 \dp0\@tempdima
4515 \box0\relax
4516 }
4517 \def\DefaultHeightofSubmit{14pt}
4518 \def\DefaultWidthofSubmit{2cm}
4519 \def\DefaultHeightofReset{14pt}
4520 \def\DefaultWidthofReset{2cm}
4521 \def\DefaultHeightofCheckBox{\baselineskip}
4522 \def\DefaultWidthofCheckBox{\baselineskip}
4523 \def\DefaultHeightofChoiceMenu{\baselineskip}
4524 \def\DefaultWidthofChoiceMenu{\baselineskip}
4525 \def\DefaultHeightofText{\baselineskip}
4526 \def\DefaultHeightofTextMultiline{4\baselineskip}
4527 \def\DefaultWidthofText{3cm}
4528 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4529 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4530 \def\DefaultOptionsofPushButton{print}
4531 \def\DefaultOptionsofCheckBox{print}
4532 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4533 \def\DefaultOptionsofListBox{print}
4534 \def\DefaultOptionsofComboBox{print,edit,sort}
4535 \def\DefaultOptionsofPopdownBox{print}
4536 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4537 \ifHy@figures
4538 \Hy@Info{Hyper figures ON}%
4539 \else
4540 \Hy@Info{Hyper figures OFF}%
4541 \fi
4542 \ifHy@nesting
4543 \Hy@Info{Link nesting ON}%
4544 \else
4545 \Hy@Info{Link nesting OFF}%
4546 \fi
4547 \ifHy@hyperindex
4548 \Hy@Info{Hyper index ON}%
4549 \else
4550 \Hy@Info{Hyper index OFF}%
4551 \fi
4552 \ifHy@backref
4553 \Hy@Info{backreferencing ON}%
4554 \else
4555 \Hy@Info{backreferencing OFF}%
4556 \fi
4557 \ifHy@colorlinks
4558 \Hy@Info{Link coloring ON}%
4559 \else
4560 \Hy@Info{Link coloring OFF}%
4561 \fi
4562 \ifHy@ocgcolorlinks

```

```

4563 \Hy@Info{Link coloring with OCG ON}%
4564 \else
4565 \Hy@Info{Link coloring with OCG OFF}%
4566 \fi
4567 \ifHy@pdfa
4568 \Hy@Info{PDF/A mode ON}%
4569 \else
4570 \Hy@Info{PDF/A mode OFF}%
4571 \fi

```

21 Low-level utility macros

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

```

4572 \edef\hyper@hash{\string#}
4573 \edef\hyper@tilde{\string~}
4574 \edef\hyper@quote{\string"}
4575 \let\@currentHref\@empty
4576 \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.

```

4577 \AfterBeginDocument{%
4578   \Hy@pdfstringtrue
4579   \PDF@SetupDoc
4580   \let\PDF@SetupDoc\@empty
4581   \Hy@DisableOption{pdfpagescrop}%
4582   \Hy@DisableOption{pdfpagemode}%
4583   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4584   \Hy@DisableOption{pdfdirection}%
4585   \Hy@DisableOption{pdfviewarea}%
4586   \Hy@DisableOption{pdfviewclip}%
4587   \Hy@DisableOption{pdfprintarea}%
4588   \Hy@DisableOption{pdfprintclip}%
4589   \Hy@DisableOption{pdfprintscaling}%
4590   \Hy@DisableOption{pdfduplex}%
4591   \Hy@DisableOption{pdfpicktraybypdfsize}%
4592   \Hy@DisableOption{pdfprintpagerange}%
4593   \Hy@DisableOption{pdfnumcopies}%
4594   \Hy@DisableOption{pdfstartview}%
4595   \Hy@DisableOption{pdfstartpage}%
4596   \Hy@DisableOption{pdftoolbar}%
4597   \Hy@DisableOption{pdfmenubar}%
4598   \Hy@DisableOption{pdfwindowui}%
4599   \Hy@DisableOption{pdf-fit-window}%
4600   \Hy@DisableOption{pdf-center-window}%
4601   \Hy@DisableOption{pdfdisplaydoctitle}%
4602   \Hy@DisableOption{pdfpagelayout}%
4603   \Hy@DisableOption{pdflang}%
4604   \Hy@DisableOption{baseurl}%
4605   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4606   \Hy@pdfstringfalse
4607 }

```

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 func-

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

```

4608 \def\NoHyper{%
4609   \def\hyper@link@{##1}##2##3##4{##4}%
4610   \def\hyper@@anchor##1{%
4611     \global\let\hyper@livelink\hyper@link
4612     \gdef\hyper@link##1##2##3{##3}%
4613     \def\hyper@anchorstart##1{%
4614       \let\hyper@anchorend\@empty
4615       \def\hyper@linkstart##1##2{%
4616         \let\hyper@linkend\@empty
4617         \def\hyper@linkurl##1##2{##1}%
4618         \def\hyper@linkfile##1##2##3{##1}%
4619         \def\hyper@link@{##1}##2##3{%
4620           \let\Hy@backout\@gobble
4621         }
4622       \def\stop@hyper{%
4623         \def\hyper@link@{##1}##2##3##4{##4}%
4624         \let\Hy@backout\@gobble
4625         \def\hyper@@anchor##1{%
4626           \def\hyper@link##1##2##3{##3}%
4627           \def\hyper@anchorstart##1{%
4628             \let\hyper@anchorend\@empty
4629             \def\hyper@linkstart##1##2{%
4630               \let\hyper@linkend\@empty
4631               \def\hyper@linkurl##1##2{##1}%
4632               \def\hyper@linkfile##1##2##3{##1}%
4633               \def\hyper@link@{##1}##2##3{%
4634             }
4635             \def\endNoHyper{%
4636               \global\let\hyper@link\hyper@livelink
4637             }
4638           }
4639         }
4640       }
4641     }
4642   }
4643 }
4644 \end{package}

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

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

Some low-level commands:

```

4639 \def\*nohyperref{
4640   \let\hyper@@anchor\@gobble
4641   \def\hyper@link##1##2##3{##3}%
4642   \let\hyper@anchorstart\@gobble
4643   \let\hyper@anchorend\@empty
4644   \let\hyper@linkstart\@gobbletwo
4645   \let\hyper@linkend\@empty
4646   \def\hyper@linkurl##1##2{##1}%
4647   \def\hyper@linkfile##1##2##3{##1}%
4648   \def\hyper@link@{##1}##2##3{%
4649     \let\PDF@SetupDoc\@empty
4650     \let\PDF@FinishDoc\@empty
4651     \def\nohyperpage##1{##1}

```

Some top-level commands:

```

4652 \def\Acrobatmenu#1#2{\leavevmode#2}
4653 \let\pdfstringdefDisableCommands@gobbletwo
4654 \let\texorpdfstring@firstoftwo
4655 \let\pdfbookmark@undefined
4656 \newcommand\pdfbookmark[3][]{\{}
4657 \let\phantomsection\@empty
4658 \let\hypersetup@gobble
4659 \let\hyperbaseurl@gobble
4660 \let\href@gobble
4661 \let\hyperdef@gobbletwo
4662 \let\hyperlink@gobble
4663 \let\hypertarget@gobble
4664 \def\hyperref{%
4665   \@ifnextchar[\@gobbleopt{\expandafter@gobbletwo@gobble}%
4666 }
4667 \long\def@gobbleopt[#1]{\{}
4668 \let\hyperpage\@empty
4669 \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}`

```

4670 \*package
4671 \AfterBeginDocument{%

```

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.

```

4672 \if@filesw
4673   \ifHy@typexml
4674     \immediate\closeout\@mainaux
4675     \immediate\openout\@mainaux\jobname.aux\relax
4676     \immediate\write\@auxout{<relaxxml>\relax}%
4677   \fi
4678   \immediate\write\@auxout{%
4679     \string\ifx\string\hyper@anchor\string\@undefined^^J%
4680     \global\let\string\oldcontentsline\string\contentsline^^J%
4681     \gdef\string\contentsline%
4682       \string#1\string#2\string#3\string#4{%
4683       \string\oldcontentsline%
4684       {\string#1}{\string#2}{\string#3}}^^J%
4685     \global\let\string\oldnewlabel\string\newlabel^^J%
4686     \gdef\string\newlabel\string#1\string#2{%
4687       \string\newlabelxx{\string#1}\string#2}^^J%
4688     \gdef\string\newlabelxx%
4689       \string#1\string#2\string#3\string#4\string#5\string#6{%
4690       \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.

```

4691   \string\AtEndDocument{%
4692     \let\string\contentsline\string\oldcontentsline^^J%
4693     \let\string\newlabel\string\oldnewlabel^^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.

```

4694     \string\else^^J%
4695     \global\let\string\hyper@last\relax^^J%
4696     \string\fi^^J%
4697   }%
4698 \fi

```

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.

```

4699 \ifx\hyper@last\@undefined
4700   \def\@starttoc#1{%
4701     \begingroup
4702       \makeatletter
4703       \IfFileExists{\jobname.#1}{%
4704         \Hy@WarningNoLine{%
4705           old #1 file detected, not used; run LaTeX again%
4706         }%
4707       }{%
4708         \if@filesw
4709           \expandafter\newwrite\csname tf@#1\endcsname
4710           \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4711         \fi
4712         \@nobreakfalse
4713       \endgroup
4714     }%
4715     \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
4716 \fi
4717 }

```

25 Title strings

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

```

4718 \ifHy@usetitle
4719   \let\HyOrg@title\title
4720   \let\HyOrg@author\author
4721   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4722   \def\Hy@scanopttitle[#1]{%
4723     \gdef\Hy@title{#1}%
4724     \HyOrg@title[{#1}]%
4725   }%
4726   \def\Hy@scantitle#1{%
4727     \gdef\Hy@title{#1}%
4728     \HyOrg@title{#1}%
4729   }%
4730   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
4731   \def\Hy@scanoptauthor[#1]{%
4732     \gdef\Hy@author{#1}%
4733     \HyOrg@author[{#1}]%
4734   }%
4735   \def\Hy@scanauthor#1{%
4736     \gdef\Hy@author{#1}%

```

```

4737 \HyOrg@author{#1}%
4738 }%

```

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

```

4739 \begingroup
4740 \def\process@me#1\@nil#2{%
4741 \expandafter\let\expandafter\x\csname @#2\endcsname
4742 \edef\y{\expandafter\strip@prefix\meaning\x}%
4743 \def\c##1##2\@nil{%
4744 \ifx\\##1\\%
4745 \else
4746 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4747 \expandafter{\x}%
4748 \fi
4749 }%
4750 \expandafter\c\y\relax#1\@nil
4751 }%
4752 \expandafter\process@me\string\@latex@\@nil{title}%
4753 \expandafter\process@me\string\@latex@\@nil{author}%
4754 \endgroup
4755 \fi
4756 \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.

```

4757 \def\Hy@UseMaketitleString#1{%
4758 \@ifundefined{Hy@#1}{}%
4759 \begingroup
4760 \let\Hy@saved@hook\pdfstringdefPreHook
4761 \pdfstringdefDisableCommands{%
4762 \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
4763 \let\newline\\%
4764 }%
4765 \expandafter\ifx\csname @pdf#1\endcsname\@empty
4766 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4767 \csname Hy@#1\endcsname\@empty
4768 }%
4769 \fi
4770 \global\let\pdfstringdefPreHook\Hy@saved@hook
4771 \endgroup
4772 }%
4773 }
4774 \def\Hy@newline@title#1{ #1}
4775 \def\Hy@newline@author#1{, #1}
4776 \def\Hy@UseMaketitleInfos{%
4777 \Hy@UseMaketitleString{title}%
4778 \Hy@UseMaketitleString{author}%
4779 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```
4780 \RequirePackage{atbegshi}[2007/09/09]
4781 \def\Hy@EveryPageHook{}
4782 \def\Hy@EveryPageBoxHook{}
4783 \def\Hy@FirstPageHook{}
4784 \AtBeginShipout{%
4785   \Hy@EveryPageHook
4786   \ifx\Hy@EveryPageBoxHook\@empty
4787   \else
4788     \setbox\AtBeginShipoutBox=\vbox{%
4789       \offinterlineskip
4790       \Hy@EveryPageBoxHook
4791       \box\AtBeginShipoutBox
4792     }%
4793   \fi
4794 }
4795 \AtBeginShipoutFirst{%
4796   \Hy@FirstPageHook
4797 }
4798 \g@addto@macro\Hy@FirstPageHook{%
4799   \PDF@FinishDoc
4800   \gdef\PDF@FinishDoc{}}%
4801 }
```

27.1 PDF /PageLabels

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

```
4802 \ifHy@pagelabels
4803   \begingroup\expandafter\expandafter\expandafter\endgroup
4804   \expandafter\ifx\csname thepage\endcsname\relax
4805     \Hy@pagelabelsfalse
4806     \Hy@WarningNoLine{%
4807       Option 'pdfpagelabels' is turned off\MessageBreak
4808       because \string\thepage\space is undefined%
4809     }%
4810     \csname fi\endcsname
4811     \csname iffalse\expandafter\endcsname
4812   \fi
```

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

```
4813 \def\thispdfpagelabel#1{%
4814   \gdef\HyPL@thisLabel{#1}%
4815 }%
4816 \global\let\HyPL@thisLabel\relax
```

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

```
4817 \def\HyPL@Labels{}
```

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

```
4818 \newcount\Hy@abspage
4819 \Hy@abspage=0 %
```

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

```
4820 \def\HyPL@LastType{init}%
4821 \def\HyPL@LastNumber{0}%
4822 \def\HyPL@LastPrefix{}
```

Definitions for the PDF names of the \LaTeX pendants.

```
4823 \def\HyPL@arabic{D}%
4824 \def\HyPL@Roman{R}%
4825 \def\HyPL@roman{r}%
4826 \def\HyPL@Alph{A}%
4827 \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.

```
4828 \def\HyPL@EveryPage{%
4829   \begingroup
4830   \ifx\HyPL@thisLabel\relax
4831     \let\HyPL@page\thepage
4832   \else
4833     \let\HyPL@page\HyPL@thisLabel
4834     \global\let\HyPL@thisLabel\relax
4835   \fi
4836   \let\HyPL@Type\relax
4837   \ifnum\the\c@page>0 %
4838     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4839   \fi
4840   \let\Hy@temp Y%
4841   \ifx\HyPL@Type\HyPL@LastType
4842   \else
4843     \let\Hy@temp N%
4844   \fi
4845   \ifx\HyPL@Type\relax
4846     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4847   \else
4848     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4849   \fi
4850   \ifx\HyPL@Prefix\HyPL@LastPrefix
4851   \else
4852     \let\Hy@temp N%
4853   \fi
4854   \if Y\Hy@temp
4855     \advance\c@page by -1 %
4856     \ifnum\HyPL@LastNumber=\the\c@page\relax
4857     \else
4858       \let\Hy@temp N%
4859     \fi
4860     \Hy@StepCount\c@page
4861   \fi
4862   \if N\Hy@temp
4863     \ifx\HyPL@Type\relax
4864       \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
4865     \else
4866       \HyPL@storePageLabel{%
4867         \ifx\HyPL@Prefix\@empty
4868         \else
4869           /P(\HyPL@Prefix)%
4870       \fi
```

```

4871         /S/\csname HyPL\HyPL@Type\endcsname
4872         \ifnum\the\c@page=1 %
4873         \else
4874         \space/St \the\c@page
4875         \fi
4876     }%
4877     \fi
4878 \fi
4879 \xdef\HyPL@LastNumber{\the\c@page}%
4880 \global\let\HyPL@LastType\HyPL@Type
4881 \global\let\HyPL@LastPrefix\HyPL@Prefix
4882 \endgroup
4883 \Hy@GlobalStepCount\Hy@abspage
4884 }%

```

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

```

4885 \def\HyPL@CheckThePage#1\@nil{%
4886     \HyPL@@CheckThePage{#1}\csname\endcsname\c@page\@nil
4887 }%

```

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

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

```

4888 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4889     \def\Hy@tempa{#4}%
4890     \def\Hy@tempb{\csname\endcsname\c@page}%
4891     \ifx\Hy@tempa\Hy@tempb
4892         \expandafter\ifx\csname HyPL#3\endcsname\relax
4893         \else
4894             \def\HyPL@Type{#3}%
4895             \def\HyPL@Prefix{#2}%
4896         \fi
4897     \else
4898         \begingroup
4899             \let\Hy@next\endgroup
4900             \let\HyPL@found\@undefined
4901             \def\arabic{\HyPL@Format{arabic}}%
4902             \def\Roman{\HyPL@Format{Roman}}%
4903             \def\roman{\HyPL@Format{roman}}%
4904             \def\Alph{\HyPL@Format{Alph}}%
4905             \def\alph{\HyPL@Format{alph}}%
4906             \protected@edef\Hy@temp{#1}%
4907             \ifx\HyPL@found\relax
4908                 \toks@{\expandafter{\Hy@temp}}%
4909             \edef\Hy@next{\endgroup
4910                 \noexpand\HyPL@@@CheckThePage\the\toks@
4911                 \noexpand\HyPL@found\relax\noexpand\@nil
4912             }%
4913             \fi
4914             \Hy@next
4915         \fi
4916     }%

```

`\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`.

```

4917 \def\HyPL@Format#1#2{%
4918   \ifx\HyPL@found\undefined
4919     \expandafter\ifx\csname c@#2\endcsname\c@page
4920       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4921     \else
4922       \expandafter\noexpand\csname#1\endcsname{#2}%
4923     \fi
4924   \else
4925     \expandafter\noexpand\csname#1\endcsname{#2}%
4926   \fi
4927 }%

```

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

```

4928 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4929   \def\Hy@tempa{#3}%
4930   \def\Hy@tempb{\HyPL@found\relax}%
4931   \ifx\Hy@tempa\Hy@tempb
4932     \def\HyPL@Type{#2}%
4933     \def\HyPL@Prefix{#1}%
4934   \fi
4935 }%

```

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

```

4936 \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`.

```

4937 \def\HyPL@Useless{0<</S/D>>}%
4938 \@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.

```

4939 \def\HyPL@SetPageLabels{%
4940   \@onelevel@sanitize\HyPL@Labels
4941   \ifx\HyPL@Labels\@empty
4942   \else
4943     \ifx\HyPL@Labels\HyPL@Useless
4944     \else
4945       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4946     \fi
4947   \fi
4948 }%

```

```

4949 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4950 \fi

```

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

```

4951 \Hy@DisableOption{pdfpagelabels}
4952 </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

```
4953 \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.

```
4954 \*vTeX)
4955 \providecommand*\XR@ext}{pdf}
4956 \edef\Hy@VTeXversion{%
4957   \ifx\VTeXversion\@undefined
4958     \z@
4959   \else
4960     \ifx\VTeXversion\relax
4961       \z@
4962     \else
4963       \VTeXversion
4964     \fi
4965   \fi
4966 }
4967 \begingroup
4968   \ifnum\Hy@VTeXversion<660 %
4969     \gdef\Hy@PutCatalog#1{%
4970       \Hy@WarningNoLine{%
4971         VTeX 6.59g or above required for pdfpagelabels%
4972       }%
4973     }%
4974   \else
4975     \gdef\Hy@PutCatalog#1{%
4976       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4977     }%
4978     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
4979       \ifx\#2\%
4980         \else
4981           \immediate\special{!pdfpagelabels #2}%
4982         \fi
4983       }%
4984     \fi
4985 \endgroup
4986 \pdfTeX | vTeX)
4987 \pdfTeX | vTeX)
```

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

```
4988 \ifHy@pagelabels
4989   \def\HyPL@StorePageLabel#1{%
4990     \toks@ \expandafter{\HyPL@Labels}%
4991     \xdef\HyPL@Labels{%
4992       \the\toks@
4993       \the\Hy@abspage<<#1>>%
4994     }%
4995   }%
```

At the end of the document, \clearpage tries to make sure, that no further pages will follow. Then the PDF catalog entry for \PageLabels is set.

```
4996 \@ifclassloaded{revtex4}{%
4997   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
```

```

4998 }{%
4999 \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
5000 }%

5001 \fi
5002 </pdfTeX | vTeX>

```

27.1.2 pdfmarkbase, dvipdfm

```

5003 <*pdfmarkbase>
5004 \begingroup
5005 \toks@{\expandafter{\Hy@FirstPageHook}}%
5006 \xdef\Hy@FirstPageHook{%
5007   \noexpand\headerps@out{%
5008     systemdict /pdfmark known%
5009     {%
5010       userdict /?pdfmark systemdict /exec get put%
5011     }{%
5012       userdict /?pdfmark systemdict /pop get put %
5013       userdict /pdfmark systemdict /cleartomark get put%
5014     }%
5015     ifelse%
5016   }%
5017   \the\toks@
5018 }%
5019 \endgroup
5020 </pdfmarkbase>

\Hy@PutCatalog

5021 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
5022 <*pdfmarkbase>
5023 \def\Hy@PutCatalog#1{%
5024   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5025 }
5026 </pdfmarkbase>

5027 <*pdfmarkbase | dvipdfm>
5028 \ifHy@pagelabels

```

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

```

5029 \def\HyPL@StorePageLabel#1{%
5030   \if@filesw
5031     \begingroup
5032       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5033       \immediate\write\@mainaux{%
5034         \string\HyPL@Entry{\Hy@tempa}%
5035       }%
5036     \endgroup
5037   \fi
5038 }%

```

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.

```

5039 \AfterBeginDocument{%
5040   \if@filesw
5041     \immediate\write\@mainaux{%
5042       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5043     }%

```

```

5044 \fi
5045 \ifx\HyPL@Labels\@empty
5046 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5047 \else
5048 \HyPL@SetPageLabels
5049 \fi
5050 \let\HyPL@Entry\@gobble
5051 }%

\HyPL@Entry

5052 \def\HyPL@Entry#1{%
5053 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5054 \HyPL@Labels
5055 #1%
5056 }%
5057 }%

5058 \fi
5059 </pdfmarkbase | dvipdfm>

5060 <*package>

5061 \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

```

5062 \def\Hy@CounterExists#1{%
5063 \begingroup\expandafter\expandafter\expandafter\endgroup
5064 \expandafter\ifx\csname c@#1\endcsname\relax
5065 \expandafter\@gobble
5066 \else
5067 \begingroup\expandafter\expandafter\expandafter\endgroup
5068 \expandafter\ifx\csname the#1\endcsname\relax
5069 \expandafter\expandafter\expandafter\@gobble
5070 \else
5071 \expandafter\expandafter\expandafter\@firstofone
5072 \fi
5073 \fi
5074 }
5075 \Hy@CounterExists{section}{%

```

```

5076 \newcommand\theHequation{\theHsection.\arabic{equation}}%
5077 }
5078 \Hy@CounterExists{part}{%
5079 \newcommand\theHpart{\arabic{part}}%
5080 }
5081 \@ifundefined{thechapter}{%
5082 \newcommand\theHsection {\arabic{section}}%
5083 \newcommand\theHfigure {\arabic{figure}}%
5084 \newcommand\theHtable {\arabic{table}}%
5085 }{%
5086 \newcommand\theHchapter {\arabic{chapter}}%
5087 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
5088 \newcommand\theHtable {\theHchapter.\arabic{table}}%
5089 \newcommand\theHsection {\theHchapter.\arabic{section}}%
5090 }
5091 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5092 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5093 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5094 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5095 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5096 \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.

```

5097 \let\H@item\item
5098 \newcounter{Item}
5099 \def\theHItem{\arabic{Item}}
5100 \def\item{%
5101 \@hyper@itemfalse
5102 \if@nmbrlist\@hyper@itemtrue\fi
5103 \H@item
5104 }
5105 \newcommand\theHenumi {\theHItem}
5106 \newcommand\theHenumii {\theHItem}
5107 \newcommand\theHenumiii {\theHItem}
5108 \newcommand\theHenumiv {\theHItem}
5109 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5110 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5111 \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.

```

5112 \let\H@refstepcounter\refstepcounter
5113 \edef\name@of@eq{equation}%
5114 \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.

```

5115 \newif\if@hyper@item
5116 \newif\if@skiphyperref
5117 \@hyper@itemfalse
5118 \@skiphyperreffalse
5119 \def\refstepcounter#1{%
5120 \ifHy@pdfstring
5121 \else

```

```

5122 \H@refstepcounter{#1}%
5123 \edef\This@name{#1}%
5124 \ifx\This@name\name@of@slide
5125 \else
5126 \if@skiphyperref
5127 \else
5128 \if@hyper@item
5129 \stepcounter{Item}%
5130 \hyper@refstepcounter{Item}%
5131 \@hyper@itemfalse
5132 \else
5133 \hyper@refstepcounter{#1}%
5134 \fi
5135 \fi
5136 \fi
5137 \fi
5138 }

```

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

```

5139 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5140 \def\hyper@refstepcounter#1{%
5141 \edef\This@name{#1}%
5142 \ifx\This@name\name@of@eq
5143 \@ifundefined{theHequation}{%
5144 \make@stripped@name{\theequation}%
5145 \let\theHequation\newname
5146 }{}%
5147 \fi
5148 \@ifundefined{theH#1}{%
5149 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5150 }{}%
5151 \hyper@makecurrent{#1}%
5152 \ifmeasuring@
5153 \else
5154 \Hy@raisedlink{%
5155 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5156 }%
5157 \fi
5158 }

```

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`.

```

5159 \begingroup\expandafter\expandafter\expandafter\endgroup
5160 \expandafter\ifx\csname chapter\endcsname\relax
5161 \def\Hy@chapterstring{section}%
5162 \else
5163 \def\Hy@chapterstring{chapter}%
5164 \fi
5165 \def\Hy@appendixstring{appendix}

```

```

5166 \def\Hy@chapapp{\Hy@chapterstring}
5167 \let\HyOrg@appendix\appendix
5168 \def\appendix{%
5169   \@ifundefined{chapter}%
5170     {\gdef\theHsection{\Alph{section}}}%
5171     {\gdef\theHchapter{\Alph{chapter}}}%
5172   \xdef\Hy@chapapp{\Hy@appendixstring}%
5173   \HyOrg@appendix
5174 }

```

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

```

5175 \def\hyper@makecurrent#1{%
5176   \begingroup
5177     \edef\Hy@param{#1}%
5178     \ifx\Hy@param\Hy@chapterstring
5179       \let\Hy@param\Hy@chapapp
5180     \fi
5181     \ifHy@hypertextnames
5182       \let\@number\@firstofone
5183       \@ifundefined{latin@Alph}{-}{%
5184         \ifx\@Alph\greek@Alph
5185           \def\@Alph{Alph\@arabic}%
5186         \fi
5187       }%
5188       \ifx\@Alph\@Alph@bul
5189         \def\@Alph{Alph\@arabic}%
5190       \fi
5191       \ifx\@alph\@alph@bul
5192         \def\@alph{alph\@arabic}%
5193       \fi
5194       \ifHy@naturalnames
5195         \let\textlatin\@firstofone
5196         \xdef\@currentHlabel{\csname the#1\endcsname}%
5197       \else
5198         \xdef\@currentHlabel{%
5199           \csname
5200             the%
5201             \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5202             #1%
5203           \endcsname
5204         }%
5205       \fi
5206       \xdef\@currentHref{%
5207         \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5208       }%
5209       \else
5210         \Hy@GlobalStepCount\Hy@linkcounter
5211         \xdef\@currentHref{\Hy@param.the\Hy@linkcounter}%
5212       \fi
5213     \endgroup
5214 }

5215 \@ifpackageloaded{fancyvrb}{%
5216   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
5217     \def\FV@StepLineNo{%
5218       \FV@SetLineNo
5219       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%

```

```

5220      \FV@StepLineNo
5221    }%
5222  }%
5223 }{}

```

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`

```

5224 \AtBeginDocument{%
5225   \@ifclassloaded{revtex4}{%
5226     \@namedef{ver@lastpage.sty}{1994/06/25}%
5227   }{}%
5228   \@ifpackageloaded{lastpage}{%
5229     \ifHy@pageanchor
5230     \else
5231       \Hy@WarningNoLine{%
5232         The \string\pageref{LastPage} link doesn't work\MessageBreak
5233         with disabled option 'pageanchor'%
5234       }%
5235     \fi
5236     \def\lastpage@putlabel{%
5237       \addtocounter{page}{-1}%
5238       \if@filesw
5239         \begingroup
5240           \let\@number\@firstofone
5241           \ifHy@pageanchor
5242             \ifHy@hypertexnames
5243               \ifHy@plainpages
5244                 \def\Hy@temp{\arabic{page}}%
5245               \else
5246                 \Hy@unicodedefalse
5247                 \pdfstringdef\Hy@temp{\thepage}%
5248               \fi
5249             \else
5250               \def\Hy@temp{\the\Hy@pagecounter}%
5251             \fi
5252           \fi
5253           \immediate\write\@auxout{%
5254             \string\newlabel
5255             {LastPage}{}{\thepage}{}{%
5256               \ifHy@pageanchor page.\Hy@temp\fi}{}%
5257             }%
5258           \endgroup
5259         \fi
5260       \addtocounter{page}{1}%
5261     }%
5262     \@ifclassloaded{revtex4}{%
5263       \begingroup
5264         \toks@{\expandafter{\lastpage@putlabel}}%

```

```

5265         \edef\x{\endgroup
5266             \def\noexpand\lastpage@putlabel{%
5267                 \noexpand\stepcounter{page}%
5268                 \the\toks@
5269                 \noexpand\addtocounter{page}\noexpand\m@ne
5270             }%
5271         }%
5272     \x
5273 }{}%
5274 }{}%
5275 }
5276 </package>
5277 <*check>
5278 \checkpackage{lastpage}[1994/06/25]
5279 \checkcommand\def\lastpage@putlabel{%
5280     \addtocounter{page}{-1}%
5281     \immediate\write\@auxout{%
5282         \string\newlabel{LastPage}{\the\thepage}}%
5283     }%
5284     \addtocounter{page}{1}%
5285 }
5286 </check>
5287 <*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.

```

5288 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
5289 \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:

```

5290 \@ifpackageloaded{titlesec}{%
5291     \def\ttl@Hy@steplink#1{%
5292         \Hy@GlobalStepCount\Hy@linkcounter
5293         \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5294         \def\ttl@Hy@saveanchor{%
5295             \Hy@raisedlink{%
5296                 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5297             }%
5298         }%
5299     }%
5300     \def\ttl@Hy@refstepcounter#1{%
5301         \let\ttl@b\Hy@raisedlink
5302         \def\Hy@raisedlink##1{%
5303             \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5304         }%
5305         \refstepcounter{#1}%
5306         \let\Hy@raisedlink\ttl@b
5307     }%
5308 }{}

```


Package titletoc support:

```
5309 \@ifpackageloaded{titletoc}{%
5310   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5311 }{}
```

32 Package varioref support

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

```
5312 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
5313 \@ifpackageloaded{varioref}{%
5314   \def\vref@pagenum#1#2{%
5315     \ifundefined{r@#2}{%
5316       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5317     }{}%
5318     \edef#1{\getpagerefnumber{#2}}%
5319   }%
5320 }
```

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

```
5321 \@ifpackageloaded{longtable}{%
5322   \begingroup
5323     \def\y{\LT@array}%
5324     \ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%
5325     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5326       \expandafter\endgroup
5327       \expandafter\def\y[#1]##2{%
5328         \H@refstepcounter{#1}%
5329         \hyper@makecurrent{table}%
5330         \let\Hy@LT@currentHlabel\@currentHlabel
5331         \let\Hy@LT@currentHref\@currentHref
5332         #2\@sharp####4%
5333       }%
5334     }%
5335     \expandafter\expandafter\expandafter\x\y[#1]{#2}\@nil
```

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

```
5336   \begingroup
5337     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5338     \endgroup
5339     \def\LT@start{%
5340       #1%
5341       \let\@currentHlabel\Hy@LT@currentHlabel
5342       \let\@currentHref\Hy@LT@currentHref
5343       \Hy@raisedlink{%
5344         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5345       }%
5346       \ifvoid\LT@firsthead\copy
```

```

5347      #2%
5348    }%
5349  }%
5350  \expandafter\x\LT@start\@nil
5351 }{}

```

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.

```

5352 \let\new@refstepcounter\refstepcounter
5353 \let\H@equation\equation
5354 \let\H@endequation\endequation

5355 \@ifpackageloaded{amsmath}{%
5356   \long\def\Hy@temp{%
5357     \incr@eqnum
5358     \mathdisplay@push
5359     \st@rredfalse \global\@eqnswtrue
5360     \mathdisplay{equation}%
5361   }%
5362   \ifx\Hy@temp\equation
5363     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5364       \csname iftrue\endcsname
5365   \else
5366     \long\def\equation{%
5367       \mathdisplay@push
5368       \st@rredfalse \global\@eqnswtrue
5369       \mathdisplay{equation}%
5370       \incr@eqnum
5371     }%
5372   \fi
5373 \fi
5374 }{%
5375 \def\equation{%
5376   \let\refstepcounter\H@refstepcounter
5377   \H@equation
5378   \@ifundefined{theHequation}{%
5379     \make@stripped@name{\theequation}%
5380     \let\theHequation\newname
5381   }{}%
5382   \hyper@makecurrent{equation}%
5383   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5384   \let\refstepcounter\new@refstepcounter
5385 }%
5386 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5387 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

5388 \newif\if@eqnstar
5389 \@eqnstarfalse
5390 \let\H@eqnarray\eqnarray
5391 \let\H@endeqnarray\endeqnarray
5392 \def\eqnarray{%
5393   \let\Hy@reserved@a\relax
5394   \def\@currentHref{}%
5395   \H@eqnarray
5396   \if@eqnstar
5397   \else
5398     \ifx\\ \@currentHref\\%
5399     \else
5400       \@ifundefined{theHequation}{%
5401         \make@stripped@name{\theequation}%
5402         \let\theHequation\newname
5403       }{}%
5404       \hyper@makecurrent{equation}%
5405       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5406     \fi
5407   \fi
5408 }
5409 \def\endeqnarray{%
5410   \H@endeqnarray
5411 }

```

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.

```

5412 \@namedef{eqnarray*}{%
5413   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
5414 }
5415 \@namedef{endeqnarray*}{%
5416   \nonumber\endeqnarray\@eqnstarfalse
5417 }

```

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

```

5418 \@ifundefined{subeqnarray}{%
5419   \let\H@subeqnarray\subeqnarray
5420   \let\H@endsubeqnarray\endsubeqnarray
5421   \def\subeqnarray{%
5422     \let\Hy@reserved@a\relax
5423     \H@subeqnarray
5424     \@ifundefined{theHequation}{%
5425       \make@stripped@name{\theequation}%
5426       \let\theHequation\newname
5427     }{}%
5428     \hyper@makecurrent{equation}%
5429     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5430   }%
5431   \def\endsubeqnarray{%
5432     \H@endsubeqnarray
5433   }%
5434   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5435 }

```

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

```

5436 \def\make@stripped@name#1{%
5437   \begingroup
5438     \escapechar\m@ne

```

```

5439 \global\let\newname\@empty
5440 \protected@edef\Hy@tempa{#1}%
5441 \edef\@tempb{%
5442   \noexpand\@tfor\noexpand\Hy@tempa:=%
5443   \expandafter\strip@prefix\meaning\Hy@tempa
5444 }%
5445 \@tempb\do{%
5446   \if\Hy@tempa\else
5447     \if}\Hy@tempa\else
5448       \xdef\newname{\newname\Hy@tempa}%
5449     \fi
5450   \fi
5451 }%
5452 \endgroup
5453 }

```

Support for amsmath's subequations:

```

5454 \begingroup\expandafter\expandafter\expandafter\endgroup
5455 \expandafter\ifx\csname subequations\endcsname\relax
5456 \else
5457   \let\HyOrg@subequations\subequations
5458   \def\subequations{%
5459     \stepcounter{equation}%
5460     \protected@edef\theHparentequation{%
5461       \ifundefined{theHequation}\theequation\theHequation
5462     }%
5463     \addtocounter{equation}{-1}%
5464     \HyOrg@subequations
5465     \def\theHequation{\theHparentequation\alph{equation}}%
5466     \ignorespaces
5467   }%
5468 \fi

```

Support for package amsthm (Daniel Müllner):

```

5469 \@ifpackageloaded{amsthm}{%
5470   \def\@thm#1#2#3{%
5471     \ifhmode
5472       \unskip\unskip\par
5473     \fi
5474     \normalfont
5475     \trivlist
5476     \let\thmheadnl\relax
5477     \let\thm@swap\@gobble
5478     \thm@notefont{\fontseries\mddefault\upshape}%
5479     \thm@headpunct{.}% add period after heading
5480     \thm@headsep 5\p@ plus\p@ minus\p@\relax
5481     \thm@space@setup
5482     #1% style overrides
5483     \@topsep \thm@preskip % used by thm head
5484     \@topsepadd \thm@postskip % used by \@endparenv
5485     \def\dth@counter{#2}%
5486     \ifx\@empty\dth@counter
5487       \def\@tempa{%
5488         \@oparg{\@begintheorem{#3}{}} []%
5489       }%
5490     \else
5491       \H@refstepcounter{#2}%
5492       \hyper@makecurrent{#2}%

```

```

5493     \def\@tempa{%
5494       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{[]}%
5495     }%
5496     \fi
5497     \@tempa
5498   }%
5499   \dth@everypar={%
5500     \@minipagefalse
5501     \global\@newlistfalse
5502     \@noparitemfalse
5503     \if@inlabel
5504       \global\@inlabelfalse
5505     \begingroup
5506       \setbox\z@\lastbox
5507       \ifvoid\z@
5508         \kern-\itemindent
5509       \fi
5510     \endgroup
5511     \ifx\@empty\dth@counter
5512     \else
5513       \Hy@raisedlink{%
5514         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5515       }%
5516     \fi
5517     \unhbox\@labels
5518   \fi
5519   \if@nobreak
5520     \@nobreakfalse \clubpenalty\@M
5521   \else
5522     \clubpenalty\@clubpenalty \everypar{}%
5523   \fi
5524 }%
5525 }{}

```

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.

```

5526 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5527 \ifHy@hyperfootnotes
5528   \newcounter{Hfootnote}%
5529   \let\H@@footnotetext\@footnotetext
5530   \let\H@@footnotemark\@footnotemark
5531   \def\@xfootnotenext[#1]{%
5532     \begingroup
5533       \csname c@\@mpfn\endcsname #1\relax
5534       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5535     \endgroup
5536     \ifx\@footnotetext\@mpfootnotetext
5537       \expandafter\H@@mpfootnotetext
5538     \else
5539       \expandafter\H@@footnotetext
5540     \fi

```

```

5541 }%
5542 \def\@footnotemark[#1]{%
5543   \begingroup
5544     \c@footnote #1\relax
5545     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5546   \endgroup
5547   \H@@footnotemark
5548 }%
5549 \let\H@@mpfootnotetext\@mpfootnotetext
5550 \long\def\@mpfootnotetext#1{%
5551   \H@@mpfootnotetext{%
5552     \ifHy@nesting
5553       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5554     \else
5555       \Hy@raisedlink{%
5556         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5557       }#1%
5558     \fi
5559   }%
5560 }%
5561 \long\def\@footnotetext#1{%
5562   \H@@footnotetext{%
5563     \ifHy@nesting
5564       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5565     \else
5566       \Hy@raisedlink{%
5567         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5568       }%
5569       \let\@currentHlabel\Hy@footnote@currentHlabel
5570       \let\@currentHref\Hy@footnote@currentHref
5571       \let\@currentlabelname\@empty
5572       #1%
5573     \fi
5574   }%
5575 }%

```

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.

```

5576 \def\@footnotemark{%
5577   \leavevmode
5578   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
5579   \stepcounter{Hfootnote}%
5580   \global\let\Hy@saved@currentHlabel\@currentHlabel
5581   \global\let\Hy@saved@currentHref\@currentHref
5582   \hyper@makecurrent{Hfootnote}%
5583   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5584   \global\let\Hy@footnote@currentHref\@currentHref
5585   \global\let\@currentHlabel\Hy@saved@currentHlabel
5586   \global\let\@currentHref\Hy@saved@currentHref
5587   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5588   \@makefnmark
5589   \hyper@linkend
5590   \ifhmode\spacefactor\@x@sf\fi
5591   \relax
5592 }%

```

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

```

5593 \ifpackageloaded{longtable}{%
5594   \CheckCommand*{\LT@p@ftntext}[1]{%
5595     \edef\@tempa{%
5596       \the\LT@p@ftn
5597       \noexpand\footnotetext[\the\c@footnote]%
5598     }%
5599     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5600   }%
5601   \long\def\LT@p@ftntext#1{%
5602     \edef\@tempa{%
5603       \the\LT@p@ftn
5604       \begingroup
5605         \noexpand\c@footnote=\the\c@footnote\relax
5606         \noexpand\protected@xdef
5607           \noexpand\@thefnmark{\noexpand\thempfn}%
5608         \noexpand\protected@xdef\noexpand\@thefnmark{%
5609           \noexpand\thempfn
5610         }%
5611         \expandafter\expandafter\expandafter\noexpand
5612         \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5613         \expandafter\expandafter\expandafter{%
5614           \expandafter\Hy@footnote@currentHref\expandafter
5615           }\expandafter{\Hy@footnote@currentHlabel}%
5616       }%
5617       \global\LT@p@ftn\expandafter{%
5618         \@tempa{#1}%
5619       }\endgroup
5620     }%
5621   }%
5622   \long\def\Hy@LT@footnotetext#1#2#3{%
5623     \H@@footnotetext{%
5624       \ifHy@nesting
5625         \hyper@@anchor{#1}{#3}%
5626       \else
5627         \Hy@raisedlink{%
5628           \hyper@@anchor{#1}{\relax}%
5629         }%
5630         \def\@currentHlabel{#2}%
5631         \def\@currentHref{#1}%
5632         \let\@currentlabelname\@empty
5633         #3%
5634       \fi
5635     }%
5636   }%
5637 }-%

```

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

```

5638 \ifpackageloaded{fancyvrb}{%
5639   \def\V@@footnotetext{%
5640     \insert\footins\bgroup
5641     \csname reset@font\endcsname
5642     \footnotesize
5643     \interlinepenalty\interfootnotelinepenalty

```

```

5644 \splittopskip\footnotesep
5645 \splitmaxdepth\dp\strutbox
5646 \floatingpenalty \@MM
5647 \hsize\columnwidth
5648 \@parboxrestore
5649 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5650 \@makefnmark}%
5651 \rule{\z@}{\footnotesep}%
5652 \bgroup
5653 \aftergroup\V@@@footnotetext
5654 \Hy@raisedlink{%
5655   \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5656 }%
5657 \let\@currentHlabel\Hy@footnote@currentHlabel
5658 \let\@currentHref\Hy@footnote@currentHref
5659 \let\@currentlabelname\@empty
5660 \ignorespaces
5661 }%
5662 }{}%

```

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.

```

5663 \let\HyOrg@maketitle\maketitle
5664 \def\maketitle{%
5665   \let\Hy@saved@footnotemark\@footnotemark
5666   \let\Hy@saved@footnotetext\@footnotetext
5667   \let\@footnotemark\H@@footnotemark
5668   \let\@footnotetext\H@@footnotetext
5669   \@ifnextchar[\Hy@maketitle@optarg{% ]
5670     \HyOrg@maketitle
5671     \Hy@maketitle@end
5672   }%
5673 }%
5674 \def\Hy@maketitle@optarg[#1]{%
5675   \HyOrg@maketitle[#{#1}]%
5676   \Hy@maketitle@end
5677 }%
5678 \def\Hy@maketitle@end{%
5679   \ifx\@footnotemark\H@@footnotemark
5680     \let\@footnotemark\Hy@saved@footnotemark
5681   \fi
5682   \ifx\@footnotetext\H@@footnotetext
5683     \let\@footnotetext\Hy@saved@footnotetext
5684   \fi
5685 }%

```

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

```

5686 \def\realfootnote{%
5687   \@ifnextchar[\@xfootnote{%
5688     \stepcounter{\@mpfn}%
5689     \protected@xdef\@thefnmark{\thempfn}%
5690     \H@@footnotemark\H@@footnotetext
5691   }%
5692 }%
5693 \fi
5694 \Hy@DisableOption{hyperfootnotes}

```



```

5695 </package>
5696 <*check>
5697 \checklatex
5698 \checkcommand\def\xfootnotenext[#1]{%
5699   \begingroup
5700     \csname c@\mpfn\endcsname #1\relax
5701     \unrestored@protected@xdef\thefnmark{\thempfn}%
5702   \endgroup
5703   \@footnotetext
5704 }
5705 \checkcommand\def\xfootnotemark[#1]{%
5706   \begingroup
5707     \c@footnote #1\relax
5708     \unrestored@protected@xdef\thefnmark{\thefootnote}%
5709   \endgroup
5710   \@footnotemark
5711 }
5712 \checkcommand\def\@footnotemark{%
5713   \leavevmode
5714   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5715   \@makefnmark
5716   \ifhmode\spacefactor\x@sf\fi
5717   \relax
5718 }
5719 </check>
5720 <*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.

```

5721 \def\caption{%
5722   \ifx\@captive\@undefined
5723     \@latex@error{\noexpand\caption outside float}\@ehd
5724     \expandafter\@gobble
5725   \else
5726     \H@refstepcounter\@captive
5727     \let\Hy@tempa\@caption
5728     \@ifundefined{float@caption}{%
5729       {%
5730         \expandafter\ifx\csname @float@c@\@captive\endcsname
5731           \float@caption
5732         \let\Hy@tempa\Hy@float@caption
5733       \fi
5734     }%
5735     \expandafter\@firstofone
5736   \fi
5737   {\@dblarg{\Hy@tempa\@captive}}%
5738 }
5739 \long\def\@caption#1[#2]#3{%
5740   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5741     \csname iftrue\endcsname
5742     \global\let\@currentHref\hc@currentHref
5743   \else
5744     \hyper@makecurrent{\@captive}%
5745   \fi

```

```

5746 \def\@currentlabelname{#2}%
5747 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5748   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5749 }%
5750 \begingroup
5751   \@parboxrestore
5752   \if@minipage
5753     \@setminipage
5754   \fi
5755   \normalsize
5756   \expandafter\ifx\csname if@capstart\endcsname
5757     \csname iftrue\endcsname
5758   \global\@capstartfalse
5759   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5760 \else
5761   \@makecaption{\csname fnum@#1\endcsname}{%
5762     \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5763   \ifHy@nesting
5764     \hyper@@anchor{\@currentHref}{#3}%
5765   \else
5766     \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5767   \fi
5768 }%
5769 \fi
5770 \par
5771 \endgroup
5772 }

```

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.

```

5773 \let\Hy@float@caption\@caption
5774 \@ifpackageloaded{float}{%
5775   \def\Hy@float@caption{%
5776     \ifx\Hy@float@currentHref\@undefined
5777       \hyper@makecurrent{\@captype}%
5778       \global\let\Hy@float@currentHref\@currentHref
5779     \else
5780       \let\@currentHref\Hy@float@currentHref
5781     \fi
5782     \float@caption
5783   }%
5784   \let\HyOrg@float@makebox\float@makebox
5785   \renewcommand{\float@makebox}[1]{%
5786     \HyOrg@float@makebox{%
5787       #1\relax
5788       \ifx\Hy@float@currentHref\@undefined
5789       \else
5790         \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5791       \global\let\Hy@float@currentHref\@undefined
5792       \fi
5793     }%
5794   }%
5795 }{}
5796 \</package>
5797 \< *check>
5798 \checklatex[1999/06/01 - 2000/06/01]

```

```

5799 \checkcommand\def\caption{%
5800   \ifx\@capttype\undefined
5801     \@latex@error{\noexpand\caption outside float}\@ehd
5802     \expandafter\@gobble
5803   \else
5804     \refstepcounter\@capttype
5805     \expandafter\@firstofone
5806   \fi
5807   {\@dblarg{\@caption\@capttype}}%
5808 }
5809 \checkcommand\long\def\@caption#1[#2]#3{%
5810   \par
5811   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5812   {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5813   \begingroup
5814     \@parboxrestore
5815     \if@minipage
5816       \@setminipage
5817     \fi
5818     \normalsize
5819     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5820   \endgroup
5821 }
5822 \end{check}
5823 \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 *drfcite* may break.

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

```

5824 \def\hyper@natlinkstart#1{%
5825   \Hy@backout{#1}%
5826   \hyper@linkstart{cite}{cite.#1}%
5827   \def\hyper@nat@current{#1}%
5828 }
5829 \def\hyper@natlinkend{%
5830   \hyper@linkend
5831 }
5832 \def\hyper@natlinkbreak#1#2{%
5833   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5834 }
5835 \def\hyper@natanchorstart#1{%
5836   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5837 }
5838 \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.

```

5839 \@ifundefined{NAT@parse}{%
5840   \providecommand*\@extra@binfo{}%
5841   \providecommand*\@extra@b@citeb{}%
5842   \def\bibcite#1#2{%
5843     \newl@bel{b}{#1\@extra@binfo}{%
5844       \hyper@link[cite]{cite.#1\@extra@b@citeb}{#2}%
5845     }%
5846   }%
5847   \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.”.

```

5848 \let\Hy@bibcite\bibcite
5849 \begingroup
5850   \@ifundefined{bbl@cite@choice}{%
5851     \g@addto@macro\bbl@cite@choice{%
5852       \let\bibcite\Hy@bibcite
5853     }%
5854   }%
5855 \endgroup

```

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

```

5856 \providecommand*\@BIBLABEL{\@biblabel}%
5857 \def\@lbibitem[#1]#2{%
5858   \@skiphyperreftrue
5859   \H@item[%
5860     \ifx\Hy@raisedlink\@empty
5861       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5862       \@BIBLABEL{#1}%
5863       \hyper@anchorend
5864     \else
5865       \Hy@raisedlink{%
5866         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5867       }%
5868       \@BIBLABEL{#1}%
5869     \fi
5870     \hfill
5871   ]%
5872   \@skiphyperreffalse
5873   \if@filesw
5874     \begingroup
5875       \let\protect\@noexpand
5876       \immediate\write\@auxout{%
5877         \string\bibcite{#2}{#1}%
5878       }%
5879     \endgroup
5880   \fi
5881   \ignorespaces
5882 }%

```

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

```

5883 \def\@bibitem#1{%
5884   \@skiphyperreftrue\H@item\@skiphyperreffalse
5885   \Hy@raisedlink{%
5886     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5887   }%
5888   \if@filesw
5889     \begingroup

```

```

5890         \let\protect\noexpand
5891         \immediate\write\@auxout{%
5892             \string\bibcite{#1}{\the\value{\@listctr}}}%
5893     }%
5894 \endgroup
5895 \fi
5896 \ignorespaces
5897 }%
5898 }{}

5899 </package>
5900 <*check>
5901 \checklatex
5902 \checkcommand\def\@lbibitem[#1]#2{%
5903     \item[\@biblabel{#1}\hfill]%
5904     \if@files
5905     {%
5906         \let\protect\noexpand
5907         \immediate\write\@auxout{%
5908             \string\bibcite{#2}{#1}%
5909         }%
5910     }%
5911 \fi
5912 \ignorespaces
5913 }
5914 \checkcommand\def\@bibitem#1{%
5915     \item
5916     \if@files
5917     \immediate\write\@auxout{%
5918         \string\bibcite{#1}{\the\value{\@listctr}}}%
5919     }%
5920 \fi
5921 \ignorespaces
5922 }
5923 </check>
5924 <*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.

```

5925 \@ifclassloaded{revtex}{%
5926     \Hy@Info{*** compatibility with revtex **** }%
5927     \def\revtex@checking#1#2{%
5928         \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5929         \expandafter\def\csname b@#1\endcsname{#2}%
5930         \@SetMaxRnhefLabel{#1}%
5931         \expandafter\let\csname b@#1\endcsname\T@temp
5932     }%

```

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

```

5933 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
5934 \providecommand*\@extra@b@citeb{}%
5935 \def\CITE[#1]#2{%
5936     \let\@citea\@empty
5937     \leavevmode
5938     \unskip
5939     $^{\%

```

```

5940 \scriptstyle
5941 \@CITE{%
5942   \@for\@citeb:=#2\do{%
5943     \@citea
5944     \def\@citea{,\penalty\@m\ }%
5945     \edef\@citeb{\expandafter\@firstofone\@citeb}%
5946     \if@filesw
5947       \immediate\write\@auxout{\string\citation{\@citeb}}%
5948     \fi
5949     \@ifundefined{b@\@citeb\extra@b@citeb}{%
5950       \mbox{\reset@font\bfseries ?}%
5951       \G@refundefinedtrue
5952       \@latex@warning{%
5953         Citation ‘\@citeb’ on page \thepage \space undefined%
5954       }%
5955     }{%
5956       {\csname b@\@citeb\extra@b@citeb\endcsname}%
5957     }%
5958   }%
5959 }{\#1}%
5960 }$%
5961 }%

```

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.

```

5962 \def\@citex[#1]#2{%
5963   \let\@citea\@empty
5964   \@cite{%
5965     \@for\@citeb:=#2\do{%
5966       \@citea
5967       \def\@citea{,\penalty\@m\ }%
5968       \edef\@citeb{\expandafter\@firstofone\@citeb}%
5969       \if@filesw
5970         \immediate\write\@auxout{\string\citation{\@citeb}}%
5971       \fi
5972       \@ifundefined{b@\@citeb\extra@b@citeb}{%
5973         \mbox{\reset@font\bfseries ?}%
5974         \G@refundefinedtrue
5975         \@latex@warning{%
5976           Citation ‘\@citeb’ on page \thepage \space undefined%
5977         }%
5978       }{%
5979         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
5980       }%
5981     }%
5982   }{\#1}%
5983 }%
5984 }{}

```

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.

```

5985 \@ifpackageloaded{harvard}{%
5986   \AtBeginDocument{%
5987     \Hy@Info{*** compatibility with harvard **** }%
5988     \Hy@raiselinksfalse
5989     \def\harvardcite#1#2#3#4{%
5990       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
5991       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
5992       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
5993       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5994     }%
5995     \def\HAR@citetoaux#1{%
5996       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5997       \ifHy@backref
5998         \ifx\@empty\@currentlabel
5999         \else
6000           \@bsphack
6001           \if@filesw
6002             \protected@write\@auxout{}{%
6003               \string\writefile{brf}{%
6004                 \string\backcite{#1}{%
6005                   {\thepage}{\@currentlabel}{\@currentHref}%
6006                 }%
6007             }%
6008           \fi
6009         \fi
6010         \@esphack
6011       \fi
6012     \fi
6013   }%
6014   \def\harvarditem{%
6015     \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6016   }%
6017   \def\@harvarditem[#1]#2#3#4#5\par{%
6018     \item[]%
6019     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6020     \if@filesw
6021       \begingroup
6022         \def\protect##1{\string ##1\space}%
6023         \ifthenelse{\equal{#1}{\null}}{%
6024           {\def\next{{#4}{#2}{#3}}}%
6025           {\def\next{{#4}{#2}{#1}{#3}}}%
6026           \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6027         \endgroup
6028       \fi
6029       \protect\hspace*{-\labelwidth}%
6030       \protect\hspace*{-\labelsep}%
6031       \ignorespaces
6032       #5%
6033       \ifHy@backref
6034         \newblock
6035         \backref{\csname br@#4\endcsname}%
6036       \fi
6037     \par
6038   }%

```

`\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:
6039   \long\def\HAR@checkcitations#1#2#3#4{%
6040     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
6041     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6042       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
6043       \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6044         \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
6045         \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6046           \else
6047             \@tempswatrue
6048           \fi
6049         \else
6050           \@tempswatrue
6051         \fi
6052       \else
6053         \@tempswatrue
6054       \fi
6055     }%
6056   }%

```

37.2 Package chicago

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

```

6058 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

6059   \def\citeN{%
6060     \def\@citesep{-1000}%
6061     \def\@cite##1##2{##1}%
6062     \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6063     \@citedata@opt
6064   }%

```

`\shortciteN`

```

6065   \def\shortciteN{%
6066     \def\@citesep{-1000}%
6067     \def\@cite##1##2{##1}%
6068     \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6069     \@citedata@opt
6070   }%

```

`\@citedata@opt`

```

6071   \def\@citedata@opt{%
6072     \let\@cite@opt\empty
6073     \@ifnextchar [{%
6074       \@tempswatrue
6075       \@citedatax@opt
6076     }{%
6077       \@tempswafalse
6078       \@citedatax[]%
6079     }%
6080   }%

```


\@citedatax@opt

```

6081 \def\@citedatax@opt[#1]{%
6082   \def\@cite@opt{, #1}%
6083   \@citedatax[#1]}%
6084 }%
6085 }{}

```

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.

```

6086 \def\Hy@EveryPageAnchor{%
6087   \Hy@DistillerDestFix
6088   \ifHy@pageanchor
6089     \ifHy@hypertextnames
6090       \ifHy@plainpages
6091         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6092       \else
6093         \begingroup
6094           \let\@number\@firstofone
6095           \Hy@unicodetofalse
6096           \pdfstringdef\@the@H@page{\thepage}%
6097         \endgroup
6098         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6099       \fi
6100     \else
6101       \Hy@GlobalStepCount\Hy@pagecounter
6102       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
6103     \fi
6104     \vbox to 0pt{%
6105       \kern\voffset
6106       \kern\topmargin
6107       \kern-1bp\relax
6108       \hbox to 0pt{%
6109         \kern\hoffset
6110         \kern\ifodd\value{page}%
6111           \oddsidemargin
6112         \else
6113           \evensidemargin
6114         \fi
6115         \kern-1bp\relax
6116         \Hy@TempPageAnchor
6117       \hss
6118     }%
6119     \vss
6120   }%
6121 \fi
6122 }
6123 \g@addto@macro\Hy@EveryPageBoxHook{%
6124   \Hy@EveryPageAnchor
6125 }

```

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.

```

6126 \def\addcontentsline#1#2#3{% toc extension, type, tag
6127   \begingroup
6128     \let\label\@gobble
6129     \ifx\@currentHref\@empty
6130       \Hy@Warning{%
6131         No destination for bookmark of \string\addcontentsline,%
6132         \MessageBreak destination is added%
6133       }%
6134     \phantomsection
6135   \fi
6136   \expandafter\ifx\csname toplevel@#2\endcsname\relax
6137     \begingroup
6138       \def\Hy@tempa{#1}%
6139       \ifx\Hy@tempa\Hy@bookmarkstype
6140         \Hy@WarningNoLine{%
6141           bookmark level for unknown #2 defaults to 0%
6142         }%
6143       \else
6144         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6145       \fi
6146     \endgroup
6147     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6148   \fi
6149   \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
6150   \Hy@writebookmark{\csname the#2\endcsname}%
6151     {#3}%
6152     {\@currentHref}%
6153     {\Hy@toclevel}%
6154     {#1}%
6155   \ifHy@verbose
6156     \def\Hy@tempa{#3}%
6157     \@onelevel@sanitize\Hy@tempa
6158     \typeout{pdfTeX: bookmark at \the\inputlineno: %
6159       {\csname the#2\endcsname}%
6160       {\Hy@tempa}%
6161       {\@currentHref}%
6162       {\Hy@toclevel}%
6163       {#1}%
6164     }%
6165   \fi
6166   \addtocontents{#1}{%
6167     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6168   }%
6169 \endgroup
6170 }
6171 \def\contentsline#1#2#3#4{%
6172   \ifx\#4\%
6173     \csname l@#1\endcsname{#2}{#3}%
6174   \else
6175     \ifcase\Hy@linktoc % none
6176       \csname l@#1\endcsname{#2}{#3}%
6177     \or % section

```

```

6178     \csname l@#1\endcsname{%
6179       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6180     }{#3}%
6181   \or % page
6182     \csname l@#1\endcsname{#{2}}{%
6183       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6184     }%
6185   \else % all
6186     \csname l@#1\endcsname{%
6187       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6188     }{%
6189       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6190     }%
6191   \fi
6192 \fi
6193 }

6194 </package>
6195 <*check>
6196 \checklatex
6197 \checkcommand\def\addcontentsline#1#2#3{%
6198   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6199 }
6200 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6201 </check>
6202 <*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.

```

6203 \let\H@definecounter\@definecounter
6204 \def\@definecounter#1{%
6205   \H@definecounter{#1}%
6206   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6207 }

```

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.

```

6208 \let\H@newctr\@newctr
6209 \def\@newctr#1[#2]{%
6210   \H@newctr#1[#2]%
6211   \expandafter\def\csname theH#1\endcsname{%
6212     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6213   }%
6214 }

```

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.

```

6215 \@ifpackageloaded{amsmath}{%
6216   \def\Hy@make@anchor{%
6217     \Hy@GlobalStepCount\Hy@linkcounter
6218     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6219     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6220   }%
6221   \def\Hy@make@df@tag@@#1{%
6222     \gdef\df@tag{%
6223       \maketag@@@{\Hy@make@anchor#1}%
6224       \def\@currentlabel{#1}%
6225     }%
6226   }%
6227   \def\Hy@make@df@tag@@@#1{%
6228     \gdef\df@tag{%
6229       \tagform@{\Hy@make@anchor#1}%
6230       \toks@{\xp{\p@equation{#1}}}%
6231       \edef\@currentlabel{\the\toks@}%
6232     }%
6233   }%
6234   \let\HyOrg@make@df@tag@@\make@df@tag@@
6235   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6236   \let\make@df@tag@@\Hy@make@df@tag@@
6237   \let\make@df@tag@@@\Hy@make@df@tag@@@
6238 }{}

```

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

```

6239 \@ifpackagewith{hyperref}{pdfTeX}{%
6240   \let\H@seteqlabel\@seteqlabel
6241   \def\@seteqlabel#1{%
6242     \H@seteqlabel{#1}%
6243     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6244     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6245   }%
6246 }{}

```

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.

```

6247 \let\HyOrg@addtoreset\@addtoreset
6248 \def\@addtoreset#1#2{%
6249   \HyOrg@addtoreset{#1}{#2}%
6250   \expandafter\xdef\csname theH#1\endcsname{%
6251     \expandafter\noexpand
6252     \csname the\@ifundefined{theH#2}{H#2}\endcsname
6253     .\noexpand\the\noexpand\value{#1}%

```

```

6254 }%
6255 }

```

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

```

6256 \</package>
6257 \<*check>
6258 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6259 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6260   \ifundefined{c@#2}{\@nocounterr{#2}}{%
6261     \ifundefined{c@#3}{\@nocnterr{#3}}{%
6262       \addtoreset{#2}{#3}%
6263       \xp\xdef\csname the#2\endcsname{%
6264         \xp\xnx\csname the#3\endcsname .\nx#1{#2}%
6265       }%
6266     }%
6267   }%
6268 }%
6269 \</check>
6270 \<*package>
6271 \ifpackageloaded{amsmath}{%
6272   \ifpackagelater{amsmath}{1999/12/14}{%
6273     \renewcommand*\numberwithin[3][\arabic]{%
6274       \ifundefined{c@#2}{\@nocounterr{#2}}{%
6275         \ifundefined{c@#3}{\@nocnterr{#3}}{%
6276           \HyOrg@addtoreset{#2}{#3}%
6277           \xp\xdef\csname the#2\endcsname{%
6278             \xp\xnx\csname the#3\endcsname .\nx#1{#2}%
6279           }%
6280           \xp\xdef\csname theH#2\endcsname{%
6281             \xp\xnx
6282             \csname the\ifundefined{theH#3}{H#3\endcsname
6283             .\nx#1{#2}%
6284           }%
6285         }%
6286       }%
6287     }%
6288   }{%
6289     \Hy@WarningNoLine{%
6290       \string\numberwithin\space of package 'amsmath' %
6291       only fixed\MessageBreak
6292       for version 2000/06/06 v2.12 or newer%
6293     }%
6294   }%
6295 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6296 \ifHy@figures
6297   \let\Hy@Gin@setfile\Gin@setfile
6298   \def\Gin@setfile#1#2#3{%
6299     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6300   }%
6301 \fi
6302 \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.

```

6303 \ifHy@hyperindex
6304   \def\HyInd@ParenLeft{ }%
6305   \def\HyInd@ParenRight{ }%
6306   \Hy@nextfalse
6307   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6308   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6309   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
6310   \begingroup
6311     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
6312   \lowercase{\endgroup
6313     \ifHy@next
6314       \let\HyInd@org@wrindex\@wrindex
6315       \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
6316       \def\HyInd@@wrindex#1#2|#3|#4\{\%
6317         \ifx\|#3\%
6318           \HyInd@org@wrindex{#1}-{#2|hyperpage}%
6319         \else
6320           \def\Hy@temp@A{#3}%
6321           \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6322             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6323             \relax
6324           \HyInd@org@wrindex{#1}-{#2|#3}%
6325         \else
6326           \HyInd@org@wrindex{#1}-{#2|#3hyperpage}%
6327         \fi
6328       \fi
6329     }%
6330   \else
6331     \def\@wrindex#1{\@@wrindex#1||\}%
6332     \def\@@wrindex#1|#2|#3\{\%
6333       \if@files
6334         \ifx\|#2\%
6335           \protected@write\@indexfile{\%
6336             \string\indexentry{#1|hyperpage}{\thepage}%
6337           }%
6338         \else
6339           \def\Hy@temp@A{#2}%
6340           \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6341             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6342             \relax
6343           \protected@write\@indexfile{\%
6344             \string\indexentry{#1|#2}{\thepage}%
6345           }%
6346         \else
6347           \protected@write\@indexfile{\%

```

```

6348             \string\indexentry{#1|#2hyperpage}{\thepage}%
6349         }%
6350     \fi
6351 \fi
6352 \fi
6353 \endgroup
6354 \esphack
6355 }%
6356 \fi
6357 }%
6358 \fi
6359 \Hy@DisableOption{hyperindex}
6360 \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.

```

6361 \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.

```

6362 \def\hyperpage#1{%
6363   \HyInd@hyperpage#1\nohyperpage{}\@nil
6364 }
6365 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6366   \HyInd@@hyperpage{#1}%
6367   #2%
6368   \def\Hy@temp{#3}%
6369   \ifx\Hy@temp\@empty
6370   \else
6371     \Hy@ReturnAfterFi{%
6372       \HyInd@hyperpage#3\@nil
6373     }%
6374   \fi
6375 }
6376 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
6377 \def\@hyperpage#1--#2--#3\{%
6378   \ifx\#2\%
6379     \@commahyperpage{#1}%
6380   \else
6381     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6382   \fi
6383 }
6384 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6385 \def\@commahyperpage#1, #2,#3\{%
6386   \ifx\#2\%
6387     \HyInd@pagelink{#1}%
6388   \else
6389     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6390   \fi
6391 }

```

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

```

6392 \def\HyInd@pagelink#1{%
6393   \begingroup
6394     \toks@={}%
6395     \HyInd@removespaces#1 \@nil

```

```

6396 \endgroup
6397 }
6398 \def\HyInd@removespaces#1 #2\@nil{%
6399 \toks@=\expandafter{\the\toks@#1}%
6400 \ifx\#2\%
6401 \edef\x{\the\toks@}%
6402 \ifx\x\@empty
6403 \else
6404 \hyperlink{page.\the\toks@}{\the\toks@}%
6405 \fi
6406 \else
6407 \Hy@ReturnAfterFi{%
6408 \HyInd@removespaces#2\@nil
6409 }%
6410 \fi
6411 }

```

44 Compatibility with foiltex

```

6412 \@ifclassloaded{foils}{%
6413 \providecommand*\ext@table{lot}%
6414 \providecommand*\ext@figure{lof}%
6415 }{}

```

45 Compatibility with seminar slide package

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

```

6416 \@ifclassloaded{seminar}{%
6417 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
6418 }{%
6419 \Hy@seminarslidesfalse
6420 }
6421 \@ifpackageloaded{slidesec}{%
6422 \newcommand\theHslidesection {\arabic{slidesection}}%
6423 \newcommand\theHslidesubsection{%
6424 \theHslidesection.\arabic{slidesubsection}}%
6425 }%
6426 \def\slide@heading[#1]#2{%
6427 \H@refstepcounter{slidesection}%
6428 \@addtoreset{slidesubsection}{slidesection}%
6429 \addtocontents{los}{%
6430 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6431 {\@SCTR}{slideheading.\theslidesection}}%
6432 }%
6433 \def\Hy@tempa{#2}%
6434 \ifx\Hy@tempa\@empty
6435 \else
6436 {%
6437 \edef\@currentlabel{%
6438 \csname p@slidesection\endcsname\theslidesection
6439 }%
6440 \makeslideheading{#2}%
6441 }%
6442 \fi
6443 \gdef\theslideheading{#1}%

```



```

6444 \gdef\theslidesubheading{%
6445 \ifHy@bookmarksnumbered
6446 \def\Hy@slidetitle{\theslidesection\space #1}%
6447 \else
6448 \def\Hy@slidetitle{#1}%
6449 \fi
6450 \ifHy@hypertextnames
6451 \ifHy@naturalnames
6452 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6453 \Hy@writebookmark
6454 {\theslidesection}%
6455 {\Hy@slidetitle}%
6456 {slideheading.\theslidesection}%
6457 {1}%
6458 {toc}%
6459 \else
6460 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6461 \Hy@writebookmark
6462 {\theslidesection}%
6463 {\Hy@slidetitle}%
6464 {slideheading.\theHslidesection}%
6465 {1}%
6466 {toc}%
6467 \fi
6468 \else
6469 \Hy@GlobalStepCount\Hy@linkcounter
6470 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6471 \Hy@writebookmark
6472 {\theslidesection}%
6473 {\Hy@slidetitle}%
6474 {slideheading.\the\Hy@linkcounter}%
6475 {1}%
6476 {toc}%
6477 \fi
6478 }%
6479 \def\slide@subheading[#1]#2{%
6480 \H@refstepcounter{slidesubsection}%
6481 \addtocontents{los}{%
6482 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6483 {\@SCTR}{slideheading.\theslidesubsection}%
6484 }%
6485 \def\Hy@tempa{#2}%
6486 \ifx\Hy@tempa\@empty
6487 \else
6488 {%
6489 \edef\@currentlabel{%
6490 \csname p@slidesubsection\endcsname\theslidesubsection
6491 }%
6492 \makeslidesubheading{#2}%
6493 }%
6494 \fi
6495 \gdef\theslidesubheading{#1}%
6496 \ifHy@bookmarksnumbered
6497 \def\Hy@slidetitle{\theslidesubsection\space #1}%
6498 \else
6499 \def\Hy@slidetitle{#1}%
6500 \fi

```

```

6501 \ifHy@hypertextnames
6502 \ifHy@naturalnames
6503 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6504 \Hy@writebookmark
6505 {\theslidesubsection}%
6506 {\Hy@slidetitle}%
6507 {slideheading.\theslidesubsection}%
6508 {2}%
6509 {toc}%
6510 \else
6511 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6512 \Hy@writebookmark
6513 {\theslidesubsection}%
6514 {\Hy@slidetitle}%
6515 {slideheading.\theHslidesubsection}%
6516 {2}%
6517 {toc}%
6518 \fi
6519 \else
6520 \Hy@GlobalStepCount\Hy@linkcounter
6521 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6522 \Hy@writebookmark
6523 {\theslidesubsection}%
6524 {\Hy@slidetitle}%
6525 {slideheading.\the\Hy@linkcounter}%
6526 {1}%
6527 {toc}%
6528 \fi
6529 }%
6530 \providecommand*{\listslidenam}{List of Slides}%
6531 \def\listofslides{%
6532 \section*{%
6533 \listslidenam
6534 \@mkboth{%
6535 \expandafter\MakeUppercase\listslidenam
6536 }{%
6537 \expandafter\MakeUppercase\listslidenam
6538 }%
6539 }%
6540 \def\l@slide##1##2##3##4{%
6541 \slide@undottedcline{%
6542 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
6543 }{%
6544 }%
6545 \let\l@subslide\l@slide
6546 \@startlos
6547 }%
6548 \def\slide@contents{%
6549 \def\l@slide##1##2##3##4{%
6550 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6551 }%
6552 \let\l@subslide\@gobblefour
6553 \@startlos
6554 }%
6555 \def\Slide@contents{%
6556 \def\l@slide##1##2##3##4{%
6557 \ifcase\l@slide@flag

```

```

6558 \message{##1 ** \the\c@slide@section}%
6559 \ifnum##1>\c@slide@section
6560 \def\lslide@flag{1}%
6561 {%
6562 \large
6563 \slide@cline{%
6564 \slidenumberline{$\rightarrow\bullet$}%
6565 {\hyperlink{##4}{##2}}%
6566 }{##3}%
6567 }%
6568 \else
6569 {%
6570 \large
6571 \slide@cline{%
6572 \slidenumberline{$\surd\;\bullet$}%
6573 {\hyperlink{##4}{##2}}%
6574 }{##3}%
6575 }%
6576 \fi
6577 \or
6578 \def\lslide@flag{2}%
6579 {%
6580 \large
6581 \slide@cline{%
6582 \slidenumberline{$\bullet$}%
6583 {\hyperlink{##4}{##2}}%
6584 }{##3}%
6585 }%
6586 \or
6587 {%
6588 \large
6589 \slide@cline{%
6590 \slidenumberline{$\bullet$}%
6591 {\hyperlink{##4}{##2}}%
6592 }{##3}%
6593 }%
6594 \fi
6595 }%
6596 \def\l@subslide##1##2##3##4{%
6597 \ifnum\lslide@flag=1 %
6598 \undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6599 \fi
6600 }%
6601 \def\lslide@flag{0}%
6602 \@startlos
6603 }%
6604 }{}

```

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.)

```

6605 \ifHy@texht
6606 \expandafter\endinput
6607 \fi
6608 \let\real@setref\@setref
6609 \def\@setref#1#2#3{% csname, extract group, refname
6610 \ifx#1\relax
6611 \protect\G@refundefinedtrue

```

```

6612 \nfss@text{\reset@font\bfseries ??}%
6613 \@latex@warning{%
6614   Reference '#3' on page \thepage \space undefined%
6615 }%
6616 \else
6617   \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6618 \fi
6619 }

```

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

```

6620 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6621   \begingroup
6622     \toks0={\hyper@@link{#5}{#4}}%
6623     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6624     \edef\x{\endgroup
6625       \the\toks0 {\the\toks1 }}%
6626   }%
6627   \x
6628 }
6629 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6630   \ifx#1\relax
6631     \protect\G@refundefinedtrue
6632     \nfss@text{\reset@font\bfseries ??}%
6633     \@latex@warning{%
6634       Reference '#3' on page \thepage \space undefined%
6635     }%
6636   \else
6637     \protect\hyper@@link
6638     {\expandafter\@fifthoffive#1}%
6639     {page.\expandafter\@secondoffive#1}%
6640     {\expandafter\@secondoffive#1}%
6641   \fi
6642 }
6643 </package>
6644 <*check>
6645 \checklatex
6646 \checkcommand\def\@setref#1#2#3{%
6647   \ifx#1\relax
6648     \protect\G@refundefinedtrue
6649     \nfss@text{\reset@font\bfseries ??}%
6650     \@latex@warning{%
6651       Reference '#3' on page \thepage\space undefined%
6652     }%
6653   \else
6654     \expandafter#2#1\null
6655   \fi
6656 }
6657 </check>
6658 <*package>

```

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

```

6659 \def\HyRef@StarSetRef#1{%
6660   \begingroup
6661     \Hy@safe@activetrue
6662     \edef\x{#1}%
6663     \@onelevel@sanitize\x

```

```

6664 \edef\x{\endgroup
6665 \noexpand\HyRef@StarSetRef
6666 \expandafter\noexpand\csname r@\x\endcsname{\x}%
6667 }%
6668 \x
6669 }
6670 \def\HyRef@StarSetRef#1#2#3{%
6671 \ifx#1\undefined
6672 \let#1\relax
6673 \fi
6674 \real@setref#1#3{#2}%
6675 }
6676 \def\@refstar#1{%
6677 \HyRef@StarSetRef{#1}\@firstoffive
6678 }
6679 \def\@pagerefstar#1{%
6680 \HyRef@StarSetRef{#1}\@secondoffive
6681 }
6682 \AtBeginDocument{%
6683 \ifpackageloaded{varioref}{%
6684 \def\@Refstar#1{%
6685 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6686 }%
6687 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6688 \MakeUppercase#1%
6689 }%
6690 \DeclareRobustCommand*\Ref*{%
6691 \@ifstar\@Refstar\HyRef@Ref
6692 }%
6693 \def\HyRef@Ref#1{%
6694 \hyperref[#{1}]{\Ref*{#1}}%
6695 }%
6696 \def\Vr@f#1{%
6697 \leavevmode\unskip\vref@space
6698 \hyperref[#{1}]{%
6699 \Ref*{#1}%
6700 \let\vref@space\nobreakspace
6701 \@vpageref[\unskip]{#1}%
6702 }%
6703 }%
6704 \def\vr@f#1{%
6705 \leavevmode\unskip\vref@space
6706 \begingroup
6707 \let\T@pageref\@pagerefstar
6708 \hyperref[#{1}]{%
6709 \ref*{#1}%
6710 \vpageref[\unskip]{#1}%
6711 }%
6712 \endgroup
6713 }%
6714 }{}%
6715 }
6716 \DeclareRobustCommand*\autopageref{%
6717 \@ifstar{%
6718 \HyRef@autopagerefname\pageref*%
6719 }\HyRef@autopageref
6720 }

```

```

6721 \def\HyRef@autopageref#1{%
6722   \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#1}}%
6723 }
6724 \def\HyRef@autopagerefname{%
6725   \@ifundefined{pageautorefname}{%
6726     \@ifundefined{pagename}{%
6727       \Hy@Warning{No autoref name for 'page'}%
6728     }{%
6729       \pagename\nobreakspace
6730     }%
6731   }{%
6732     \pageautorefname\nobreakspace
6733   }%
6734 }
6735 \DeclareRobustCommand*\autoref{%
6736   \@ifstar{\HyRef@autoref\@gobbles}\HyRef@autoref\hyper@link}%
6737 }
6738 \def\HyRef@autoref#1#2{%
6739   \begingroup
6740     \Hy@safe@activetrue
6741     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
6742   \endgroup
6743 }
6744 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6745   \HyRef@ShowKeysRef{#2}%
6746   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6747     \edef\HyRef@thisref{%
6748       \expandafter\@fourthoffive#1\@empty\@empty\@empty
6749     }%
6750     \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6751     \Hy@safe@activesfalse
6752     #3{%
6753       \expandafter\@fifthoffive#1\@empty\@empty\@empty
6754     }{%
6755       \expandafter\@fourthoffive#1\@empty\@empty\@empty
6756     }{%
6757       \HyRef@currentHtag
6758       \expandafter\@firstoffive#1\@empty\@empty\@empty
6759       \null
6760     }%
6761   \else
6762     \protect\G@refundefinedtrue
6763     \nfss@text{\reset@font\bfseries ??}%
6764     \@latex@warning{%
6765       Reference '#2' on page \thepage\space undefined%
6766     }%
6767   \fi
6768 }
6769 \def\HyRef@testreftype#1.#2\{%
6770   \@ifundefined{#1autorefname}{%
6771     \@ifundefined{#1name}{%
6772       \HyRef@StripStar#1\*\@nil{#1}%
6773       \@ifundefined{\HyRef@name autorefname}{%
6774         \@ifundefined{\HyRef@name name}{%
6775           \def\HyRef@currentHtag{%
6776             \Hy@Warning{No autoref name for '#1'}%
6777           }{%

```

```

6778         \edef\HyRef@currentHtag{%
6779             \expandafter\noexpand\csname\HyRef@name name\endcsname
6780             \noexpand~%
6781         }%
6782     }%
6783 }{%
6784     \edef\HyRef@currentHtag{%
6785         \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6786         \noexpand~%
6787     }%
6788 }%
6789 }{%
6790     \edef\HyRef@currentHtag{%
6791         \expandafter\noexpand\csname#1name\endcsname
6792         \noexpand~%
6793     }%
6794 }%
6795 }{%
6796     \edef\HyRef@currentHtag{%
6797         \expandafter\noexpand\csname#1autorefname\endcsname
6798         \noexpand~%
6799     }%
6800 }%
6801 }
6802 \def\HyRef@StripStar#1*\#2\@nil#3{%
6803     \def\HyRef@name{#2}%
6804     \ifx\HyRef@name\HyRef@CaseStar
6805         \def\HyRef@name{#1}%
6806     \else
6807         \def\HyRef@name{#3}%
6808     \fi
6809 }
6810 \def\HyRef@CaseStar{*\\}
6811 \def\HyRef@currentHtag{}

```

Support for package showkeys.

`\HyRef@ShowKeysRef`

```

6812 \let\HyRef@ShowKeysRef\@gobble
6813 \def\HyRef@ShowKeysInit{%
6814     \begingroup\expandafter\expandafter\expandafter\endgroup
6815     \expandafter\ifx\csname SK@@label\endcsname\relax
6816     \else
6817         \ifx\SK@ref\@empty
6818         \else
6819             \def\HyRef@ShowKeysRef{%
6820                 \SK@\SK@@ref
6821             }%
6822         \fi
6823     \fi
6824 }
6825 \@ifpackageloaded{showkeys}{%
6826     \HyRef@ShowKeysInit
6827 }{%
6828     \AtBeginDocument{%
6829         \@ifpackageloaded{showkeys}{%
6830             \HyRef@ShowKeysInit
6831         }{}%

```

```

6832 }%
6833 }

```

Defaults for the names that `\autoref` uses.

```

6834 \providecommand*{\AMSautorefname}{\equationautorefname}
6835 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
6836 \providecommand*{\Itemautorefname}{\itemautorefname}
6837 \providecommand*{\itemautorefname}{item}
6838 \providecommand*{\equationautorefname}{Equation}
6839 \providecommand*{\footnoteautorefname}{footnote}
6840 \providecommand*{\itemautorefname}{item}
6841 \providecommand*{\figureautorefname}{Figure}
6842 \providecommand*{\tableautorefname}{Table}
6843 \providecommand*{\partautorefname}{Part}
6844 \providecommand*{\appendixautorefname}{Appendix}
6845 \providecommand*{\chapterautorefname}{chapter}
6846 \providecommand*{\sectionautorefname}{section}
6847 \providecommand*{\subsectionautorefname}{subsection}
6848 \providecommand*{\subsubsectionautorefname}{subsubsection}
6849 \providecommand*{\paragraphautorefname}{paragraph}
6850 \providecommand*{\subparagraphautorefname}{subparagraph}
6851 \providecommand*{\FancyVerbLineautorefname}{line}
6852 \providecommand*{\theoremautorefname}{Theorem}
6853 \providecommand*{\pageautorefname}{page}
6854 \end{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`.

```

6855 < *pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo >
6856 \RequirePackage{pdfTeXcmds}[2007/11/11]
6857 \begingroup\expandafter\expandafter\expandafter\endgroup
6858 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6859   \begingroup
6860     \catcode'\|=0 %
6861     \@makeother\| %
6862     \@firstofone{\endgroup
6863       |def|Hy@pstringdef#1#2{%
6864         |begingroup
6865           |edef~{|string~}%
6866           |xdef|Hy@gtemp{#2}%
6867         |endgroup
6868         |let#1|Hy@gtemp
6869         |@onelevel@sanitize#1%
6870         |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
6871         |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6872         |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
6873       }%

```



```

6874 |def|Hy@ExchangeBackslash#1\#2|@nil{%
6875 #1%
6876 |ifx|\#2|\%%
6877 |else
6878 \\\%
6879 |Hy@ReturnAfterFi{%
6880 |Hy@ExchangeBackslash#2|@nil
6881 }%
6882 |fi
6883 }%
6884 }%
6885 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6886 #1%
6887 \ifx\\#2\\%
6888 \else
6889 \@backslashchar(%
6890 \Hy@ReturnAfterFi{%
6891 \Hy@ExchangeLeftParenthesis#2\@nil
6892 }%
6893 \fi
6894 }%
6895 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6896 #1%
6897 \ifx\\#2\\%
6898 \else
6899 \@backslashchar)%
6900 \Hy@ReturnAfterFi{%
6901 \Hy@ExchangeRightParenthesis#2\@nil
6902 }%
6903 \fi
6904 }%
6905 \else
6906 \def\Hy@pstringdef#1#2{%
6907 \begingroup
6908 \edef~{\string~}%
6909 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6910 \endgroup
6911 \let#1\Hy@gtemp
6912 }%
6913 \fi
6914 </pdfTeX | dvipdfm | vTeX | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

6915 <*pdfTeX>
6916 \providecommand*{\XR@ext}{pdf}
6917 \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, 2005-08-08: `\pdfminorversion`

```

6918 \let\Hy@pdfminorversion\relax
6919 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

6920 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6921 \begingroup\expandafter\expandafter\expandafter\endgroup
6922 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6923 \else
6924 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6925 \fi
6926 \else
6927 \def\Hy@pdfminorversion{\pdfminorversion}%
6928 \fi
6929 \ifundefined{Hy@pdfminorversion}{%
6930 \PackageInfo{hyperref}{%
6931 PDF version is not set, because pdfTeX is too old (<1.10a)%
6932 }%
6933 }{%
6934 \ifHy@ocgcolorlinks
6935 \ifnum\Hy@pdfminorversion<5 %
6936 \setkeys{Hyp}{pdfversion=1.5}%
6937 \fi
6938 \fi
6939 \ifHy@setpdfversion
6940 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
6941 \else
6942 \Hy@pdfminorversion=\Hy@pdfversion\relax
6943 \fi
6944 \PackageInfo{hyperref}{%
6945 \expandafter\string\Hy@pdfminorversion
6946 :=\number\Hy@pdfversion\space
6947 }%
6948 \fi
6949 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6950 }
6951 \Hy@DisableOption{pdfversion}%

6952 \ifHy@ocgcolorlinks
6953 \immediate\pdfobj{%
6954 <<%
6955 /Type/OCG%
6956 /Name(View)%
6957 /Usage<<%
6958 /Print<<%
6959 /PrintState/OFF%
6960 >>%
6961 /View<<%
6962 /ViewState/ON%
6963 >>%
6964 >>%
6965 >>%
6966 }%
6967 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6968 \immediate\pdfobj{%
6969 <<%
6970 /Type/OCG%
6971 /Name(Print)%
6972 /Usage<<%
6973 /Print<<%
6974 /PrintState/ON%
6975 >>%
6976 /View<<%

```

```

6977         /ViewState/OFF%
6978     >>%
6979 >>%
6980 >>%
6981 }%
6982 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6983 \immediate\pdfobj{%
6984     [%
6985         \OBJ@OCG@view\space\OBJ@OCG@print
6986     ]%
6987 }%
6988 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6989 \pdfcatalog{%
6990     /OCProperties<<%
6991         /OCGs \OBJ@OCGs
6992     /D<<%
6993         /OFF[\OBJ@OCG@print]%
6994         /AS[%
6995             <<%
6996                 /Event/View%
6997                 /OCGs \OBJ@OCGs
6998                 /Category[/View]%
6999             >>%
7000             <<%
7001                 /Event/Print%
7002                 /OCGs \OBJ@OCGs
7003                 /Category[/Print]%
7004             >>%
7005             <<%
7006                 /Event/Export%
7007                 /OCGs \OBJ@OCGs
7008                 /Category[/Print]%
7009             >>%
7010         ]%
7011     >>%
7012 >>%
7013 }%
7014 \begingroup
7015     \edef\x{\endgroup
7016         \pdfpageresources{%
7017             /Properties<<%
7018                 /OCView \OBJ@OCG@view
7019                 /OCPrint \OBJ@OCG@print
7020             >>%
7021         }%
7022     }%
7023 \x
7024 \AtBeginDocument{%
7025     \def\Hy@colorlink#1{%
7026         \begingroup
7027             \ifHy@ocgcolorlinks
7028                 \def\Hy@ocgcolor{#1}%
7029                 \setbox0=\color@hbox
7030             \else
7031                 \HyColor@UseColor#1%
7032             \fi
7033         }%

```

```

7034 \def\Hy@endcolorlink{%
7035 \ifHy@ocgcolorlinks
7036 \color@endbox
7037 \mbox{%
7038 \pdfliteral page{/OC/OCPrint BDC}%
7039 \rlap{\copy0}%
7040 \pdfliteral page{EMC/OC/OCView BDC}%
7041 \begingroup
7042 \expandafter\HyColor@UseColor\Hy@ocgcolor
7043 \box0 %
7044 \endgroup
7045 \pdfliteral page{EMC}%
7046 }%
7047 \fi
7048 \endgroup
7049 }%
7050 }%
7051 \else
7052 \Hy@DisableOption{ocgcolorlinks}%
7053 \fi

```

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

```

7054 \def\setpdflinkmargin#1{\pdflinkmargin#1}
7055 \ifx\pdfstartlink\@undefined% less than version 14
7056 \let\pdfstartlink\pdfannotlink
7057 \let\pdflinkmargin\@tempdima
7058 \let\pdfxform\pdfform
7059 \let\pdflastxform\pdfastform
7060 \let\pdfrefxform\pdfrefform
7061 \else
7062 \pdflinkmargin1pt %
7063 \fi

```

First set up the default linking

```
7064 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7065 \def\new@pdflink#1{%
7066 \ifHy@verbose
7067 \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7068 \fi
7069 \Hy@SaveLastskip
7070 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7071 \Hy@DestName\Hy@pstringDest\@pdfview
7072 \Hy@RestoreLastskip
7073 }
7074 \let\pdf@endanchor\@empty

```

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

```

7075 \def\Hy@DestName#1#2{%
7076 \pdfdest name{#1}#2\relax
7077 }

```

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.

```

7078 \providecommand*\@pdfborder{0 0 1}
7079 \providecommand*\@pdfborderstyle{}
7080 \def\Hy@undefinedname{UNDEFINED}
7081 \def\find@pdflink#1#2{%
7082   \leavevmode
7083   \protected@edef\Hy@testname{#2}%
7084   \ifx\Hy@testname\@empty
7085     \Hy@Warning{%
7086       Empty destination name,\MessageBreak
7087       using '\Hy@undefinedname'%
7088     }%
7089     \let\Hy@testname\Hy@undefinedname
7090   \else
7091     \Hy@pstringdef\Hy@testname{%
7092       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7093     }%
7094   \fi
7095   \Hy@StartlinkName{%
7096     \ifHy@pdfa /F 4\fi
7097     \Hy@setpdfborder
7098     \ifx\@pdfhighlight\@empty
7099     \else
7100       /H\@pdfhighlight
7101     \fi
7102     \ifx\CurrentBorderColor\relax
7103     \else
7104       /C[\CurrentBorderColor]%
7105     \fi
7106   }\Hy@testname
7107   \expandafter\Hy@colorlink\csname @#1color\endcsname
7108 }
7109 \def\Hy@StartlinkName#1#2{%
7110   \pdfstartlink attr{#1}goto name{#2}\relax
7111 }
7112 \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
7113 \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}
7114 \def\hyper@anchorstart#1{\new@pdflink{#1}\Hy@activeanchortrue}
7115 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7116 \def\hyper@linkstart#1#2{%
7117   \@ifundefined{@#1bordercolor}{%
7118     \let\CurrentBorderColor\relax
7119   }{%
7120     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7121   }%
7122   \find@pdflink{#1}{#2}%
7123 }
7124 \def\hyper@linkend{\close@pdflink}
7125 \def\hyper@link#1#2#3{%
7126   \@ifundefined{@#1bordercolor}{%
7127     \let\CurrentBorderColor\relax
7128   }{%
7129     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7130   }%
7131   \find@pdflink{#1}{#2}#3%
7132   \close@pdflink
7133 }
7134 \let\CurrentBorderColor\@linkbordercolor

```

```

7135 \def\hyper@linkurl#1#2{%
7136   \begingroup
7137     \Hy@pstringdef\Hy@pstringURI{#2}%
7138     \hyper@chars
7139     \leavevmode
7140     \pdfstartlink
7141     attr{%
7142       \Hy@setpdfborder
7143       \ifx\@pdfhighlight\@empty
7144       \else
7145         /H\@pdfhighlight
7146       \fi
7147       \ifx\@urlbordercolor\relax
7148       \else
7149         /C[\@urlbordercolor]%
7150       \fi
7151     }%
7152     user{%
7153       /Subtype/Link%
7154       \ifHy@pdfa /F 4\fi
7155       /A<<%
7156         /Type/Action%
7157         /S/URI%
7158         /URI(\Hy@pstringURI)%
7159       >>%
7160     }%
7161     \relax
7162     \Hy@colorlink\@urlcolor#1%
7163     \close@pdflink
7164   \endgroup
7165 }
7166 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7167   \begingroup
7168     \Hy@pstringdef\Hy@pstringF{#2}%
7169     \Hy@pstringdef\Hy@pstringD{#3}%
7170     \leavevmode
7171     \pdfstartlink
7172     attr{%
7173       \Hy@setpdfborder
7174       \ifx\@pdfhighlight\@empty
7175       \else
7176         /H\@pdfhighlight
7177       \fi
7178       \ifx\@filebordercolor\relax
7179       \else
7180         /C[\@filebordercolor]%
7181       \fi
7182     }%
7183     user {%
7184       /Subtype/Link%
7185       \ifHy@pdfa /F 4\fi
7186       /A<<%
7187         /F(\Hy@pstringF)%
7188         /S/GoToR%
7189         \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}

7190      \ifx\|#3\%
7191      /D[0 \@pdfstartview]%
7192      \else
7193      /D(\Hy@pstringD)%
7194      \fi
7195      >>%
7196      }%
7197      \relax
7198      \Hy@colorlink\@filecolor#1%
7199      \close@pdflink
7200 \endgroup
7201 }
7202 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
7203 \begingroup
7204   \Hy@pstringdef\Hy@pstringF{#1}%
7205   \Hy@pstringdef\Hy@pstringP{#3}%
7206   \leavevmode
7207   \pdfstartlink
7208   attr{%
7209     \Hy@setpdfborder
7210     \ifx\@pdfhighlight\@empty
7211     \else
7212     /H\@pdfhighlight
7213     \fi
7214     \ifx\@runbordercolor\relax
7215     \else
7216     /C[\@runbordercolor]%
7217     \fi
7218   }%
7219   user {%
7220     /Subtype/Link%
7221     \ifHy@pdfa /F 4\fi
7222     /A<<%
7223     /F(\Hy@pstringF)%
7224     /S/Launch%
7225     \Hy@SetNewWindow
7226     \ifx\|#3\%
7227     \else
7228     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7229     \fi
7230     >>%
7231     }%
7232     \relax
7233     \Hy@colorlink\@runcolor#2%
7234     \close@pdflink
7235 \endgroup
7236 }

```

\@pdfproducer

```

7237 \ifx\@pdfproducer\relax
7238   \begingroup\expandafter\expandafter\expandafter\endgroup
7239   \expandafter\ifx\csname luatexversion\endcsname\relax
7240     \def\@pdfproducer{pdfTeX}%
7241     \ifx\eTeXversion\@undefined
7242       \else
7243         \ifx\eTeXversion\relax
7244           \else
7245             \ifnum\eTeXversion>0 %
7246               \def\@pdfproducer{pdfTeX}%
7247             \fi
7248           \fi
7249         \fi
7250       \ifx\pdfTeXversion\@undefined
7251       \else
7252         \ifnum\pdfTeXversion<100 %
7253           \edef\@pdfproducer{%
7254             \@pdfproducer
7255             \the\pdfTeXversion.\pdfTeXrevision
7256           }%
7257         \else
7258           \ifnum\pdfTeXversion<130 %
7259             \edef\@pdfproducer{%
7260               \@pdfproducer-
7261               \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7262               \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7263               \pdfTeXrevision
7264             }%
7265           \else
7266             \ifnum\pdfTeXversion<140 %
7267               \else
7268                 \def\@pdfproducer{pdfTeX}%
7269               \fi
7270             \edef\@pdfproducer{%
7271               \@pdfproducer-
7272               \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7273               \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7274               \pdfTeXrevision
7275             }%
7276           \fi
7277         \fi
7278       \fi
7279     \else
7280       \begingroup
7281       \count@=\luatexversion
7282       \divide\count@ by 100 %
7283       \edef\x{\the\count@}%
7284       \count@=-\x\relax
7285       \multiply\count@ by 100 %
7286       \advance\count@ by \luatexversion
7287       \edef\x{\endgroup
7288         \def\noexpand\@pdfproducer{%
7289           LuaTeX-\x.\the\count@.\luatexrevision
7290         }%
7291       }%
7292     \x
7293   \fi

```


7294 \fi

\PDF@SetupDox

```
7295 \def\PDF@SetupDoc{%
7296   \ifx\@pdfpagescrop\@empty
7297   \else
7298     \edef\process@me{%
7299       \pdfpagesattr={%
7300         /CropBox[\@pdfpagescrop]%
7301         \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
7302         \else
7303         ^^J\the\pdfpagesattr
7304         \fi
7305       }%
7306     }%
7307     \process@me
7308   \fi
7309   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7310   \pdfcatalog{%
7311     /PageMode/\@pdfpagemode
7312     \ifx\@baseurl\@empty
7313     \else
7314     /URI<</Base(\Hy@pstringB)>>%
7315     \fi
7316   }%
7317   \ifx\@pdfstartpage\@empty
7318   \else
7319     \ifx\@pdfstartview\@empty
7320     \else
7321       openaction goto page\@pdfstartpage{\@pdfstartview}%
7322     \fi
7323   \fi
7324   \edef\Hy@temp{%
7325     \ifHy@toolbar\else /HideToolbar true\fi
7326     \ifHy@menubar\else /HideMenubar true\fi
7327     \ifHy>windowui\else /HideWindowUI true\fi
7328     \ifHy@fitwindow /FitWindow true\fi
7329     \ifHy@centerwindow /CenterWindow true\fi
7330     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7331     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7332     \Hy@UseNameKey{Direction}\@pdfdirection
7333     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7334     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7335     \Hy@UseNameKey{PrintArea}\@pdfprintarea
7336     \Hy@UseNameKey{PrintClip}\@pdfprintclip
7337     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7338     \Hy@UseNameKey{Duplex}\@pdfduplex
7339     \ifx\@pdfpicktraybypdfsize\@empty
7340     \else
7341       /PickTrayByPDFSize \@pdfpicktraybypdfsize
7342     \fi
7343     \ifx\@pdfprintpagerange\@empty
7344     \else
7345       /PrintPageRange[\@pdfprintpagerange]%
7346     \fi
7347     \ifx\@pdfnumcopies\@empty
7348     \else
```

```

7349     /NumCopies \@pdfnumcopies
7350   \fi
7351 }%
7352 \pdfcatalog{%
7353   \ifx\Hy@temp\@empty
7354   \else
7355     /ViewerPreferences<<\Hy@temp>>%
7356   \fi
7357   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7358   \ifx\@pdflang\@empty
7359   \else
7360     /Lang(\@pdflang)%
7361   \fi
7362 }%
7363 }

```

\PDF@FinishDoc

```

7364 \def\PDF@FinishDoc{%
7365   \Hy@UseMaketitleInfos
7366   \pdfinfo{%
7367     /Author(\@pdfauthor)%
7368     /Title(\@pdftitle)%
7369     /Subject(\@pdfsubject)%
7370     /Creator(\@pdfcreator)%
7371     \ifx\@pdfcreationdate\@empty
7372     \else
7373       /CreationDate(\@pdfcreationdate)%
7374     \fi
7375     \ifx\@pdfmoddate\@empty
7376     \else
7377       /ModDate(\@pdfmoddate)%
7378     \fi
7379     \ifx\@pdfproducer\relax
7380     \else
7381       /Producer(\@pdfproducer)%
7382     \fi
7383     /Keywords(\@pdfkeywords)%
7384   }%
7385   \Hy@DisableOption{pdfauthor}%
7386   \Hy@DisableOption{pdftitle}%
7387   \Hy@DisableOption{pdfsubject}%
7388   \Hy@DisableOption{pdfcreator}%
7389   \Hy@DisableOption{pdfcreationdate}%
7390   \Hy@DisableOption{pdfmoddate}%
7391   \Hy@DisableOption{pdfproducer}%
7392   \Hy@DisableOption{pdfkeywords}%
7393 }

```

\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.

```

7394 \def\hyper@pagetransition{%
7395   \ifx\@pdfpagetransition\relax
7396   \else
7397     \expandafter\Hy@RemoveTransPageAttr
7398     \the\pdfpageattr~J/Trans{>>>\END
7399     \ifx\@pdfpagetransition\@empty

```

```

7400     \else
7401         \edef\@processme{%
7402             \global\pdfpageattr{%
7403                 \the\pdfpageattr
7404                 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7405             }%
7406         }%
7407         \@processme
7408     \fi
7409 \fi
7410 }

```

\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.

```

7411 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7412     \ifx\#2\%
7413         \global\pdfpageattr{#1}%
7414     \else
7415         \Hy@RemoveTransPageAttr#1#4\END
7416     \fi
7417 }

```

\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`.

```

7418 \def\hyper@pageduration{%
7419     \ifx\@pdfpageduration\relax
7420     \else
7421         \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
7422         \ifx\@pdfpageduration\@empty
7423         \else
7424             \edef\@processme{%
7425                 \global\pdfpageattr{%
7426                     \the\pdfpageattr
7427                     ^^J/Dur \@pdfpageduration\space
7428                 }%
7429             }%
7430             \@processme
7431         \fi
7432     \fi
7433 }

```

\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.

```

7434 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7435     \ifx\#2\%
7436         \global\pdfpageattr{#1}%
7437     \else
7438         \Hy@RemoveDurPageAttr#1#4\END
7439     \fi
7440 }

```

`\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).

```

7441 \def\hyper@pagehidden{%
7442   \ifHy@useHidKey
7443     \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7444     \ifHy@pdfpagehidden
7445       \edef\@processme{%
7446         \global\pdfpageattr{%
7447           \the\pdfpageattr
7448             ^^J/Hid true % SPACE
7449         }%
7450       }%
7451       \@processme
7452     \fi
7453   \fi
7454 }

```

`\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.

```

7455 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7456   \ifx\#2\%
7457     \global\pdfpageattr{#1}%
7458   \else
7459     \Hy@RemoveHidPageAttr#1#4\END
7460   \fi
7461 }

7462 \g@addto@macro\Hy@EveryPageHook{%
7463   \hyper@pagetransition
7464   \hyper@pageduration
7465   \hyper@pagehidden
7466 }

7467 \AtBeginDocument{%
7468   \ifHy@setpagesize
7469     \expandafter\@firstofone
7470   \else
7471     \expandafter\@gobble
7472   \fi
7473   {%
7474     \@ifclassloaded{seminar}{%
7475       \setlength{\pdfhorigin}{1truein}%
7476       \setlength{\pdfvorigin}{1truein}%
7477     \ifportrait
7478       \ifdim\paperwidth=\z@
7479     \else
7480       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7481     \fi
7482     \ifdim\paperheight=\z@
7483     \else
7484       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7485     \fi
7486   \else
7487     \ifdim\paperheight=\z@
7488     \else

```

```

7489         \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7490     \fi
7491     \ifdim\paperwidth=\z@
7492     \else
7493         \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7494     \fi
7495 \fi
7496 }{%
7497     \@ifundefined{stockwidth}{%
7498         \ifdim\paperwidth=\z@
7499         \else
7500             \setlength{\pdfpagewidth}{\paperwidth}%
7501         \fi
7502         \ifdim\paperheight=\z@
7503         \else
7504             \setlength{\pdfpageheight}{\paperheight}%
7505         \fi
7506     }{%
7507         \ifdim\stockwidth=\z@
7508         \else
7509             \setlength{\pdfpagewidth}{\stockwidth}%
7510         \fi
7511         \ifdim\stockheight=\z@
7512         \else
7513             \setlength{\pdfpageheight}{\stockheight}%
7514         \fi
7515     }%
7516 }%
7517 }%
7518 \Hy@DisableOption{setpagesize}%
7519 }
7520 \def\Acrobatmenu#1#2{%
7521     \Hy@Acrobatmenu{#1}{#2}{%
7522         \pdfstartlink
7523         attr{%
7524             \Hy@setpdfborder
7525             \ifx\@pdfhighlight\@empty
7526             \else
7527                 /H\@pdfhighlight
7528             \fi
7529             \ifx\@menubordercolor\relax
7530             \else
7531                 /C[\@menubordercolor]%
7532             \fi
7533         }%
7534         user{%
7535             /Subtype/Link%
7536             \ifHy@pdfa /F 4\fi
7537             /A<<%
7538                 /S/Named/N/#1%
7539             >>%
7540         }%
7541         \relax
7542         \Hy@colorlink\@menucolor#2%
7543         \close@pdflink
7544     }%
7545 }

```

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`.

```
7546 \def\Hy@FixNotFirstPage{%
7547   \gdef\Hy@FixNotFirstPage{%
7548     \setbox\AtBeginShipoutBox=\hbox{%
7549       \copy\AtBeginShipoutBox
7550     }%
7551   }%
7552 }
7553 \AtBeginShipout{\Hy@FixNotFirstPage}
7554 </pdfTeX>
```

46.3 hypertext

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.

```
7555 <*hypertext>
7556 \providecommand*{\XR@ext}{dvi}
7557 \def\PDF@FinishDoc{}
```

```

7558 \def\PDF@SetupDoc{%
7559   \ifx\@baseurl\@empty
7560   \else
7561     \special{html:<base href="\@baseurl">}%
7562   \fi
7563 }
7564 \def\hyper@anchor#1{%
7565   \Hy@SaveLastskip
7566   \begingroup
7567     \let\protect=\string
7568     \hyper@chars
7569     \special{html:<a name=%
7570       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7571   \endgroup
7572   \Hy@activeanchortrue
7573   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7574   \special{html:</a>}%
7575   \Hy@activeanchorfalse
7576   \Hy@RestoreLastskip
7577 }
7578 \def\hyper@anchorstart#1{%
7579   \Hy@SaveLastskip
7580   \begingroup
7581     \hyper@chars
7582     \special{html:<a name=%
7583       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7584   \endgroup
7585   \Hy@activeanchortrue
7586 }
7587 \def\hyper@anchorend{%
7588   \special{html:</a>}%
7589   \Hy@activeanchorfalse
7590   \Hy@RestoreLastskip
7591 }
7592 \def\@urltype{url}
7593 \def\hyper@linkstart#1#2{%
7594   \expandafter\Hy@colorlink\csname @#1color\endcsname
7595   \def\Hy@tempa{#1}%
7596   \ifx\Hy@tempa\@urltype
7597     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7598   \else
7599     \begingroup
7600       \hyper@chars
7601       \special{html:<a href=%
7602         \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%
7603     \endgroup
7604   \fi
7605 }
7606 \def\hyper@linkend{%
7607   \special{html:</a>}%
7608   \Hy@endcolorlink
7609 }
7610 \def\hyper@linkfile#1#2#3{%
7611   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
7612 }
7613 \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.

```

7614 \leavevmode
7615 \ifHy@raiselinks
7616   \setbox\@tempboxa=\color@hbox #1\color@endbox
7617   \@linkdim\dp\@tempboxa
7618   \lower\@linkdim\hbox{%
7619     \hyper@chars
7620     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7621   }%
7622   \Hy@colorlink\@urlcolor#1%
7623   \@linkdim\ht\@tempboxa

```

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

```

7624   \advance\@linkdim by -6.5\p@
7625   \raise\@linkdim\hbox{\special{html:</a>}}%
7626   \Hy@endcolorlink
7627 \else
7628   \begingroup
7629   \hyper@chars
7630   \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7631   \Hy@colorlink\@urlcolor#1%
7632   \special{html:</a>}}%
7633   \Hy@endcolorlink
7634   \endgroup
7635 \fi
7636 }

```

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

```

7637 \def\hyper@link#1#2#3{%
7638   \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
7639 }

7640 \def\hyper@image#1#2{%
7641   \begingroup
7642   \hyper@chars
7643   \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7644   \endgroup
7645 }
7646 </hypertex>
7647 <*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.


```

7648 \providecommand*{\XR@ext}{dvi}
7649 \providecommand*{\wwwbrowser}{c:\string\netscape\string\netscape}
7650 \def\hyper@anchor#1{%
7651   \Hy@SaveLastskip
7652   \beginngroup
7653     \let\protect=\string
7654     \special{mark: #1}%
7655   \endgroup
7656   \Hy@activeanchortrue
7657   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7658   \Hy@activeanchorfalse
7659   \Hy@RestoreLastskip
7660 }
7661 \def\hyper@anchorstart#1{%
7662   \Hy@SaveLastskip
7663   \special{mark: #1}%
7664   \Hy@activeanchortrue
7665 }
7666 \def\hyper@anchorend{%
7667   \Hy@activeanchorfalse
7668   \Hy@RestoreLastskip
7669 }
7670 \def\hyper@linkstart#1#2{%
7671   \expandafter\Hy@colorlink\csname @#1color\endcsname
7672   \special{button: %
7673     10000000 %
7674     \number\baselineskip\space
7675     #2%
7676   }%
7677 }
7678 \def\hyper@linkend{%
7679   \Hy@endcolorlink
7680 }
7681 \def\hyper@link#1#2#3{%
7682   \setbox\@tempboxa=\color@hbox #3\color@endbox
7683   \leavevmode
7684   \ifHy@raiselinks
7685     \@linkdim\dp\@tempboxa
7686     \lower\@linkdim\hbox{%
7687       \special{button: %
7688         \number\wd\@tempboxa\space
7689         \number\ht\@tempboxa\space
7690         #2%
7691       }%
7692       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7693       \Hy@endcolorlink
7694     }%
7695     \@linkdim\ht\@tempboxa
7696     \advance\@linkdim by -6.5\p@
7697     \raise\@linkdim\hbox{}%
7698   \else
7699     \special{button: %
7700       \number\wd\@tempboxa\space
7701       \number\ht\@tempboxa\space
7702       #2%
7703     }%
7704     \expandafter\Hy@colorlink\csname @#1color\endcsname#3%

```

```

7705 \Hy@endcolorlink
7706 \fi
7707 }
7708 \def\hyper@linkurl#1#2{%
7709 \begingroup
7710 \hyper@chars
7711 \leavevmode
7712 \setbox\@tempboxa=\color@hbox #1\color@endbox
7713 \ifHy@raiselinks
7714 \@linkdim\dp\@tempboxa
7715 \lower\@linkdim\hbox{%
7716 \special{button: %
7717 \number\wd\@tempboxa\space
7718 \number\ht\@tempboxa\space
7719 launch: \wwwbrowser\space
7720 #2%
7721 }%
7722 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7723 }%
7724 \@linkdim\ht\@tempboxa
7725 \advance\@linkdim by -6.5\p@
7726 \raise\@linkdim\hbox{}}%
7727 \else
7728 \special{button: %
7729 \number\wd\@tempboxa\space
7730 \number\ht\@tempboxa\space
7731 launch: \wwwbrowser\space
7732 #2%
7733 }%
7734 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7735 \fi
7736 \endgroup
7737 }
7738 \def\hyper@linkfile#1#2#3{%
7739 \begingroup
7740 \hyper@chars
7741 \leavevmode
7742 \setbox\@tempboxa=\color@hbox #1\color@endbox
7743 \ifHy@raiselinks
7744 \@linkdim\dp\@tempboxa
7745 \lower\@linkdim\hbox{%
7746 \special{button: %
7747 \number\wd\@tempboxa\space
7748 \number\ht\@tempboxa\space
7749 #3,%
7750 file: #2%
7751 }%
7752 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7753 }%
7754 \@linkdim\ht\@tempboxa
7755 \advance\@linkdim by -6.5\p@
7756 \raise\@linkdim\hbox{}}%
7757 \else
7758 \special{button: %
7759 \number\wd\@tempboxa\space
7760 \number\ht\@tempboxa\space
7761 #3,%

```

```

7762         file: #2%
7763     }%
7764     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7765     \fi
7766 \endgroup
7767 }
7768 \ifx\@pdfproducer\relax
7769 \def\@pdfproducer{dviwindo + Distiller}%
7770 \fi
7771 \def\PDF@FinishDoc{%
7772     \Hy@UseMaketitleInfos
7773     \special{PDF: Keywords \@pdfkeywords}%
7774     \special{PDF: Title \@pdftitle}%
7775     \special{PDF: Creator \@pdfcreator}%
7776     \ifx\@pdfcreationdate\@empty
7777     \else
7778         \special{PDF: CreationDate \@pdfcreationdate}%
7779     \fi
7780     \ifx\@pdfmoddate\@empty
7781     \else
7782         \special{PDF: ModDate \@pdfmoddate}%
7783     \fi
7784     \special{PDF: Author \@pdfauthor}%
7785     \ifx\@pdfproducer\relax
7786     \else
7787         \special{PDF: Producer \@pdfproducer}%
7788     \fi
7789     \special{PDF: Subject \@pdfsubject}%
7790     \Hy@DisableOption{pdfauthor}%
7791     \Hy@DisableOption{pdftitle}%
7792     \Hy@DisableOption{pdfsubject}%
7793     \Hy@DisableOption{pdfcreator}%
7794     \Hy@DisableOption{pdfcreationdate}%
7795     \Hy@DisableOption{pdfmoddate}%
7796     \Hy@DisableOption{pdfproducer}%
7797     \Hy@DisableOption{pdfkeywords}%
7798 }
7799 \def\PDF@SetupDoc{%
7800     \ifx\@baseurl\@empty
7801     \else
7802         \special{PDF: Base \@baseurl}%
7803     \fi
7804     \ifx\@pdfpagescrop\@empty\else
7805         \special{PDF: BBox \@pdfpagescrop}%
7806     \fi
7807     \def\Hy@temp{%
7808     \ifx\@pdfstartpage\@empty
7809     \else
7810         \ifx\@pdfstartview\@empty
7811         \else
7812             \edef\Hy@temp{%
7813                 ,Page=\@pdfstartpage
7814                 ,View=\@pdfstartview
7815             }%
7816         \fi
7817     \fi
7818     \edef\Hy@temp{%

```

```

7819     \noexpand\pdfmark{%
7820         pdfmark=/DOCVIEW,%
7821         PageMode=/\@pdfpagemode
7822         \Hy@temp
7823     }%
7824 }%
7825 \Hy@temp
7826 \ifx\@pdfpagescrop\@empty
7827 \else
7828     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7829 \fi
7830 \edef\Hy@temp{%
7831     \ifHy@toolbar\else /HideToolbar true\fi
7832     \ifHy@menubar\else /HideMenubar true\fi
7833     \ifHy>windowui\else /HideWindowUI true\fi
7834     \ifHy@fitwindow /FitWindow true\fi
7835     \ifHy@centerwindow /CenterWindow true\fi
7836     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7837     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7838     \Hy@UseNameKey{Direction}\@pdfdirection
7839     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7840     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7841     \Hy@UseNameKey{PrintArea}\@pdfprintarea
7842     \Hy@UseNameKey{PrintClip}\@pdfprintclip
7843     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7844     \Hy@UseNameKey{Duplex}\@pdfduplex
7845     \ifx\@pdfpicktraybypdfsize\@empty
7846     \else
7847         /PickTrayByPDFSize \@pdfpicktraybypdfsize
7848     \fi
7849     \ifx\@pdfprintpagerange\@empty
7850     \else
7851         /PrintPageRange[\@pdfprintpagerange]%
7852     \fi
7853     \ifx\@pdfnumcopies\@empty
7854     \else
7855         /NumCopies \@pdfnumcopies
7856     \fi
7857 }%
7858 \pdfmark{pdfmark=/PUT,%
7859     Raw={%
7860         \string{Catalog\string}<<%
7861         \ifx\Hy@temp\@empty
7862         \else
7863             /ViewerPreferences<<\Hy@temp>>%
7864         \fi
7865         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7866         \ifx\@pdflang\@empty
7867         \else
7868             /Lang(\@pdflang)%
7869         \fi
7870         >>%
7871     }%
7872 }%
7873 }
7874 </dviwindo>
7875 <*dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```
7876 \providecommand*{\XR@ext}{pdf}
7877 \Hy@setbreaklinks{true}
7878 \newsavebox{\pdfm@box}
7879 \def\@pdfm@mark#1{\special{pdf:#1}}
7880 \def\@pdfm@dest#1{%
7881   \Hy@SaveLastskip
7882   \beginingroup
7883     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7884     \def\x{XYZ}%
7885     \ifx\x\@pdfview
7886       \def\x{XYZ @xpos @ypos null}%
7887     \else
7888       \def\x{FitH}%
7889       \ifx\x\@pdfview
7890         \def\x{FitH @ypos}%
7891       \else
7892         \def\x{FitBH}%
7893         \ifx\x\@pdfview
7894           \def\x{FitBH @ypos}%
7895         \else
7896           \def\x{FitV}%
7897           \ifx\x\@pdfview
7898             \def\x{FitV @xpos}%
7899           \else
7900             \def\x{FitBV}%
7901             \ifx\x\@pdfview
7902               \def\x{FitBV @xpos}%
7903             \else
7904               \def\x{Fit}%
7905               \ifx\x\@pdfview
7906                 \let\x\@pdfview
7907               \else
7908                 \def\x{FitB}%
7909                 \ifx\x\@pdfview
7910                   \let\x\@pdfview
7911                 \else
7912                   \def\x{FitR}%
7913                   \ifx\x\@pdfview
7914                     \Hy@Warning{'pdfview=FitR' is not supported}%
7915                     \def\x{XYZ @xpos @ypos null}%
7916                   \else
7917                     \@onelevel@sanitize\@pdfview
7918                     \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
7919                     \def\x{XYZ @xpos @ypos null}%
7920                   \fi
7921                 \fi
7922               \fi
7923             \fi
7924           \fi
7925         \fi
7926       \fi
7927     \fi
7928     \@pdfm@mark{dest (\Hy@pstringDest) [ @thispage / \x ]}%
7929   \endgroup
```

```

7930 \Hy@RestoreLastskip
7931 }
7932 \providecommand*\@pdfview{XYZ}
7933 \providecommand*\@pdfborder{0 0 1}
7934 \providecommand*\@pdfborderstyle{}
7935 \def\hyper@anchor#1{%
7936 \@pdfm@dest{#1}%
7937 }
7938 \def\hyper@anchorstart#1{%
7939 \Hy@activeanchortrue
7940 \@pdfm@dest{#1}%
7941 }
7942 \def\hyper@anchorend{%
7943 \Hy@activeanchorfalse
7944 }
7945 \newcounter{Hy@AnnotLevel}
7946 \ifHy@ocgcolorlinks
7947 \def\OBJ@OCG@view{@OCG@view}%
7948 \@pdfm@mark{%
7949 obj \OBJ@OCG@view <<%
7950 /Type/OCG%
7951 /Name(View)%
7952 /Usage<<%
7953 /Print<<%
7954 /PrintState/OFF%
7955 >>%
7956 /View<<%
7957 /ViewState/ON%
7958 >>%
7959 >>%
7960 >>%
7961 }%
7962 \@pdfm@mark{close \OBJ@OCG@view}%
7963 \def\OBJ@OCG@print{@OCG@print}%
7964 \@pdfm@mark{%
7965 obj \OBJ@OCG@print <<%
7966 /Type/OCG%
7967 /Name(Print)%
7968 /Usage<<%
7969 /Print<<%
7970 /PrintState/ON%
7971 >>%
7972 /View<<%
7973 /ViewState/OFF%
7974 >>%
7975 >>%
7976 >>%
7977 }%
7978 \@pdfm@mark{close \OBJ@OCG@print}%
7979 \def\OBJ@OCGs{@OCGs}%
7980 \@pdfm@mark{%
7981 obj \OBJ@OCGs [%
7982 \OBJ@OCG@view\space\OBJ@OCG@print
7983 ]%
7984 }%
7985 \@pdfm@mark{close \OBJ@OCGs}%
7986 \@pdfm@mark{%

```

```

7987     put @catalog <<%
7988         /OCProperties<<%
7989         /OCGs \OBJ@OCGs
7990         /D<<%
7991         /OFF[\OBJ@OCG@print]%
7992         /AS[%
7993             <<%
7994                 /Event/View%
7995                 /OCGs \OBJ@OCGs
7996                 /Category[/View]%
7997             >>%
7998             <<%
7999                 /Event/Print%
8000                 /OCGs \OBJ@OCGs
8001                 /Category[/Print]%
8002             >>%
8003             <<%
8004                 /Event/Export%
8005                 /OCGs \OBJ@OCGs
8006                 /Category[/Print]%
8007             >>%
8008         ]%
8009     >>%
8010 >>%
8011 >>%
8012 }%
8013 \AtBeginShipout{%
8014     \setbox\AtBeginShipoutBox=\hbox{%
8015         \copy\AtBeginShipoutBox
8016         \@pdfm@mark{%
8017             put @resources <<%
8018                 /Properties<<%
8019                 /OCView \OBJ@OCG@view
8020                 /OCPrint \OBJ@OCG@print
8021             >>%
8022             >>%
8023         }%
8024     }%
8025 }%
8026 \AtBeginDocument{%
8027     \def\Hy@colorlink#1{%
8028         \begingroup
8029         \ifHy@ocgcolorlinks
8030             \def\Hy@ocgcolor{#1}%
8031             \setbox0=\color@hbox
8032         \else
8033             \HyColor@UseColor#1%
8034         \fi
8035     }%
8036     \def\Hy@endcolorlink{%
8037         \ifHy@ocgcolorlinks
8038             \color@endbox
8039             \mbox{%
8040                 \@pdfm@mark{content /OC/OCPrint BDC}%
8041                 \rlap{\copy0}%
8042                 \@pdfm@mark{content EMC/OC/OCView BDC}%
8043                 \begingroup

```

```

8044         \expandafter\HyColor@UseColor\Hy@ocgcolor
8045         \box0 %
8046     \endgroup
8047     \@pdfmark{content EMC}%
8048 }%
8049 \fi
8050 \endgroup
8051 }%
8052 }%
8053 \else
8054 \Hy@DisableOption{ocgcolorlinks}%
8055 \fi

8056 \def\Hy@BeginAnnot#1{%
8057 \stepcounter{Hy@AnnotLevel}%
8058 \ifnum\value{Hy@AnnotLevel}=\@ne
8059 #1%
8060 \fi
8061 }
8062 \def\Hy@endAnnot{%
8063 \ifnum\value{Hy@AnnotLevel}=\@ne
8064 \Hy@endcolorlink
8065 \@pdfmark{eann}%
8066 \fi
8067 \addtocounter{Hy@AnnotLevel}\m@ne
8068 }

8069 \def\Hy@undefinedname{UNDEFINED}
8070 \def\hyper@linkstart#1#2{%
8071 \Hy@BeginAnnot{%
8072 \protected@edef\Hy@testname{#2}%
8073 \ifx\Hy@testname\@empty
8074 \Hy@Warning{%
8075 Empty destination name,\MessageBreak
8076 using '\Hy@undefinedname'%
8077 }%
8078 \let\Hy@testname\Hy@undefinedname
8079 \else
8080 \Hy@pstringdef\Hy@testname{%
8081 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8082 }%
8083 \fi
8084 \@pdfmark{%
8085 bann<<%
8086 /Type/Annot%
8087 /Subtype/Link%
8088 \ifHy@pdfa /F 4\fi
8089 \Hy@setpdfborder
8090 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8091 \else
8092 /C[\csname @#1bordercolor\endcsname]%
8093 \fi
8094 /A<<%
8095 /S/GoTo%
8096 /D(\Hy@testname)%
8097 >>%
8098 >>%
8099 }%
8100 \expandafter\Hy@colorlink\csname @#1color\endcsname

```



```

8101 }%
8102 }
8103 \def\hyper@linkend{\Hy@EndAnnot}%
8104 \def\hyper@link#1#2#3{%
8105   \hyper@linkstart{#1}{#2}#3\hyper@linkend
8106 }
8107 \def\hyper@linkfile#1#2#3{%
8108   \leavevmode
8109   \Hy@BeginAnnot{%
8110     \Hy@pstringdef\Hy@pstringF{#2}%
8111     \Hy@pstringdef\Hy@pstringD{#3}%
8112     \@pdfm@mark{%
8113       bann<<%
8114         /Type/Annot%
8115         /Subtype/Link%
8116         \ifHy@pdfa /F 4\fi
8117         \Hy@setpdfborder
8118         \ifx\@filebordercolor\relax
8119           \else
8120             /C[\@filebordercolor]%
8121           \fi
8122         /A<<%
8123         /S/GoToR%
8124         /F(\Hy@pstringF)%
8125         /D\ifx\#3\[\[0 \@pdfstartview]\else(\Hy@pstringD)\fi
8126         \Hy@SetNewWindow
8127       >>%
8128     >>%
8129   }%
8130   \Hy@colorlink\@filecolor
8131 }%
8132 #1%
8133 \Hy@EndAnnot
8134 }
8135 \def\hyper@linkurl#1#2{%
8136   \leavevmode
8137   \Hy@BeginAnnot{%
8138     \Hy@pstringdef\Hy@pstringURI{#2}%
8139     \@pdfm@mark{%
8140       bann<<%
8141         /Type/Annot%
8142         /Subtype/Link%
8143         \ifHy@pdfa /F 4\fi
8144         \Hy@setpdfborder
8145         \ifx\@urlbordercolor\relax
8146           \else
8147             /C[\@urlbordercolor]%
8148           \fi
8149         /A<<%
8150         /S/URI%
8151         /URI(\Hy@pstringURI)%
8152       >>%
8153     >>%
8154   }%
8155   \Hy@colorlink\@urlcolor
8156 }%
8157 #1%

```

```

8158 \Hy@EndAnnot
8159 }
8160 \def\Acrobatmenu#1#2{%
8161 \Hy@Acrobatmenu{#1}{#2}{%
8162 \Hy@BeginAnnot{%
8163 \@pdfm@mark{%
8164 bann<<%
8165 /Type/Annot%
8166 /Subtype/Link%
8167 \ifHy@pdfa /F 4\fi
8168 /A<<%
8169 /S/Named%
8170 /N/#1%
8171 >>%
8172 \Hy@setpdfborder
8173 \ifx\@menubordercolor\relax
8174 \relax
8175 /C[\@menubordercolor]%
8176 \fi
8177 >>%
8178 }%
8179 \Hy@colorlink\@menucolor
8180 }%
8181 #2%
8182 \Hy@EndAnnot
8183 }%
8184 }
8185 \ifx\@pdfproducer\relax
8186 \def\@pdfproducer{dvipdfm}%

```

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

```

8187 \begingroup\expandafter\expandafter\expandafter\endgroup
8188 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8189 \else
8190 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8191 \fi
8192 \fi
8193 \def\PDF@FinishDoc{%
8194 \Hy@UseMaketitleInfos
8195 \@pdfm@mark{%
8196 docinfo<<%
8197 /Title(\@pdftitle)%
8198 /Subject(\@pdfsubject)%
8199 /Creator(\@pdfcreator)%
8200 \ifx\@pdfcreationdate\empty
8201 \else
8202 /CreationDate(\@pdfcreationdate)%
8203 \fi
8204 \ifx\@pdfmoddate\empty
8205 \else
8206 /ModDate(\@pdfmoddate)%
8207 \fi
8208 /Author(\@pdfauthor)%
8209 \ifx\@pdfproducer\relax
8210 \else
8211 /Producer(\@pdfproducer)%
8212 \fi
8213 /Keywords(\@pdfkeywords)%

```

```

8214     >>%
8215 }%
8216 \Hy@DisableOption{pdfauthor}%
8217 \Hy@DisableOption{pdftitle}%
8218 \Hy@DisableOption{pdfsubject}%
8219 \Hy@DisableOption{pdfcreator}%
8220 \Hy@DisableOption{pdfcreationdate}%
8221 \Hy@DisableOption{pdfmoddate}%
8222 \Hy@DisableOption{pdfproducer}%
8223 \Hy@DisableOption{pdfkeywords}%
8224 }

8225 \def\PDF@SetupDoc{%
8226   \edef\Hy@temp{%
8227     \ifHy@toolbar\else /HideToolbar true\fi
8228     \ifHy@menubar\else /HideMenubar true\fi
8229     \ifHy@windowui\else /HideWindowUI true\fi
8230     \ifHy@fitwindow /FitWindow true\fi
8231     \ifHy@centerwindow /CenterWindow true\fi
8232     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8233     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8234     \Hy@UseNameKey{Direction}\@pdfdirection
8235     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8236     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8237     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8238     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8239     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8240     \Hy@UseNameKey{Duplex}\@pdfduplex
8241     \ifx\@pdfpicktraybypdfsize\@empty
8242     \else
8243       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8244     \fi
8245     \ifx\@pdfprintpagerange\@empty
8246     \else
8247       /PrintPageRange[\@pdfprintpagerange]%
8248     \fi
8249     \ifx\@pdfnumcopies\@empty
8250     \else
8251       /NumCopies \@pdfnumcopies
8252     \fi
8253   }%
8254   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8255   \@pdfm@mark{%
8256     docview<<%
8257     \ifx\@pdfstartpage\@empty
8258     \else
8259       \ifx\@pdfstartview\@empty
8260       \else
8261         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8262       \fi
8263     \fi
8264     \ifx\@baseurl\@empty
8265     \else
8266       /URI<</Base(\Hy@pstringB)>>%
8267     \fi
8268     /PageMode/\@pdfpagemode
8269     \ifx\Hy@temp\@empty
8270     \else

```

```

8271      /ViewerPreferences<<\Hy@temp>>%
8272      \fi
8273      \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8274      \ifx\@pdflang\@empty
8275      \else
8276      /Lang(\@pdflang)%
8277      \fi
8278      >>%
8279      }%
8280      \ifx\@pdfpagescrop\@empty
8281      \else
8282      \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8283      \fi
8284      }

8285      \AtBeginShipoutFirst{%
8286      \ifx\special@paper\@empty
8287      \else
8288      \ifHy@setpagesize
8289      \special{papersize=\special@paper}%
8290      \fi
8291      \fi
8292      \Hy@DisableOption{setpagesize}%
8293      }
8294      </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.

```

8295      <*vtexhtml>
8296      \providecommand*\XR@ext}{htm}
8297      \RequirePackage{vtexhtml}
8298      \newif\if@Localurl
8299      \def\PDF@FinishDoc{%
8300      \def\PDF@SetupDoc{%
8301      \ifx\@baseurl\@empty
8302      \else
8303      \special{!direct <base href="\@baseurl">}%
8304      \fi
8305      }
8306      \def\@urltype{url}
8307      \def\hyper@link#1#2#3{%
8308      \leavevmode
8309      \special{!direct <a href=%
8310      \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8311      #3%
8312      \special{!direct </a>}%
8313      }
8314      \def\hyper@linkurl#1#2{%
8315      \begingroup
8316      \hyper@chars
8317      \leavevmode
8318      \MathBSuppress=1\relax
8319      \special{!direct <a href=%
8320      \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8321      #1%

```

```

8322 \MathBSuppress=0\relax
8323 \special{!direct </a>}%
8324 \endgroup
8325 }
8326 \def\hyper@linkfile#1#2#3{%
8327 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
8328 }
8329 \def\hyper@linkstart#1#2{%
8330 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8331 \@Localurltrue
8332 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8333 \else
8334 \@Localurlfalse
8335 \begingroup
8336 \hyper@chars
8337 \special{!aref \HyperDestNameFilter{#2}}%
8338 \endgroup
8339 \fi
8340 }
8341 \def\hyper@linkend{%
8342 \if@Localurl
8343 \special{!endaref}%
8344 \else
8345 \special{!direct </a>}%
8346 \fi
8347 }
8348 \def\hyper@anchorstart#1{%
8349 \Hy@SaveLastskip
8350 \begingroup
8351 \hyper@chars
8352 \special{!aname #1}%
8353 \special{!direct <a name=%
8354 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8355 \endgroup
8356 \Hy@activeanchortrue
8357 }
8358 \def\hyper@anchorend{%
8359 \special{!direct </a>}%
8360 \Hy@activeanchorfalse
8361 \Hy@RestoreLastskip
8362 }
8363 \def\hyper@anchor#1{%
8364 \Hy@SaveLastskip
8365 \begingroup
8366 \let\protect=\string
8367 \hyper@chars
8368 \leavevmode
8369 \special{!aname #1}%
8370 \special{!direct <a name=%
8371 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8372 \endgroup
8373 \Hy@activeanchortrue
8374 \bgroup\anchor@spot\egroup
8375 \special{!direct </a>}%
8376 \Hy@activeanchorfalse
8377 \Hy@RestoreLastskip
8378 }

```

```

8379 \def \@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8380 \def \@endForm{}
8381 \def \@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8382   \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8383 }
8384 \def \@TextField[#1]#2{% parameters, label
8385   \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8386 }
8387 \def \@CheckBox[#1]#2{% parameters, label
8388   \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8389 }
8390 \def \@ChoiceMenu[#1]#2#3{% parameters, label, choices
8391   \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8392 }
8393 \def \@PushButton[#1]#2{% parameters, label
8394   \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8395 }
8396 \def \@Reset[#1]#2{%
8397   \typeout{Sorry, TeXpider does not yet support FORMs}%
8398 }
8399 \def \@Submit[#1]#2{%
8400   \typeout{Sorry, TeXpider does not yet support FORMs}%
8401 }
8402 </vtexhtml>
8403 < *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.

```

8404 \ifx \mediaheight \@undefined
8405 \else
8406   \ifx \mediaheight \relax
8407   \else
8408     \ifHy@setpagesize
8409       \providecommand*{\VTeXInitMediaSize}{%
8410         \@ifundefined{stockwidth}{%
8411           \ifdim \paperheight > 0pt %
8412             \setlength \mediaheight \paperheight
8413           \fi
8414           \ifdim \paperheight > 0pt %
8415             \setlength \mediawidth \paperwidth
8416           \fi
8417         }{%
8418           \ifdim \stockheight > 0pt %
8419             \setlength \mediaheight \stockheight
8420           \fi
8421           \ifdim \stockwidth > 0pt %
8422             \setlength \mediawidth \stockwidth
8423           \fi
8424         }%
8425       }%
8426       \AtBeginDocument{\VTeXInitMediaSize}%
8427     \fi
8428     \Hy@DisableOption{setpagesize}%
8429   \fi
8430 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

8431 \providecommand*\@pdfview{xyz}
8432 \providecommand*\@pdfborder{0 0 1}
8433 \providecommand*\@pdfborderstyle{}
8434 \let\CurrentBorderColor\@linkbordercolor
8435 \def\hyper@anchor#1{%
8436   \Hy@SaveLastskip
8437   \begingroup
8438     \let\protect=\string
8439     \hyper@chars
8440     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8441   \endgroup
8442   \Hy@activeanchortrue
8443   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8444   \Hy@activeanchorfalse
8445   \Hy@RestoreLastskip
8446 }
8447 \def\hyper@anchorstart#1{%
8448   \Hy@SaveLastskip
8449   \begingroup
8450     \hyper@chars
8451     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8452   \endgroup
8453   \Hy@activeanchortrue
8454 }
8455 \def\hyper@anchorend{%
8456   \Hy@activeanchorfalse
8457   \Hy@RestoreLastskip
8458 }
8459 \def\@urltype{url}
8460 \def\Hy@undefinedname{UNDEFINED}
8461 \def\hyper@linkstart#1#2{%
8462   \Hy@pstringdef\Hy@pstringURI{#2}%
8463   \expandafter\Hy@colorlink\csname @#1color\endcsname
8464   \@ifundefined{#1bordercolor}{%
8465     \let\CurrentBorderColor\relax
8466   }{%
8467     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8468   }%
8469   \def\Hy@tempa{#1}%
8470   \ifx\Hy@tempa\@urltype
8471     \special{!%
8472       aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8473       a=<%
8474         \ifHy@pdfa /F 4\fi
8475         \Hy@setpdfborder
8476         \ifx\CurrentBorderColor\relax
8477           \else
8478             /C [\CurrentBorderColor]%
8479           \fi
8480         >%
8481       }%
8482   \else
8483     \protected@edef\Hy@testname{#2}%
8484     \ifx\Hy@testname\@empty
8485       \Hy@Warning{%
8486         Empty destination name,\MessageBreak
8487         using '\Hy@undefinedname'%

```

```

8488     }%
8489     \let\Hy@testname\Hy@undefinedname
8490 \fi
8491 \special{!%
8492   aref \expandafter\HyperDestNameFilter
8493     \expandafter{\Hy@testname};%
8494   a=<%
8495     \ifHy@pdfa /F 4\fi
8496     \Hy@setpdfborder
8497     \ifx\CurrentBorderColor\relax
8498     \else
8499       /C [\CurrentBorderColor]%
8500     \fi
8501   >%
8502 }%
8503 \fi
8504 }
8505 \def\hyper@linkend{%
8506   \special{!endaref}%
8507   \Hy@endcolorlink
8508 }
8509 \def\hyper@linkfile#1#2#3{%
8510   \leavevmode
8511   \special{!%
8512     aref <%
8513       \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
8514     f=#2>#3;%
8515     a=<%
8516       \ifHy@pdfa /F 4\fi
8517       \Hy@setpdfborder
8518       \ifx\@filebordercolor\relax
8519       \else
8520         /C [\@filebordercolor]%
8521       \fi
8522     >%
8523   }%
8524   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8525   \special{!endaref}%
8526 }
8527 \def\hyper@linkurl#1#2{%
8528   \begingroup
8529     \Hy@pstringdef\Hy@pstringURI{#2}%
8530     \hyper@chars
8531     \leavevmode
8532     \special{!%
8533       aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8534       a=<%
8535         \ifHy@pdfa /F 4\fi
8536         \Hy@setpdfborder
8537         \ifx\@urlbordercolor\relax
8538         \else
8539           /C [\@urlbordercolor]%
8540         \fi
8541       >%
8542     }%
8543     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8544     \special{!endaref}%

```



```

8545 \endgroup
8546 }
8547 \def\hyper@link#1#2#3{%
8548   \@ifundefined{#1bordercolor}{%
8549     \let\CurrentBorderColor\relax
8550   }{%
8551     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8552   }%
8553   \leavevmode
8554   \protected@edef\Hy@testname{#2}%
8555   \ifx\Hy@testname\@empty
8556     \Hy@Warning{%
8557       Empty destination name,\MessageBreak
8558       using '\Hy@undefinedname'%
8559     }%
8560     \let\Hy@testname\Hy@undefinedname
8561   \fi
8562   \special{!%
8563     aref \expandafter\HyperDestNameFilter
8564     \expandafter{\Hy@testname};%
8565     a=<%
8566     \ifHy@pdfa /F 4\fi
8567     \Hy@setpdfborder
8568     \ifx\CurrentBorderColor\relax
8569       \else
8570       /C [\CurrentBorderColor]%
8571     \fi
8572     >%
8573   }%
8574   \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8575   \special{!endaref}%
8576 }
8577 \def\hyper@image#1#2{%
8578   \hyper@linkurl{#2}{#1}%
8579 }
8580 \def\@hyper@launch run:#1\#2#3{%
8581   \Hy@pstringdef\Hy@pstringF{#1}%
8582   \Hy@pstringdef\Hy@pstringP{#3}%
8583   \leavevmode
8584   \special{!aref %
8585     <u=%
8586     /Type/Action%
8587     /S/Launch%
8588     /F(\Hy@pstringF)%
8589     \Hy@SetNewWindow
8590     \ifx\#3\@empty /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8591     >;%
8592     a=<%
8593     \ifHy@pdfa /F 4\fi
8594     \Hy@setpdfborder
8595     \ifx\@runbordercolor\relax
8596       \else
8597       /C[\@runbordercolor]%
8598     \fi
8599     >%
8600   }%
8601   \Hy@colorlink\@runcolor#2\Hy@endcolorlink

```

```

8602 \special{!endaref}%
8603 }
8604 \def\Acrobatmenu#1#2{%
8605   \Hy@Acrobatmenu{#1}{#2}{%
8606     \special{!%
8607       aref <u=/S /Named /N /#1>;%
8608       a=<%
8609         \ifHy@pdfa /F 4\fi
8610         \Hy@setpdfborder
8611         \ifx\@menubordercolor\relax
8612         \else
8613         /C[\@menubordercolor]%
8614         \fi
8615       >%
8616     }%
8617     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8618   \special{!endaref}%
8619 }%
8620 }

```

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

The code below makes sense for \TeX 7.02 or later.

Please never use $\text{\@ifundefined{VTeXversion}}\{..\}\{..\}$ globally.

```

8621 \ifnum\Hy@VTeXversion<702 %
8622 \else
8623   \def\hyper@pagetransition{%
8624     \ifx\@pdfpagetransition\relax
8625     \else
8626     \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

8627   \else
8628     \hvtex@parse@trans\@pdfpagetransition
8629   \fi
8630 \fi
8631 }%

```

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

Syntax of \TeX $\text{\special}\{!trans <transition_effect>\}$:

```

<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:

```

8632 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8633 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8634 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8635 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8636 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8637 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8638 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

8639 \def\hvtex@par@dimension{/Dm}%
8640 \def\hvtex@par@direction{/Di}%
8641 \def\hvtex@par@duration{/D}%
8642 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

8643 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%

```

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

```

8644 \def\hvtex@gettoken@#1 #2\@nil{%
8645   \edef\hvtex@token{#1}%
8646   \edef\hvtex@buffer{#2}%
8647 }%
8648 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

8649 \let\hvtex@trans@code\@empty
8650 \let\hvtex@param@dimension\@empty
8651 \let\hvtex@param@direction\@empty
8652 \let\hvtex@param@duration\@empty
8653 \let\hvtex@param@motion\@empty
8654 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

8655 \hvtex@gettoken
8656 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

8657 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

8658 \else
8659 \hvtex@gettoken
8660 \fi
8661 \fi
8662 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

8663 \hvtex@trans@params
8664 }%

```

Reentrant macro to parse optional parameters.

```

8665 \def\hvtex@trans@params{%
8666 \ifx\hvtex@buffer\@empty
8667 \else
8668 \hvtex@gettoken
8669 \let\hvtex@trans@par\hvtex@token
8670 \ifx\hvtex@buffer\@empty
8671 \else
8672 \hvtex@gettoken
8673 \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```
8674      \let\hvtex@param@duration\hvtex@token
8675      \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
8676      \expandafter\edef\expandafter\hvtex@param@motion
8677      \expandafter{\expandafter\@gobble\hvtex@token}%
8678      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
8679      \expandafter\edef\expandafter\hvtex@param@dimension
8680      \expandafter{\expandafter\@gobble\hvtex@token}%
8681      \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).

```
8682      \let\hvtex@param@direction\hvtex@token
8683      \fi\fi\fi\fi
8684      \fi
8685      \fi
8686      \ifx\hvtex@buffer\@empty
8687      \let\next\hvtex@produce@trans
8688      \else
8689      \let\next\hvtex@trans@params
8690      \fi
8691      \next
8692  }%
```

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

```
8693  \def\hvtex@produce@trans{%
8694    \let\vtex@trans@special\@empty
8695    \if S\hvtex@trans@code
8696      \edef\vtex@trans@special{\hvtex@trans@code
8697        \hvtex@param@dimension\hvtex@param@motion}%
8698    \else\if B\hvtex@trans@code
8699      \edef\vtex@trans@special{%
8700        \hvtex@trans@code\hvtex@param@dimension
8701      }%
8702    \else\if X\hvtex@trans@code
8703      \edef\vtex@trans@special{%
8704        \hvtex@trans@code\hvtex@param@motion
8705      }%
8706    \else\if W\hvtex@trans@code
8707      \edef\vtex@trans@special{%
8708        \hvtex@trans@code\hvtex@param@direction
8709      }%
8710    \else\if D\hvtex@trans@code
8711      \let\vtex@trans@special\hvtex@trans@code
8712    \else\if R\hvtex@trans@code
8713      \let\vtex@trans@special\hvtex@trans@code
8714    \else\if G\hvtex@trans@code
8715      \edef\vtex@trans@special{%
8716        \hvtex@trans@code\hvtex@param@direction
8717      }%
8718    \fi\fi\fi\fi\fi\fi\fi
8719    \ifx\vtex@trans@special\@empty
8720      \else
8721        \ifx\hvtex@param@duration\@empty
```

```

8722     \else
8723     \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

8724     \multiply\dimen@\@m
8725     \edef\vtex@trans@special{%
8726     \vtex@trans@special,\strip@pt\dimen@
8727     }%
8728     \fi

```

And all the mess is just for this.

```

8729     \special{!trans \vtex@trans@special}%
8730     \fi
8731 }%

8732 \def\hyper@pageduration{%
8733 \ifx\@pdfpageduration\relax
8734 \else
8735 \ifx\@pdfpageduration\@empty
8736 \special{!duration-}%
8737 \else
8738 \special{!duration \@pdfpageduration}%
8739 \fi
8740 \fi
8741 }%
8742 \def\hyper@pagehidden{%
8743 \ifHy@useHidKey
8744 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8745 \fi
8746 }%
8747 \g@addto@macro\Hy@EveryPageBoxHook{%
8748 \hyper@pagetransition
8749 \hyper@pageduration
8750 \hyper@pagehidden
8751 }%
8752 \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

```

8753 \ifx\@pdfproducer\relax
8754 \def\@pdfproducer{VTeX}%
8755 \ifnum\Hy@VTeXversion>\z@
8756 \count@\VTeXversion
8757 \divide\count@ 100 %
8758 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8759 \multiply\count@ -100 %
8760 \advance\count@\VTeXversion
8761 \edef\@pdfproducer{%
8762 \@pdfproducer
8763 .\ifnum\count@<10 0\fi\the\count@

```

```

8764 \ifx\TeXOS\@undefined\else
8765 \ifnum\TeXOS>0 %
8766 \ifnum\TeXOS<6 %
8767 \space(
8768 \ifcase\TeXOS
8769 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8770 \fi
8771 )%
8772 \fi
8773 \fi
8774 \fi
8775 ,\space
8776 \ifnum\OpMode=\@ne PDF\else PS\fi
8777 \space backend%
8778 \ifx\gexmode\@undefined\else
8779 \ifnum\gexmode>z@\space with GeX\fi
8780 \fi
8781 }%
8782 \fi
8783 \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).

```

8784 \def\PDF@SetupDoc{%
8785 \ifx\@pdfpagescrop\@empty
8786 \else
8787 \special{!pdfinfo b=<\@pdfpagescrop>}%
8788 \fi
8789 \ifx\@pdfstartpage\@empty
8790 \else
8791 \ifx\@pdfstartview\@empty
8792 \else
8793 \special{!onopen Page\@pdfstartpage}%
8794 \fi
8795 \fi
8796 \special{!pdfinfo p=</\@pdfpagemode>}%
8797 \ifx\@baseurl\@empty
8798 \else
8799 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
8800 \fi
8801 \special{!pdfinfo v=<<<%
8802 \ifHy@toolbar\else /HideToolbar true\fi
8803 \ifHy@menubar\else /HideMenubar true\fi
8804 \ifHy@windowui\else /HideWindowUI true\fi
8805 \ifHy@fitwindow /FitWindow true\fi

```

```

8806 \ifHy@centerwindow /CenterWindow true\fi
8807 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8808 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8809 \Hy@UseNameKey{Direction}\@pdfdirection
8810 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8811 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8812 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8813 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8814 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8815 \Hy@UseNameKey{Duplex}\@pdfduplex
8816 \ifx\@pdfpicktraybypdfsize\@empty
8817 \else
8818 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8819 \fi
8820 \ifx\@pdfprintpagerange\@empty
8821 \else
8822 /PrintPageRange[\@pdfprintpagerange]%
8823 \fi
8824 \ifx\@pdfnumcopies\@empty
8825 \else
8826 /NumCopies \@pdfnumcopies
8827 \fi
8828 >>>}%
8829 \ifx\@pdfpagelayout\@empty
8830 \else
8831 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
8832 \fi
8833 }%
8834 \def\PDF@FinishDoc{%
8835 \Hy@UseMaketitleInfos
8836 \special{!pdfinfo a=<\@pdfauthor>}%
8837 \special{!pdfinfo t=<\@pdftitle>}%
8838 \special{!pdfinfo s=<\@pdfsubject>}%
8839 \special{!pdfinfo c=<\@pdfcreator>}%
8840 \ifx\@pdfproducer\relax
8841 \else
8842 \special{!pdfinfo r=<\@pdfproducer>}%
8843 \fi
8844 \special{!pdfinfo k=<\@pdfkeywords>}%
8845 \Hy@DisableOption{pdfauthor}%
8846 \Hy@DisableOption{pdftitle}%
8847 \Hy@DisableOption{pdfsubject}%
8848 \Hy@DisableOption{pdfcreator}%
8849 \Hy@DisableOption{pdfcreationdate}%
8850 \Hy@DisableOption{pdfmoddate}%
8851 \Hy@DisableOption{pdfproducer}%
8852 \Hy@DisableOption{pdfkeywords}%
8853 }
8854 </vtx>

```

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.

```

8855 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8856 <package>\providecommand*\Hy@DistillerDestFix{}%
8857 <*pdfmark | dviwindo>
8858 \def\Hy@DistillerDestFix{%
8859   \begingroup
8860     \let\x\literalps@out

```

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

```

8861   \ifnum \@ifundefined{OpMode}{0}{%
8862     \ifundefined{gexmode}{0}{%
8863       \ifnum\gexmode>0 \OpMode\else 0\fi
8864     }>1 %
8865   \def\x##1{%
8866     \immediate\special{!=##1}%
8867   }%
8868 \fi
8869 \x{%
8870   /product where{%
8871     pop %
8872     product(Distiller)search{%
8873       pop pop pop %
8874       version(.)search{%
8875         exch pop exch pop%
8876         (3011)eq{%
8877           gsave %
8878             newpath 0 0 moveto closepath clip%
8879             /Courier findfont 10 scalefont setfont %
8880             72 72 moveto(.)show %
8881             grestore%
8882           }if%
8883         }{pop}ifelse%
8884       }{pop}ifelse%
8885     }if%
8886   }%
8887 \endgroup
8888 }
8889 </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


```

8890 <*pdfmark>
8891 \Hy@breaklinks@unsupported
8892 \def\hyper@anchor#1{%
8893   \Hy@SaveLastskip
8894   \beginingroup
8895     \pdfmark[\anchor@spot]{%
8896       pdfmark=/DEST,%
8897       linktype=anchor,%
8898       View=/\@pdfview \@pdfviewparams,%
8899       DestAnchor={#1}%
8900     }%
8901   \endgroup
8902   \Hy@RestoreLastskip
8903 }
8904 \@ifundefined{hyper@anchorstart}{\endinput}
8905 \def\hyper@anchorstart#1{%
8906   \Hy@SaveLastskip
8907   \literalps@out{H.S}%
8908   \xdef\hyper@currentanchor{#1}%
8909   \Hy@activeanchortrue
8910 }
8911 \def\hyper@anchorend{%
8912   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8913   \pdfmark{%
8914     pdfmark=/DEST,%
8915     linktype=anchor,%
8916     View=/\@pdfview \@pdfviewparams,%
8917     DestAnchor=\hyper@currentanchor,%
8918   }%
8919   \Hy@activeanchorfalse
8920   \Hy@RestoreLastskip
8921 }
8922 \def\hyper@linkstart#1#2{%
8923   \ifHy@breaklinks
8924   \else
8925     \leavevmode\hbox\bgroup
8926     \fi
8927     \expandafter\Hy@colorlink\csname @#1color\endcsname
8928     \literalps@out{H.S}%
8929     \xdef\hyper@currentanchor{#2}%
8930     \gdef\hyper@currentlinktype{#1}%
8931 }
8932 \def\hyper@linkend{%
8933   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8934   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8935     \let\Hy@tempcolor\relax
8936   }{%
8937     \edef\Hy@tempcolor{%
8938       \csname @\hyper@currentlinktype bordercolor\endcsname
8939     }%
8940   }%
8941   \pdfmark{%
8942     pdfmark=/ANN,%
8943     linktype=link,%
8944     Subtype=/Link,%
8945     PDFAMFlags=4,%
8946     Dest=\hyper@currentanchor,%

```

```

8947   AcroHighlight=\@pdfhighlight,%
8948   Border=\@pdfborder,%
8949   BorderStyle=\@pdfborderstyle,%
8950   Color=\Hy@tempcolor,%
8951   Raw=H.B%
8952 }%
8953 \Hy@endcolorlink
8954 \ifHy@breaklinks
8955 \else
8956   \egroup
8957 \fi
8958 }

```

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.

```

8959 \begingroup
8960 \catcode'P=12 %
8961 \catcode'T=12 %
8962 \lowercase{\endgroup
8963 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
8964 }
8965 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8966 \def\hyper@pagetransition{%
8967   \ifx\@pdfpagetransition\relax
8968   \else
8969     \ifx\@pdfpagetransition\@empty
8970       % 1. Does an old entry have to be deleted?
8971       % 2. If 1=yes, how to delete?
8972     \else
8973       \pdfmark{%
8974         pdfmark=/PUT,%
8975         Raw={%
8976           \string{ThisPage\string}%
8977           <</Trans << /S /\@pdfpagetransition\space >> >>%
8978         }%
8979       }%
8980     \fi
8981 \fi
8982 }

```

\hyper@pageduration

```

8983 \def\hyper@pageduration{%
8984   \ifx\@pdfpageduration\relax
8985   \else
8986     \ifx\@pdfpageduration\@empty
8987       % 1. Does an old entry have to be deleted?
8988       % 2. If 1=yes, how to delete?
8989     \else
8990       \pdfmark{%
8991         pdfmark=/PUT,%
8992         Raw={%
8993           \string{ThisPage\string}%
8994           <</Dur \@pdfpageduration>>%
8995       }%

```

```

8996     }%
8997     \fi
8998 \fi
8999 }

```

\hyper@pagehidden

```

9000 \def\hyper@pagehidden{%
9001   \ifHy@useHidKey
9002     \pdfmark{%
9003       pdfmark=/PUT,%
9004       Raw={%
9005         \string{ThisPage\string}%
9006         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9007       }%
9008     }%
9009   \fi
9010 }

9011 \g@addto@macro\Hy@EveryPageBoxHook{%
9012   \hyper@pagetransition
9013   \hyper@pageduration
9014   \hyper@pagehidden
9015 }

9016 \def\hyper@image#1#2{%
9017   \hyper@linkurl{#2}{#1}%
9018 }

9019 \def\Hy@undefinedname{UNDEFINED}
9020 \def\hyper@link#1#2#3{%
9021   \@ifundefined{#1bordercolor}{%
9022     \let\Hy@tempcolor\relax
9023   }{%
9024     \edef\Hy@tempcolor{\csname #1bordercolor\endcsname}%
9025   }%
9026   \begingroup
9027     \protected@edef\Hy@testname{#2}%
9028     \ifx\Hy@testname\@empty
9029       \Hy@Warning{%
9030         Empty destination name,\MessageBreak
9031         using '\Hy@undefinedname'%
9032       }%
9033     \let\Hy@testname\Hy@undefinedname
9034   \fi
9035   \pdfmark[#{#3}]{%
9036     Color=\Hy@tempcolor,%
9037     linktype={#1},%
9038     AcroHighlight=\@pdfhighlight,%
9039     Border=\@pdfborder,%
9040     BorderStyle=\@pdfborderstyle,%
9041     pdfmark=/ANN,%
9042     Subtype=/Link,%
9043     PDFAFlags=4,%
9044     Dest=\Hy@testname
9045   }%
9046   \endgroup
9047 }

9048 \newtoks\pdf@docset
9049 \def\PDF@FinishDoc{%

```

```

9050 \Hy@UseMaketitleInfos
9051 \let\Hy@temp\@empty
9052 \ifx\@pdfcreationdate\@empty
9053 \else
9054   \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9055 \fi
9056 \ifx\@pdfmoddate\@empty
9057 \else
9058   \expandafter\def\expandafter\Hy@temp\expandafter{%
9059     \Hy@temp
9060     ModDate=\@pdfmoddate,%
9061   }%
9062 \fi
9063 \ifx\@pdfproducer\relax
9064 \else
9065   \expandafter\def\expandafter\Hy@temp\expandafter{%
9066     \Hy@temp
9067     Producer=\@pdfproducer,%
9068   }%
9069 \fi
9070 \expandafter
9071 \pdfmark\expandafter{%
9072   \Hy@temp
9073   pdfmark=/DOCINFO,%
9074   Title=\@pdftitle,%
9075   Subject=\@pdfsubject,%
9076   Creator=\@pdfcreator,%
9077   Author=\@pdfauthor,%
9078   Keywords=\@pdfkeywords
9079 }%
9080 \Hy@DisableOption{pdfauthor}%
9081 \Hy@DisableOption{pdftitle}%
9082 \Hy@DisableOption{pdfsubject}%
9083 \Hy@DisableOption{pdfcreator}%
9084 \Hy@DisableOption{pdfcreationdate}%
9085 \Hy@DisableOption{pdfmoddate}%
9086 \Hy@DisableOption{pdfproducer}%
9087 \Hy@DisableOption{pdfkeywords}%
9088 }
9089 \def\PDF@SetupDoc{%
9090   \def\Hy@temp{}%
9091   \ifx\@pdfstartpage\@empty
9092   \else
9093     \ifx\@pdfstartview\@empty
9094     \else
9095       \edef\Hy@temp{%
9096         ,Page=\@pdfstartpage
9097         ,View=\@pdfstartview
9098       }%
9099     \fi
9100   \fi
9101   \edef\Hy@temp{%
9102     \noexpand\pdfmark{%
9103       pdfmark=/DOCVIEW,%
9104       PageMode=/\@pdfpagemode
9105     }\Hy@temp
9106   }%

```

```

9107 }%
9108 \Hy@temp
9109 \ifx\@pdfpagescrop\@empty
9110 \else
9111 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9112 \fi
9113 \edef\Hy@temp{%
9114 \ifHy@toolbar\else /HideToolbar true\fi
9115 \ifHy@menubar\else /HideMenubar true\fi
9116 \ifHy@windowui\else /HideWindowUI true\fi
9117 \ifHy@fitwindow /FitWindow true\fi
9118 \ifHy@centerwindow /CenterWindow true\fi
9119 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9120 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9121 \Hy@UseNameKey{Direction}\@pdfdirection
9122 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9123 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9124 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9125 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9126 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9127 \Hy@UseNameKey{Duplex}\@pdfduplex
9128 \ifx\@pdfpicktraybypdfsize\@empty
9129 \else
9130 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9131 \fi
9132 \ifx\@pdfprintpagerange\@empty
9133 \else
9134 /PrintPageRange[\@pdfprintpagerange]%
9135 \fi
9136 \ifx\@pdfnumcopies\@empty
9137 \else
9138 /NumCopies \@pdfnumcopies
9139 \fi
9140 }%
9141 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9142 \pdfmark{%
9143 pdfmark=/PUT,%
9144 Raw={%
9145 \string{Catalog\string}<<%
9146 \ifx\Hy@temp\@empty
9147 \else
9148 /ViewerPreferences<<\Hy@temp>>%
9149 \fi
9150 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9151 \ifx\@pdflang\@empty
9152 \else
9153 /Lang(\@pdflang)%
9154 \fi
9155 \ifx\@baseurl\@empty
9156 \else
9157 /URI<</Base(\Hy@pstringB)>>%
9158 \fi
9159 >>%
9160 }%
9161 }%
9162 }
9163 \pdfmark

```

9164 \langle *pdfmarkbase \rangle

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

```

9165 \newif\ifHy@pdfmarkerror
9166 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
9167 \def\pdfmark@[#1]#2{%
9168   \Hy@pdfmarkerrorfalse
9169   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9170   \@processme
9171   \let\pdf@type\relax
9172   \setkeys{PDF}{#2}%
9173   \ifHy@pdfmarkerror
9174   \else
9175     \ifx\pdf@type\relax
9176       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9177       \ifx\#1\%
9178       \else
9179         \pdf@rect{#1}%
9180       \fi
9181     \else
9182       \ifx\#1\%
9183         \literalps@out{%
9184           [\the\pdf@toks\space\pdf@type\space pdfmark%
9185           ]%
9186         \else
9187           \@ifundefined{@\pdf@linktype color}{%
9188             \Hy@colorlink\@linkcolor
9189           }{%
9190             \expandafter\Hy@colorlink
9191               \csname @\pdf@linktype color\endcsname
9192           }%
9193           \pdf@rect{#1}%
9194           \literalps@out{%
9195             [\the\pdf@toks\space\pdf@type\space pdfmark%
9196             ]%
9197             \Hy@endcolorlink
9198           \fi
9199         \fi
9200       \fi
9201 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (tobythain@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}

```

```
9202 \newsavebox{\pdf@box}
```

```

9203 \providecommand*{\Hy@setouterhbox}{\sbox}
9204 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9205 \def\Hy@DEST{/DEST}
9206 \def\pdf@rect#1{%
9207   \leavevmode
9208   \ifHy@breaklinks
9209     \Hy@setouterhbox\pdf@box{#1}%
9210   \else
9211     \sbox\pdf@box{#1}%
9212   \fi
9213   \dimen@{\ht\pdf@box}
9214   \ifdim\dp\pdf@box=\z@
9215     \literalps@out{H.S}%
9216   \else
9217     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9218   \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...).

```

9219   \ifHy@breaklinks
9220     \expandafter\Hy@breaklinksunhbox
9221   \else
9222     \expandafter\box
9223   \fi
9224   \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

9225 \ifdim\dimen@=\z@
9226   \literalps@out{H.R}%
9227 \else
9228   \raise\dimen@\hbox{\literalps@out{H.R}}%
9229 \fi
9230 \ifx\pdf@type\Hy@DEST
9231 \else
9232   \pdf@addtoksx{H.B}%
9233 \fi
9234 }

```

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.

```

9235 \newtoks\pdf@toks
9236 \newtoks\pdf@defaulttoks
9237 \pdf@defaulttoks={}
9238 \def\pdf@addtoks#1#2{%
9239   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9240   \@processme
9241 }
9242 \def\pdf@addtoksx#1{%
9243   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9244   \@processme
9245 }
9246 \def\PDFdefaults#1{%
9247   \pdf@defaulttoks={#1}%
9248 }

```

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

```

9249 % what is the type of pdfmark?
9250 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9251 % what is the link type?
9252 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9253 \def\pdf@linktype{link}
9254 % parameter is a stream of PDF
9255 \define@key{PDF}{Raw}{\pdf@addtoks{#1}}
9256 % parameter is a name
9257 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9258 % parameter is a array
9259 \define@key{PDF}{Border}{%
9260   \edef\Hy@temp{#1}%
9261   \ifx\Hy@temp\@empty
9262     \else
9263       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9264     \fi
9265 }
9266 \let\Hy@BorderArrayPatch\@empty
9267 % parameter is a dictionary
9268 \define@key{PDF}{BorderStyle}{%
9269   \edef\Hy@temp{#1}%
9270   \ifx\Hy@temp\@empty
9271     \else
9272       \pdf@addtoks{<<#1>>}{BS}%
9273     \fi
9274 }
9275 % parameter is a array
9276 \define@key{PDF}{Color}{%
9277   \ifx\relax#1\relax
9278     \else
9279       \pdf@addtoks{[#1]}{Color}% hash-ok
9280     \fi
9281 }
9282 % parameter is a string
9283 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9284 % parameter is a integer
9285 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9286 % parameter is a array
9287 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9288 % parameter is a string
9289 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9290 % parameter is a string or file
9291 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9292 % parameter is a destination
9293 \define@key{PDF}{Dest}{%
9294   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9295   \ifx\Hy@pstringDest\@empty
9296     \Hy@pdfmarkerrortrue
9297     \Hy@Warning{Destination with empty name ignored}%
9298   \else
9299     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9300   \fi
9301 }
9302 \define@key{PDF}{DestAnchor}{%
9303   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9304   \ifx\Hy@pstringDest\@empty

```



```

9305 \Hy@pdfmarkerrortrue
9306 \Hy@Warning{Destination with empty name ignored}%
9307 \else
9308 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9309 \fi
9310 }
9311 % parameter is a string
9312 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9313 % parameter is a string
9314 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9315 % parameter is a int
9316 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9317 \define@key{PDF}{PDFAFlags}{%
9318 \ifHy@pdfa
9319 \pdf@addtoks{#1}{F}%
9320 \fi
9321 }
9322 % parameter is a name
9323 \define@key{PDF}{AcroHighlight}{%
9324 \begingroup
9325 \edef\x{#1}%
9326 \expandafter\endgroup\ifx\x\@empty
9327 \else
9328 \pdf@addtoks{#1}{H}%
9329 \fi
9330 }
9331 % parameter is a string
9332 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9333 % parameter is a string
9334 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9335 % parameter is a string
9336 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9337 % parameter is a string
9338 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9339 % parameter is a Boolean
9340 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9341 % parameter is a integer or name
9342 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9343 % parameter is a name
9344 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9345 % parameter is a string
9346 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9347 % parameter is a array
9348 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9349 % parameter is a integer
9350 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9351 % parameter is a name
9352 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9353 % parameter is a string
9354 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9355 % parameter is a string
9356 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9357 % parameter is a string
9358 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9359 % parameter is an array
9360 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9361 % parameter is a string

```

```
9362 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}
```

These are the keys used in the DOCINFO section.

```
9363 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9364 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9365 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9366 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9367 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9368 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9369 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9370 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9371 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9372 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
9373 \pdfmarkbase
9374 \pdfmark
9375 \def\Acrobatmenu#1#2{%
9376   \Hy@Acrobatmenu{#1}{#2}{%
9377     \pdfmark[{#2}]{%
9378       linktype=menu,%
9379       pdfmark=/ANN,%
9380       AcroHighlight=\pdfhighlight,%
9381       Border=\pdfborder,%
9382       BorderStyle=\pdfborderstyle,%
9383       Action={<< /Subtype /Named /N /#1 >>},%
9384       Subtype=/Link,%
9385       PDFAFlags=4%
9386     }%
9387   }%
9388 }
```

And now for some useful examples:

```
9389 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9390 \def\PDFNextPage@[#1]#2{%
9391   \pdfmark[{#2}]{%
9392     #1,%
9393     Border=\pdfborder,%
9394     BorderStyle=\pdfborderstyle,%
9395     Color=.2 .1 .5,%
9396     pdfmark=/ANN,%
9397     Subtype=/Link,%
9398     PDFAFlags=4,%
9399     Page=/Next%
9400   }%
9401 }
9402 \def\PDFPreviousPage{%
9403   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9404 }
9405 \def\PDFPreviousPage@[#1]#2{%
9406   \pdfmark[{#2}]{%
9407     #1,%
9408     Border=\pdfborder,%
9409     BorderStyle=\pdfborderstyle,%
9410     Color=.4 .4 .1,%
9411     pdfmark=/ANN,%
9412     Subtype=/Link,%
9413     PDFAFlags=4,%
9414     Page=/Prev%
9415   }%
9416 }
```

```

9416 }
9417 \def\PDFOpen#1{%
9418   \pdfmark{#1,pdfmark=/DOCVIEW}%
9419 }

```

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

```

9420 \def\hyper@linkurl#1#2{%
9421   \begingroup
9422     \Hy@pstringdef\Hy@pstringURI{#2}%
9423     \hyper@chars
9424     \leavevmode
9425     \pdfmark[{#1}]{%
9426       pdfmark=/ANN,%
9427       linktype=url,%
9428       AcroHighlight=\@pdfhighlight,%
9429       Border=\@pdfborder,%
9430       BorderStyle=\@pdfborderstyle,%
9431       Color=\@urlbordercolor,%
9432       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9433       Subtype=/Link,%
9434       PDFAFlags=4%
9435     }%
9436   \endgroup
9437 }
9438 \def\hyper@linkfile#1#2#3{%
9439   \begingroup
9440     \Hy@pstringdef\Hy@pstringF{#2}%
9441     \Hy@pstringdef\Hy@pstringD{#3}%
9442     \leavevmode
9443     \pdfmark[{#1}]{%
9444       pdfmark=/ANN,%
9445       Subtype=/Link,%
9446       PDFAFlags=4,%
9447       AcroHighlight=\@pdfhighlight,%
9448       Border=\@pdfborder,%
9449       BorderStyle=\@pdfborderstyle,%
9450       linktype=file,%
9451       Color=\@filebordercolor,%
9452       Action={%
9453         <<%
9454           /S/GoToR%
9455           \Hy@SetNewWindow
9456           /F(\Hy@pstringF)%
9457           /D\ifx\#3\[0 \@pdfstartview]\else(\Hy@pstringD)cvn\fi
9458         >>%
9459       }%
9460     }%
9461   \endgroup
9462 }
9463 \def\@hyper@launch run:#1\#2#3{%
9464   \begingroup
9465     \Hy@pstringdef\Hy@pstringF{#1}%
9466     \Hy@pstringdef\Hy@pstringP{#3}%
9467     \leavevmode
9468     \pdfmark[{#2}]{%
9469       pdfmark=/ANN,%
9470       Subtype=/Link,%
9471       PDFAFlags=4,%

```

```

9472     AcroHighlight=\@pdfhighlight,%
9473     Border=\@pdfborder,%
9474     BorderStyle=\@pdfborderstyle,%
9475     linktype=run,%
9476     Color=\@runbordercolor,%
9477     Action={%
9478         <<%
9479             /S/Launch%
9480             \Hy@SetNewWindow
9481             /F(\Hy@pstringF)%
9482             \ifx\#3\%
9483             \else
9484                 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9485             \fi
9486         >>%
9487     }%
9488 }%
9489 \endgroup
9490 }
9491 </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.

```

9492 < *dvips>
9493 \providecommand*\XR@ext}{pdf}
9494 \def\Hy@raisedlink{}
9495 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9496 \def\headerps@out#1{\special{! #1}}%
9497 \input{pdfmark.def}%
9498 \ifx\@pdfproducer\relax
9499   \def\@pdfproducer{dvips + Distiller}%
9500 \fi
9501 \providecommand*\@pdfborder{0 0 1}
9502 \providecommand*\@pdfborderstyle{}
9503 \providecommand*\@pdfview{XYZ}
9504 \providecommand*\@pdfviewparams{ H.V}
9505 \def\Hy@BorderArrayPatch{BorderArrayPatch}
9506 \g@addto@macro\Hy@FirstPageHook{%
9507   \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.

```
9508    /DvipsToPDF{72.27 mul Resolution div} def%
9509    /PDFToDvips{72.27 div Resolution mul} def%
9510    /BPToDvips{72 div Resolution mul}def%
```

The values inside the /Border 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.

```
9511    /BorderArrayPatch{%
9512      [exch{%
9513        dup dup type/integertype eq exch type/realtype eq or%
9514        {BPToDvips}if%
9515      }forall]%
9516    }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.

```
9517    /HyperBorder {1 PDFToDvips} def%
9518    /H.V {pdf@hoff pdf@voff null} def%
9519    /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

```
9520    /H.S {%
9521      currentpoint %
9522      HyperBorder add /pdf@lly exch def %
9523      dup DvipsToPDF 72 add /pdf@hoff exch def %
9524      HyperBorder sub /pdf@llx exch def%
9525    } def%
```

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

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

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

```
9526    /H.L {%
9527      2 sub dup%
9528      /HyperBasePt exch def %
9529      PDFToDvips /HyperBaseDvips exch def %
9530      currentpoint %
9531      HyperBaseDvips sub /pdf@ury exch def%
9532      /pdf@urx exch def%
9533    } def%
9534    /H.A {%
9535      H.L %
9536    % |pdf@voff| = the distance from the top of the page to a point
9537    % |baselineskip| above the current point in PDF coordinates
9538      currentpoint exch pop %
9539      vsize 72 sub exch DvipsToPDF %
9540      HyperBasePt sub % baseline skip
9541      sub /pdf@voff exch def%
9542    } def%
9543    /H.R {%
9544      currentpoint %
9545      HyperBorder sub /pdf@ury exch def %
```

```

9546      HyperBorder add /pdf@urx exch def %
9547 % | /pdf@voff| = the distance from the top of the page to the current point, in
9548 % PDF coordinates
9549      currentpoint exch pop vsize 72 sub %
9550      exch DvipsToPDF sub /pdf@voff exch def%
9551    } def%
9552  }%
9553 }
9554 \AfterBeginDocument{%
9555   \ifx\special@paper\@empty\else
9556     \ifHy@setpagesize
9557       \special{papersize=\special@paper}%
9558     \fi
9559   \fi
9560   \Hy@DisableOption{setpagesize}%
9561 }
9562 </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.

```

9563 <*vtexpdfmark>
9564 \providecommand*{\XR@ext}{pdf}
9565 \def\Hy@raisedlink{}
9566 \def\literalps@out#1{\special{pS:#1}}%
9567 \def\headerps@out#1{\immediate\special{pS:#1}}%
9568 \input{pdfmark.def}%
9569 \ifx\@pdfproducer\relax
9570   \ifnum\OpMode=\@ne
9571     \def\@pdfproducer{VTeX}%
9572   \else
9573     \def\@pdfproducer{VTeX + Distiller}%
9574   \fi
9575 \fi
9576 \providecommand*\@pdfborder{0 0 1}
9577 \providecommand*\@pdfborderstyle{}
9578 \providecommand*\@pdfview{XYZ}
9579 \providecommand*\@pdfviewparams{ H.V}
9580 \g@addto@macro\Hy@FirstPageHook{%
9581   \headerps@out{%
9582     /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.

```

9583   /HyperBorder {1} def%
9584   /H.V {pdf@hoff pdf@voff null} def%
9585   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

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

```

9586   /H.S {%
9587     currentpoint %

```

```

9588     HyperBorder sub%
9589     /pdf@lly exch def %
9590     dup 72 add /pdf@hoff exch def %
9591     HyperBorder sub%
9592     /pdf@llx exch def%
9593     } def%

```

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

```

9594     /H.L {%
9595         2 sub%
9596         /HyperBasePt exch def %
9597         currentpoint %
9598         HyperBasePt add HyperBorder add%
9599         /pdf@ury exch def %
9600         HyperBorder add%
9601         /pdf@urx exch def%
9602     } def%
9603     /H.A {%
9604         H.L %
9605         currentpoint exch pop %
9606         vsize 72 sub exch %
9607         HyperBasePt add add%
9608         /pdf@voff exch def%
9609     } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9610     /H.R {%
9611         currentpoint %
9612         HyperBorder add%
9613         /pdf@ury exch def %
9614         HyperBorder add%
9615         /pdf@urx exch def %
9616         currentpoint exch pop vsize 72 sub add%
9617         /pdf@voff exch def%
9618     } def%
9619     }%
9620 }
9621 </vtxpdfmark>

```

46.11 Textures

```

9622 <*textures>
9623 \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.

```

9624 \begingroup
9625     \obeylines %
9626     \gdef\Hy@ps@CR{\noexpand
9627     }%
9628 \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`.

```

9629 \def\literalps@out#1{%
9630   \special{postscript 0 0 transform}%
9631   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9632 }%
9633 %

```

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.

```

9634 \def\headerps@out#1{%
9635   \special{%
9636     prepostscript TeXdict begin\Hy@ps@CR
9637       #1\Hy@ps@CR
9638     end%
9639   }%
9640 }%
9641 %

```

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.

```

9642 \g@addto@macro\Hy@FirstPageHook{%
9643   \headerps@out{%
9644     /betterpdfmark {%
9645       systemdict begin %
9646         dup /BP eq%
9647         {cleartomark gsave nulldevice []}%
9648         {dup /EP eq%
9649           {cleartomark cleartomark grestore}%
9650           {cleartomark}%}
9651         ifelse%
9652       }ifelse %
9653     end%
9654   }def\Hy@ps@CR
9655   __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9656 }% end of \headerps@out
9657 }% end of \AtBeginShipoutFirst
9658 %
9659 \input{pdfmark.def}%
9660 %
9661 \ifx\@pdfproducer\relax
9662   \def\@pdfproducer{Textures + Distiller}%
9663 \fi
9664 \providecommand*\@pdfborder{0 0 1}
9665 \providecommand*\@pdfborderstyle{}
9666 \providecommand*\@pdfview{XYZ}
9667 \providecommand*\@pdfviewparams{ H.V}
9668 %

```


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

```
9669 \headerps@out{%
```

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

```
9670 /vsize {\Hy@pageheight} def%
9671 /DvipsToPDF {} def%
9672 /PDFToDvips {} def%
9673 /BPToDvips {} def%
9674 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9675 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9676 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9677 /H.S {%
9678   currentpoint %
9679   HyperBorder add /pdf@lly exch def %
9680   dup DvipsToPDF 72 add /pdf@hoff exch def %
9681   HyperBorder sub /pdf@llx exch def%
9682 } def\Hy@ps@CR
9683 /H.L {%
9684   2 sub %
9685   PDFToDvips /HyperBase exch def %
9686   currentpoint %
9687   HyperBase sub /pdf@ury exch def%
9688   /pdf@urx exch def%
9689 } def\Hy@ps@CR
9690 /H.A {%
9691   H.L %
9692   currentpoint exch pop %
9693   vsize 72 sub exch DvipsToPDF %
9694   HyperBase sub % baseline skip
9695   sub /pdf@voff exch def%
9696 } def\Hy@ps@CR
9697 /H.R {%
9698   currentpoint %
9699   HyperBorder sub /pdf@ury exch def %
9700   HyperBorder add /pdf@urx exch def %
9701   currentpoint exch pop vsize 72 sub %
9702   exch DvipsToPDF sub /pdf@voff exch def%
9703 } def\Hy@ps@CR
9704 }

9705 \AfterBeginDocument{%
9706   \ifHy@colorlinks
9707     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9708   \fi
9709 }
```

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.

```
9710 \expandafter\let\expandafter\keepPDF@SetupDoc
9711 \csname PDF@SetupDoc\endcsname
9712 \def\PDF@SetupDoc{%
9713   \ifx\@baseurl\@empty
9714   \else
9715     \special{html:<base href="\@baseurl">}%
```

```

9716 \fi
9717 \keepPDF@SetupDoc
9718 }
9719 \def\hyper@anchor#1{%
9720 \Hy@SaveLastskip
9721 \begingroup
9722 \let\protect=\string
9723 \special{html:<a name=%
9724 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9725 \endgroup
9726 \Hy@activeanchortrue
9727 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9728 \special{html:</a>}%
9729 \Hy@activeanchorfalse
9730 \Hy@RestoreLastskip
9731 }
9732 \def\hyper@anchorstart#1{%
9733 \Hy@SaveLastskip
9734 \begingroup
9735 \hyper@chars
9736 \special{html:<a name=%
9737 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9738 \endgroup
9739 \Hy@activeanchortrue
9740 }
9741 \def\hyper@anchorend{%
9742 \special{html:</a>}%
9743 \Hy@activeanchorfalse
9744 \Hy@RestoreLastskip
9745 }
9746 \def\@urltype{url}
9747 \def\hyper@linkstart#1#2{%
9748 \expandafter\Hy@colorlink\csname @#1color\endcsname
9749 \def\Hy@tempa{#1}%
9750 \ifx\Hy@tempa\@urltype
9751 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9752 \else
9753 \begingroup
9754 \hyper@chars
9755 \special{html:<a href=%
9756 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9757 \endgroup
9758 \fi
9759 }
9760 \def\hyper@linkend{%
9761 \special{html:</a>}%
9762 \Hy@endcolorlink
9763 }
9764 \def\hyper@linkfile#1#2#3{%
9765 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9766 }
9767 \def\hyper@linkurl#1#2{%
9768 \leavevmode
9769 \ifHy@raiselinks
9770 \setbox\@tempboxa=\color@hbox #1\color@endbox
9771 \@linkdim\dp\@tempboxa
9772 \lower\@linkdim\hbox{%

```

```

9773     \hyper@chars
9774     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9775   }%
9776   \Hy@colorlink\@urlcolor#1%
9777   \@linkdim\ht\@tempboxa
9778   \advance\@linkdim by -6.5\p@
9779   \raise\@linkdim\hbox{\special{html:</a>}}}%
9780   \Hy@endcolorlink
9781 \else
9782   \begingroup
9783     \hyper@chars
9784     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9785     \Hy@colorlink\@urlcolor#1%
9786     \special{html:</a>}}}%
9787     \Hy@endcolorlink
9788   \endgroup
9789 \fi
9790 }

```

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

```

9791 \def\hyper@link#1#2#3{%
9792   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
9793 }
9794 \def\hyper@image#1#2{%
9795   \begingroup
9796     \hyper@chars
9797     \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
9798   \endgroup
9799 }
9800 </textures>

```

46.12 dvipsone

```

9801 % \subsection{dvipsone driver}
9802 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
9803 % |\special| commands.
9804 <*dvipsone>
9805 \providecommand*\XR@ext}{pdf}
9806 \def\Hy@raisedlink{}
9807 \providecommand*\@pdfborder{0 0 1}
9808 \providecommand*\@pdfborderstyle{}
9809 \def\literalps@out#1{\special{ps:#1}}}%
9810 \def\headerps@out#1{\special{headertext=#1}}}%
9811 \input{pdfmark.def}%
9812 \ifx\@pdfproducer\relax
9813   \def\@pdfproducer{dvipsone + Distiller}%
9814 \fi
9815 \def\PDF@FinishDoc{%
9816   \Hy@UseMaketitleInfos
9817   \special{PDF: Keywords \@pdfkeywords}%
9818   \special{PDF: Title \@pdftitle}%
9819   \special{PDF: Creator \@pdfcreator}%
9820   \ifx\@pdfcreationdate\@empty
9821   \else
9822     \special{PDF: CreationDate \@pdfcreationdate}%
9823   \fi
9824   \ifx\@pdfmoddate\@empty
9825   \else

```

```

9826     \special{PDF: ModDate \@pdfmoddate}%
9827 \fi
9828 \special{PDF: Author \@pdfauthor}%
9829 \ifx\@pdfproducer\relax
9830 \else
9831     \special{PDF: Producer \@pdfproducer}%
9832 \fi
9833 \special{PDF: Subject \@pdfsubject}%
9834 \Hy@DisableOption{pdfauthor}%
9835 \Hy@DisableOption{pdftitle}%
9836 \Hy@DisableOption{pdfsubject}%
9837 \Hy@DisableOption{pdfcreator}%
9838 \Hy@DisableOption{pdfcreationdate}%
9839 \Hy@DisableOption{pdfmoddate}%
9840 \Hy@DisableOption{pdfproducer}%
9841 \Hy@DisableOption{pdfkeywords}%
9842 }
9843 \def\PDF@SetupDoc{%
9844     \def\Hy@temp{}%
9845     \ifx\@pdfstartpage\@empty
9846     \else
9847         \ifx\@pdfstartview\@empty
9848         \else
9849             \edef\Hy@temp{%
9850                 ,Page=\@pdfstartpage
9851                 ,View=\@pdfstartview
9852             }%
9853         \fi
9854     \fi
9855     \edef\Hy@temp{%
9856         \noexpand\pdfmark{%
9857             pdfmark=/DOCVIEW,%
9858             PageMode=/\@pdfpagemode
9859         }\Hy@temp
9860     }%
9861 }%
9862 \Hy@temp
9863 \ifx\@pdfpagescrop\@empty
9864 \else
9865     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9866 \fi
9867 \edef\Hy@temp{%
9868     \ifHy@toolbar\else /HideToolbar true\fi
9869     \ifHy@menubar\else /HideMenubar true\fi
9870     \ifHy>windowui\else /HideWindowUI true\fi
9871     \ifHy@fitwindow /FitWindow true\fi
9872     \ifHy@centerwindow /CenterWindow true\fi
9873     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9874     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9875     \Hy@UseNameKey{Direction}\@pdfdirection
9876     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9877     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9878     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9879     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9880     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9881     \Hy@UseNameKey{Duplex}\@pdfduplex
9882     \ifx\@pdfpicktraybypdfsize\@empty

```

```

9883 \else
9884 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9885 \fi
9886 \ifx\@pdfprintpagerange\@empty
9887 \else
9888 /PrintPageRange[\@pdfprintpagerange]%
9889 \fi
9890 \ifx\@pdfnumcopies\@empty
9891 \else
9892 /NumCopies \@pdfnumcopies
9893 \fi
9894 }%
9895 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9896 \pdfmark{%
9897 pdfmark=/PUT,%
9898 Raw={%
9899 \string{Catalog\string}<<%
9900 \ifx\Hy@temp\@empty
9901 \else
9902 /ViewerPreferences<<\Hy@temp>>%
9903 \fi
9904 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9905 \ifx\@pdflang\@empty
9906 \else
9907 /Lang(\@pdflang)%
9908 \fi
9909 \ifx\@baseurl\@empty
9910 \else
9911 /URI<</Base(\Hy@pstringB)>>%
9912 \fi
9913 >>%
9914 }%
9915 }%
9916 }
9917 \providecommand*\@pdfview{XYZ}
9918 \providecommand*\@pdfviewparams{ %
9919 gsave revscl currentpoint grestore %
9920 72 add exch pop null exch null%
9921 }
9922 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

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

```

9923 \g@addto@macro\Hy@FirstPageHook{%
9924 \headerps@out{%

```

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

```

9925 /DvipsToPDF { 65781 div } def%
9926 /PDFToDvips { 65781 mul } def%
9927 /BPToDvips{65781 mul}def%
9928 /HyperBorder { 1 PDFToDvips } def%
9929 /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.

```

9930 /BorderArrayPatch{%
9931   [exch{%
9932     dup dup type/integertype eq exch type/realttype eq or%
9933     {BPToDvips}if%
9934   }forall]%
9935 }def%
9936 /H.S {%
9937   currentpoint %
9938   HyperBorder add /pdf@lly exch def %
9939   dup DvipsToPDF 72 add /pdf@hoff exch def %
9940   HyperBorder sub /pdf@llx exch def%
9941 } def%
9942 /H.L {%
9943   2 sub %
9944   PDFToDvips /HyperBase exch def %
9945   currentpoint %
9946   HyperBase sub /pdf@ury exch def%
9947   /pdf@urx exch def%
9948 } def%
9949 /H.A {%
9950   H.L %
9951   currentpoint exch pop %
9952   HyperBase sub % baseline skip
9953   DvipsToPDF /pdf@voff exch def%
9954 } def%
9955 /H.R {%
9956   currentpoint %
9957   HyperBorder sub /pdf@ury exch def %
9958   HyperBorder add /pdf@urx exch def %
9959   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9960 } def%
9961 }%
9962 }
9963 </dvipsone>

```

46.13 TeX4ht

```

9964 <{*tex4ht>
9965 \providecommand*{\XR@ext}{html}
9966 \def\Hy@raisedlink{}
9967 \@ifpackageloaded{tex4ht}{%
9968   \typeout{hyperref tex4ht: tex4ht already loaded}%
9969 }{%
9970   \RequirePackage[htex4ht]{tex4ht}%
9971 }
9972 \hyperlinkfileprefix{}
9973 \def\PDF@FinishDoc{}
9974 \def\PDF@SetupDoc{%
9975   \ifx\@baseurl\@empty
9976   \else
9977     \special{t4ht=<base href="\@baseurl">}%
9978   \fi
9979 }
9980 \def\hyper@anchor#1{%
9981   \Hy@SaveLastskip
9982   \begingroup
9983     \let\protect=\string
9984     \special{t4ht=<a name=%

```

```

9985         \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9986     \endgroup
9987     \Hy@activeanchortrue
9988     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9989     \special{t4ht=</a>}%
9990     \Hy@activeanchorfalse
9991     \Hy@RestoreLastskip
9992 }
9993 \def\hyper@anchorstart#1{%
9994     \Hy@SaveLastskip
9995     \begingroup
9996         \hyper@chars\special{t4ht=<a name=%
9997             \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9998     \endgroup
9999     \Hy@activeanchortrue
10000 }
10001 \def\hyper@anchorend{%
10002     \special{t4ht=</a>}%
10003     \Hy@activeanchorfalse
10004     \Hy@RestoreLastskip
10005 }
10006 \def\@urltype{url}
10007 \def\hyper@linkstart#1#2{%
10008     \expandafter\Hy@colorlink\csname @#1color\endcsname
10009     \def\Hy@tempa{#1}%
10010     \ifx\Hy@tempa\@urltype
10011         \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10012     \else
10013         \begingroup
10014             \hyper@chars
10015             \special{t4ht=<a href=%
10016                 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10017         \endgroup
10018     \fi
10019 }
10020 \def\hyper@linkend{%
10021     \special{t4ht=</a>}%
10022     \Hy@endcolorlink
10023 }
10024 \def\hyper@linkfile#1#2#3{%
10025     \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10026 }
10027 \def\hyper@linkurl#1#2{%
10028     \leavevmode
10029     \ifHy@raiselinks
10030         \setbox\@tempboxa=\color@hbox #1\color@endbox
10031         \@linkdim\dp\@tempboxa
10032         \lower\@linkdim\hbox{%
10033             \begingroup
10034                 \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10035             \endgroup
10036         }%
10037         \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10038         \@linkdim\ht\@tempboxa
10039         \advance\@linkdim by -6.5\p@
10040         \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10041     \else

```

```

10042 \begingroup
10043 \hyper@chars
10044 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10045 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10046 \special{t4ht=</a>}%
10047 \endgroup
10048 \fi
10049 }

```

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

```

10050 \def\hyper@link#1#2#3{%
10051 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
10052 }
10053 \def\hyper@image#1#2{%
10054 \begingroup
10055 \hyper@chars
10056 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10057 \endgroup
10058 }
10059 \let\autoref\ref
10060 \ifx \rEfLiNK \UnDef
10061 \def\rEfLiNK #1#2{#2}%
10062 \fi
10063 \def\backref#1{}
10064 </tex4ht>
10065 <*tex4htcfg>
10066 \IfFileExists{\jobname.cfg}{\endinput}{}
10067 \Preamble{html}
10068 \begin{document}%
10069 \EndPreamble
10070 \def\TeX{TeX}
10071 \def\OMEGA{\Omega}
10072 \def\LaTeX{LaTeX}
10073 \def\LaTeXe{\LaTeX2e}
10074 \def\eTeX{e-TeX}
10075 \def\MF{Metafont}
10076 \def\MP{MetaPost}
10077 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

10078 <*pdfmark>
10079 \long\def\@Form[#1]{%
10080 \g@addto@macro\Hy@FirstPageHook{%
10081 \headerps@out{%
10082 [%
10083 /_objdef{pdfDocEncoding}%
10084 /type/dict%
10085 /OBJ pdfmark%
10086 [%
10087 {pdfDocEncoding}%
10088 <<%
10089 /Type/Encoding%
10090 /Differences[%
10091 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10092 /tilde %

```


10093 39/quotesingle %
10094 96/grave %
10095 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10096 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10097 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10098 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10099 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10100 164/currency %
10101 166/brokenbar %
10102 168/dieresis/copyright/ordfeminine %
10103 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10104 /twosuperior/threesuperior/acute/mu %
10105 183/periodcentered/cedilla/onesuperior/ordmasculine %
10106 188/onequarter/onehalf/threequarters %
10107 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10108 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10109 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10110 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10111 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10112 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10113 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10114 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10115 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10116 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10117]%
10118 >>%
10119 /PUT pdfmark%
10120 [%
10121 /_objdef{ZaDb}%
10122 /type/dict%
10123 /OBJ pdfmark%
10124 [%
10125 {ZaDb}%
10126 <<%
10127 /Type/Font%
10128 /Subtype/Type1%
10129 /Name/ZaDb%
10130 /BaseFont/ZapfDingbats%
10131 >>%
10132 /PUT pdfmark%
10133 [%
10134 /_objdef{Helv}%
10135 /type/dict%
10136 /OBJ pdfmark%
10137 [%
10138 {Helv}%
10139 <<%
10140 /Type/Font%
10141 /Subtype/Type1%
10142 /Name/Helv%
10143 /BaseFont/Helvetica%
10144 /Encoding{pdfDocEncoding}%
10145 >>%
10146 /PUT pdfmark%
10147 [%
10148 /_objdef{aform}%
10149 /type/dict%

```

10150 /OBJ pdfmark%
10151 [%
10152   /_objdef{afields}%
10153   /type/array%
10154 /OBJ pdfmark%
10155 {%
10156   [%
10157     /BBox[0 0 100 100]%
10158     /_objdef{Check}%
10159   /BP pdfmark %
10160   1 0 0 setrgbcolor%
10161   /ZapfDingbats 80 selectfont %
10162   20 20 moveto%
10163   (4)show%
10164   [/EP pdfmark%
10165   [%
10166     /BBox[0 0 100 100]%
10167     /_objdef{Cross}%
10168   /BP pdfmark %
10169   1 0 0 setrgbcolor%
10170   /ZapfDingbats 80 selectfont %
10171   20 20 moveto%
10172   (8)show%
10173   [/EP pdfmark%
10174   [%
10175     /BBox[0 0 250 100]%
10176     /_objdef{Submit}%
10177   /BP pdfmark %
10178   0.6 setgray %
10179   0 0 250 100 rectfill %
10180   1 setgray %
10181   2 2 moveto %
10182   2 98 lineto %
10183   248 98 lineto %
10184   246 96 lineto %
10185   4 96 lineto %
10186   4 4 lineto %
10187   fill %
10188   0.34 setgray %
10189   248 98 moveto %
10190   248 2 lineto %
10191   2 2 lineto %
10192   4 4 lineto %
10193   246 4 lineto %
10194   246 96 lineto %
10195   fill%
10196   /Helvetica 76 selectfont %
10197   0 setgray %
10198   8 22.5 moveto%
10199   (Submit)show%
10200   [/EP pdfmark%
10201   [%
10202     /BBox[0 0 250 100]%
10203     /_objdef{SubmitP}%
10204   /BP pdfmark %
10205   0.6 setgray %
10206   0 0 250 100 rectfill %

```

```

10207 0.34 setgray %
10208 2 2 moveto %
10209 2 98 lineto %
10210 248 98 lineto %
10211 246 96 lineto %
10212 4 96 lineto %
10213 4 4 lineto %
10214 fill %
10215 1 setgray %
10216 248 98 moveto %
10217 248 2 lineto %
10218 2 2 lineto %
10219 4 4 lineto %
10220 246 4 lineto %
10221 246 96 lineto %
10222 fill%
10223 /Helvetica 76 selectfont %
10224 0 setgray %
10225 10 20.5 moveto%
10226 (Submit)show%
10227 [/EP pdfmark%
10228 } ?pdfmark%
10229 [%
10230 {aform}%
10231 <<%
10232 /Fields{afields}%
10233 /DR<<%
10234 /Font<<%
10235 /ZaDb{ZaDb}%
10236 /Helv{Helv}%
10237 >>%
10238 >>%
10239 /DA(/Helv 10 Tf 0 g)%
10240 /CO{corder}%
10241 \ifHy@pdfa
10242 \else
10243 /NeedAppearances true%
10244 \fi
10245 >>%
10246 /PUT pdfmark%
10247 [%
10248 {Catalog}%
10249 <<%
10250 /AcroForm{aform}%
10251 >>%
10252 /PUT pdfmark%
10253 [%
10254 /_objdef{corder}%
10255 /type/array%
10256 /OBJ pdfmark% dps
10257 }}%
10258 \setkeys{Form}{#1}%
10259 }
10260 \def\@endForm{}
10261 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10262 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10263 }

```

```

10264 \def\@TextField[#1]#2{% parameters, label
10265   \def\Fld@name{#2}%
10266   \def\Fld@default{}%
10267   \let\Fld@value\@empty
10268   \def\Fld@width{\DefaultWidthofText}%
10269   \def\Fld@height{%
10270     \ifFld@multiline
10271       \DefaultHeightofTextMultiline
10272     \else
10273       \DefaultHeightofText
10274     \fi
10275   }%
10276   \begingroup
10277     \Field@toks={ }%
10278     \expandafter\HyField@SetKeys\expandafter{%
10279       \DefaultOptionsofText,#1%
10280     }%
10281     \HyField@FlagsText
10282     \ifFld@hidden\def\Fld@width{1sp}\fi
10283     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10284     \LayoutTextField{#2}{%
10285       \Hy@escapeform\PDFForm@Text
10286       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10287         pdfmark=/ANN,Raw={\PDFForm@Text}%
10288       }%
10289     }%
10290   \endgroup
10291 }
10292 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10293   \def\Fld@name{#2}%
10294   \let\Fld@default\relax
10295   \let\Fld@value\relax
10296   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10297   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10298   \begingroup
10299     \Fld@menulength=0 %
10300     \@tempdima\z@
10301     \@for\@curropt:=#3\do{%
10302       \expandafter\Fld@checkequals\@curropt==\%
10303       \Hy@StepCount\Fld@menulength
10304       \settowidth{\@tempdimb}{\@currDisplay}%
10305       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10306     }%
10307     \advance\@tempdima by 15\p@
10308     \Field@toks={ }%
10309     \begingroup
10310       \HyField@SetKeys{#1}%
10311     \edef\x{\endgroup
10312       \noexpand\expandafter
10313       \noexpand\HyField@SetKeys
10314       \noexpand\expandafter{%
10315         \expandafter\noexpand\cname DefaultOptionsof%
10316         \ifFld@radio
10317           Radio%
10318         \else
10319           \ifFld@combo
10320             \ifFld@popdown

```

```

10321             PopdownBox%
10322             \else
10323             ComboBox%
10324             \fi
10325             \else
10326             ListBox%
10327             \fi
10328             \fi
10329         \endcsname
10330     }%
10331 } \x
10332 \HyField@SetKeys{#1}%
10333 \ifFld@hidden\def\Fld@width{1sp}\fi
10334 \ifx\Fld@value\relax
10335     \let\Fld@value\Fld@default
10336 \fi
10337 \LayoutChoiceField{#2}{%
10338     \ifFld@radio
10339         \HyField@FlagsRadioButton
10340         \@@Radio{#3}%
10341     \else
10342         \begingroup
10343             \HyField@FlagsChoice
10344             \ifdim\Fld@width<\@tempdima
10345                 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10346                 \edef\Fld@width{\the\@tempdima}%
10347             \fi
10348             \ifFld@combo
10349             \else
10350                 \@tempdima=\the\Fld@menulength\Fld@charsize
10351                 \advance\@tempdima by \Fld@borderwidth bp %
10352                 \advance\@tempdima by \Fld@borderwidth bp %
10353                 \edef\Fld@height{\the\@tempdima}%
10354             \fi
10355             \@@Listbox{#3}%
10356         \endgroup
10357     \fi
10358 }%
10359 \endgroup
10360 }
10361 \def\@@Radio#1{%
10362     \Fld@listcount=0 %
10363     \@for\@curropt:=#1\do{%
10364         \expandafter\Fld@checkequals\@curropt==\%
10365         \Hy@StepCount\Fld@listcount
10366         \@currDisplay\space
10367         \Hy@escapeform\PDFForm@Radio
10368         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10369             pdfmark=/ANN,%
10370             Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10371         } % deliberate space between radio buttons
10372     }%
10373 }
10374 \newcount\Fld@listcount
10375 \def\@@Listbox#1{%
10376     \HyField@PDFChoices{#1}%
10377     \Hy@escapeform\PDFForm@List

```

```

10378 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10379 pdfmark=/ANN,Raw={\PDFForm@List}%
10380 }%
10381 }
10382 \def\@PushButton[#1]#2{% parameters, label
10383 \def\Fld@name{#2}%
10384 \begingroup
10385 \Field@toks={ }%
10386 \expandafter\HyField@SetKeys\expandafter{%
10387 \DefaultOptionsofPushButton,#1%
10388 }%
10389 \ifHy@pdfa
10390 \PackageError{hyperref}{%
10391 PDF/A: Push button with JavaScript is prohibited%
10392 }\@ehc
10393 \LayoutPushButtonField{%
10394 \leavevmode
10395 \MakeButtonField{#2}%
10396 }%
10397 \else
10398 \HyField@FlagsPushButton
10399 \ifFld@hidden\def\Fld@width{1sp}\fi
10400 \LayoutPushButtonField{%
10401 \leavevmode
10402 \Hy@escapeform\PDFForm@Push
10403 \pdfmark[\MakeButtonField{#2}]{%
10404 pdfmark=/ANN,Raw={\PDFForm@Push}%
10405 }%
10406 }%
10407 \fi
10408 \endgroup
10409 }
10410 \def\@Submit[#1]#2{%
10411 \Field@toks={ }%
10412 \def\Fld@width{\DefaultWidthofSubmit}%
10413 \def\Fld@height{\DefaultHeightofSubmit}%
10414 \begingroup
10415 \expandafter\HyField@SetKeys\expandafter{%
10416 \DefaultOptionsofSubmit,#1%
10417 }%
10418 \HyField@FlagsPushButton
10419 \HyField@FlagsSubmit
10420 \ifFld@hidden\def\Fld@width{1sp}\fi
10421 \Hy@escapeform\PDFForm@Submit
10422 \pdfmark[\MakeButtonField{#2}]{%
10423 pdfmark=/ANN,%
10424 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10425 }%
10426 \endgroup
10427 }
10428 \def\@Reset[#1]#2{%
10429 \Field@toks={ }%
10430 \def\Fld@width{\DefaultWidthofReset}%
10431 \def\Fld@height{\DefaultHeightofReset}%
10432 \begingroup
10433 \expandafter\HyField@SetKeys\expandafter{%
10434 \DefaultOptionsofReset,#1%

```

```

10435 }%
10436 \leavevmode
10437 \ifHy@pdfa
10438   \PackageError{hyperref}{%
10439     PDF/A: Reset action is prohibited%
10440   }{\@ehc
10441     \MakeButtonField{#2}%
10442   \else
10443     \HyField@FlagsPushButton
10444     \ifFld@hidden\def\Fld@width{1sp}\fi
10445     \Hy@escapeform\PDFForm@Reset
10446     \pdfmark[\MakeButtonField{#2}]{%
10447       pdfmark=/ANN,Raw={\PDFForm@Reset}%
10448     }%
10449   \fi
10450 \endgroup
10451 }%
10452 \def\@CheckBox[#1]#2{% parameters, label
10453   \def\Fld@name{#2}%
10454   \def\Fld@default{0}%
10455   \beginingroup
10456     \def\Fld@width{\DefaultWidthofCheckBox}%
10457     \def\Fld@height{\DefaultHeightofCheckBox}%
10458     \Field@toks={ }%
10459     \expandafter\HyField@SetKeys\expandafter{%
10460       \DefaultOptionsofCheckBox,#1%
10461     }%
10462     \HyField@FlagsCheckBox
10463     \ifFld@hidden\def\Fld@width{1sp}\fi
10464     \LayoutCheckField{#2}{%
10465       \Hy@escapeform\PDFForm@Check
10466       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10467         pdfmark=/ANN,Raw={\PDFForm@Check}%
10468       }%
10469     }%
10470 \endgroup
10471 }
10472 \</pdfmark>

```

47.2 HyperTeX

```

10473 \<{*hypertex}
10474 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10475 \def\@endForm{}
10476 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10477   \typeout{Sorry, HyperTeX does not support FORM gauges}%
10478 }
10479 \def\@TextField[#1]#2{% parameters, label
10480   \typeout{Sorry, HyperTeX does not support FORM text fields}%
10481 }
10482 \def\@CheckBox[#1]#2{% parameters, label
10483   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10484 }
10485 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10486   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10487 }
10488 \def\@PushButton[#1]#2{% parameters, label
10489   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%

```

```

10490 }
10491 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10492 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10493 </hypertex>

```

47.3 TeX4ht

```

10494 <*tex4ht>
10495 \def\@Form[#1]{%
10496   \setkeys{Form}{#1}%
10497   \HCode{<form action="\Form@action" method="\Form@method">}%
10498 }
10499 \def\@endForm{\HCode{</form>}}
10500 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10501   \typeout{Sorry, TeX4ht does not support gauges}%
10502 }
10503 \def\@TextField[#1]#2{% parameters, label
10504   \let\Hy@reserved@a\@empty
10505   \def\Fld@name{#2}%
10506   \def\Fld@default{}%
10507   \bgroup
10508     \Field@toks={ }%
10509     \setkeys{Field}{#1}%
10510     \HCode{<label for="\Fld@name">#2</label>}%
10511     \ifFld@password
10512       \@@PasswordField
10513     \else
10514       \@@TextField
10515     \fi
10516   \egroup
10517 }
10518 \def\@@PasswordField{%
10519   \HCode{%
10520     <input type="password" %
10521       id="\Fld@name" %
10522       name="\Fld@name" %
10523       \ifFld@hidden type="hidden" \fi
10524       value="\Fld@default" %
10525       \the\Field@toks
10526     >%
10527   }%
10528 }
10529 \def\@@TextField{%
10530   \ifFld@multiline
10531     \HCode{<textarea %
10532       \ifFld@readonly readonly \fi
10533       id="\Fld@name" %
10534       name="\Fld@name" %
10535       \ifFld@hidden type="hidden" \fi
10536       \the\Field@toks>%
10537     }%
10538     \Fld@default
10539     \HCode{</textarea>}%
10540   \else
10541     \HCode{<input type="text" %
10542       \ifFld@readonly readonly \fi
10543       id="\Fld@name" %
10544       name="\Fld@name" %

```



```

10545     \ifFld@hidden type="hidden" \fi
10546     value="\Fld@default" %
10547     \the\Field@toks>%
10548 }%
10549 \fi
10550 }
10551 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10552   \def\Fld@name{#2}%
10553   \def\Fld@default{}%
10554   \let\Hy@reserved@a\relax
10555   \begingroup
10556     \expandafter\Fld@findlength#3\\%
10557     \Field@toks={ }%
10558     \setkeys{Field}{#1}%
10559     #2%
10560     \ifFld@radio
10561       \expandafter\@@Radio#3\\%
10562     \else
10563       \expandafter\@@Menu#3\\%
10564     \fi
10565   \endgroup
10566 }
10567 \def\Fld@findlength#1\\{%
10568   \Fld@menulength=0 %
10569   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10570 }
10571 \def\@@Menu#1\\{%
10572   \HCode{<select size="\the\Fld@menulength" %
10573     name="\Fld@name" %
10574     \the\Field@toks>%
10575   }%
10576   \@for\@curropt:=#1\do{%
10577     \expandafter\Fld@checkequals\@curropt==\\%
10578     \HCode{<option %
10579       \ifx\@curropt\Fld@default selected \fi
10580       value="\@currValue">\@currDisplay</option>%
10581     }%
10582   }%
10583   \HCode{</select>}%
10584 }
10585 \def\@@Radio#1\\{%
10586   \@for\@curropt:=#1\do{%
10587     \expandafter\Fld@checkequals\@curropt==\\%
10588     \HCode{<input type="radio" %
10589       \ifx\@curropt\Fld@default checked \fi
10590       name="\Fld@name" %
10591       value="\@currValue" %
10592       \the\Field@toks>%
10593     }%
10594     \@currDisplay
10595   }%
10596 }
10597 \def\@PushButton[#1]#2{% parameters, label
10598   \def\Fld@name{#2}%
10599   \bgroup
10600     \Field@toks={ }%
10601     \setkeys{Field}{#1}%

```

```

10602 \HCode{<input type="button" %
10603   name="\Fld@name" %
10604   value="#2" %
10605   \the\Fld@toks>%
10606 }%
10607 \HCode{</button>}}%
10608 \egroup
10609 }
10610 \def\@Submit[#1]#2{%
10611 \HCode{<button type="submit">#2</button>}}%
10612 }
10613 \def\@Reset[#1]#2{%
10614 \HCode{<button type="reset">#2</button>}}%
10615 }
10616 \def\@CheckBox[#1]#2{% parameters, label
10617 \let\Hy@reserved@a\@empty
10618 \def\Fld@name{#2}%
10619 \def\Fld@default{0}%
10620 \bgroup
10621 \Field@toks={ }%
10622 \setkeys{Field}{#1}%
10623 \HCode{<input type="checkbox" %
10624   \ifFld@checked checked \fi
10625   \ifFld@disabled disabled \fi
10626   \ifFld@readonly readonly \fi
10627   name="\Fld@name" %
10628   \ifFld@hidden type="hidden" \fi
10629   value="\Fld@default" %
10630   \the\Fld@toks>%
10631   #2%
10632 }%
10633 \egroup
10634 }
10635 </tex4ht>

```

47.4 pdfTeX

```

10636 <*pdfTeX>
10637 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10638 \typeout{Sorry, pdfTeX does not support FORM gauges}%
10639 }
10640 \def\MakeFieldObject#1#2{\sbox0{#1}%
10641 \immediate\pdfxform0 %
10642 \expandafter\edef\csname #2Object\endcsname{%
10643   \the\pdflastxform\space 0 R%
10644 }%
10645 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10646 }%
10647 \def\HyField@afields{}
10648 \begingroup\expandafter\expandafter\expandafter\endgroup
10649 \expandafter\ifx\csname pdflastlink\endcsname\relax
10650 \let\HyField@AddToFields\relax
10651 \PackageInfo{hyperref}{%
10652   You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10653   Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10654   but other PDF viewers might complain%
10655 }%
10656 \else

```

```

10657 \def\HyField@AddToFields{%
10658   \xdef\HyField@afields{%
10659     \ifx\HyField@afields\@empty
10660     \else
10661       \HyField@afields
10662       \space
10663     \fi
10664     \the\pdfastlink\space 0 R%
10665   }%
10666 }%
10667 \fi
10668 \def\@Form[#1]{%
10669   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
10670   \setkeys{Form}{#1}%
10671   \Hy@FormObjects
10672   \ifnum\pdfTeXversion>13 %
10673     \pdfrefobj\OBJ@pdfdocencoding
10674     \pdfrefobj\OBJ@ZaDb
10675     \pdfrefobj\OBJ@Helv
10676   \fi
10677   \AtEndDocument{%
10678     \immediate\pdfobj{%
10679       <<%
10680         /Fields[\HyField@afields]%
10681         /DR<<%
10682           /Font<<%
10683             /ZaDb \OBJ@ZaDb\space 0 R%
10684             /Helv \OBJ@Helv\space 0 R%
10685           >>%
10686         >>%
10687         /DA(/Helv 10 Tf 0 g)%
10688         \ifHy@pdfa
10689         \else
10690           /NeedAppearances true%
10691         \fi
10692       >>%
10693     }%
10694     \edef\OBJ@acroform{\the\pdfastobj}%
10695     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10696   }%
10697   \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

10698   \begingroup
10699     \fontfamily{pzd}%
10700     \fontencoding{U}%
10701     \fontseries{m}%
10702     \fontshape{n}%
10703     \selectfont
10704     \char123 %
10705   \endgroup
10706 }{Ding}%
10707 \MakeFieldObject{%
10708   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10709 }{Submit}%
10710 \MakeFieldObject{%
10711   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10712 }{SubmitP}%

```

```

10713 }
10714 \def\@endForm{
10715 \def\@TextField[#1]#2{% parameters, label
10716   \def\Fld@name{#2}%
10717   \def\Fld@default{}%
10718   \let\Fld@value\@empty
10719   \def\Fld@width{\DefaultWidthofText}%
10720   \def\Fld@height{%
10721     \ifFld@multiline
10722       \DefaultHeightofTextMultiline
10723     \else
10724       \DefaultHeightofText
10725     \fi
10726   }%
10727   \begingroup
10728     \Field@toks={ }%
10729     \expandafter\HyField@SetKeys\expandafter{%
10730       \DefaultOptionsofText,#1%
10731     }%
10732     \PDFForm@Name
10733     \HyField@FlagsText
10734     \ifFld@hidden\def\Fld@width{1sp}\fi
10735     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10736     \LayoutTextField{#2}{%
10737       \Hy@escapeform\PDFForm@Text
10738       \pdfstartlink user {\PDFForm@Text}\relax
10739       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10740       \HyField@AddToFields
10741     }%
10742   \endgroup
10743 }
10744 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10745   \def\Fld@name{#2}%
10746   \let\Fld@default\relax
10747   \let\Fld@value\relax
10748   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10749   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10750   \begingroup
10751     \Fld@menulength=0 %
10752     \@tempdima\z@
10753     \@for\@curropt:=#3\do{%
10754       \expandafter\Fld@checkequals\@curropt==\%
10755       \Hy@StepCount\Fld@menulength
10756       \settowidth{\@tempdimb}{\@currDisplay}%
10757       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10758     }%
10759     \advance\@tempdima by 15\p@
10760     \Field@toks={ }%
10761     \begingroup
10762       \HyField@SetKeys{#1}%
10763     \edef\x{\endgroup
10764       \noexpand\expandafter
10765       \noexpand\HyField@SetKeys
10766       \noexpand\expandafter{%
10767         \expandafter\noexpand\cename DefaultOptionsof%
10768         \ifFld@radio
10769           Radio%

```

```

10770         \else
10771         \ifFld@combo
10772         \ifFld@popdown
10773         PopdownBox%
10774         \else
10775         ComboBox%
10776         \fi
10777         \else
10778         ListBox%
10779         \fi
10780         \fi
10781     \endcsname
10782 }%
10783 } \x
10784 \HyField@SetKeys{#1}%
10785 \PDFForm@Name
10786 \ifFld@hidden\def\Fld@width{1sp}\fi
10787 \ifx\Fld@value\relax
10788     \let\Fld@value\Fld@default
10789 \fi
10790 \LayoutChoiceField{#2}{%
10791     \ifFld@radio
10792     \HyField@FlagsRadioButton
10793     \@@Radio{#3}%
10794     \else
10795     \beginngroup
10796     \HyField@FlagsChoice
10797     \ifdim\Fld@width<\@tempdima
10798     \ifdim\@tempdima<1cm\@tempdima1cm\fi
10799     \edef\Fld@width{\the\@tempdima}%
10800     \fi
10801     \ifFld@combo
10802     \else
10803     \@tempdima=\the\Fld@menulength\Fld@charsize
10804     \advance\@tempdima by \Fld@borderwidth bp %
10805     \advance\@tempdima by \Fld@borderwidth bp %
10806     \edef\Fld@height{\the\@tempdima}%
10807     \fi
10808     \@@ListBox{#3}%
10809     \endgroup
10810     \fi
10811 }%
10812 \endgroup
10813 }
10814 \def\@@Radio#1{%
10815     \Fld@listcount=0 %
10816     \@for\@curropt:=#1\do{%
10817         \expandafter\Fld@checkequals\@curropt==\%
10818         \Hy@StepCount\Fld@listcount
10819         \@currDisplay\space
10820         \leavevmode
10821         \Hy@escapeform\PDFForm@Radio
10822         \pdfstartlink user {%
10823             \PDFForm@Radio
10824             /AP<<%
10825             /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.

```

10826      /\@currValue\space \DingObject
10827      >>%
10828      >>%
10829      }%
10830      \relax
10831      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10832      \ifnum\Fld@listcount=1 %
10833      \HyField@AddToFields
10834      \fi
10835      \space % deliberate space between radio buttons
10836      }%
10837 }
10838 \newcount\Fld@listcount
10839 \def\@@ListBox#1{%
10840   \HyField@PDFChoices{#1}%
10841   \leavevmode
10842   \Hy@escapeform\PDFForm@List
10843   \pdfstartlink user {\PDFForm@List}\relax
10844   \MakeChoiceField{\Fld@width}{\Fld@height}%
10845   \pdfendlink
10846   \HyField@AddToFields
10847 }
10848 \def\@PushButton[#1]#2{% parameters, label
10849   \def\Fld@name{#2}%
10850   \begingroup
10851     \Field@toks={ }%
10852     \expandafter\HyField@SetKeys\expandafter{%
10853       \DefaultOptionsofPushButton,#1%
10854     }%
10855     \PDFForm@Name
10856     \ifHy@pdfa
10857       \PackageError{hyperref}{%
10858         PDF/A: Push button with JavaScript is prohibited%
10859       }\@ehc
10860       \LayoutPushButtonField{%
10861         \leavevmode
10862         \MakeButtonField{#2}%
10863       }%
10864     \else
10865       \HyField@FlagsPushButton
10866       \ifFld@hidden\def\Fld@width{1sp}\fi
10867       \LayoutPushButtonField{%
10868         \leavevmode
10869         \Hy@escapeform\PDFForm@Push
10870         \pdfstartlink user {\PDFForm@Push}\relax
10871         \MakeButtonField{#2}%
10872         \pdfendlink
10873         \HyField@AddToFields
10874       }%
10875     \fi
10876   \endgroup
10877 }
10878 \def\@Submit[#1]#2{%
10879   \Field@toks={ }%
10880   \def\Fld@width{\DefaultWidthofSubmit}%

```

```

10881 \def\Fld@height{\DefaultHeightofSubmit}%
10882 \begingroup
10883   \expandafter\HyField@SetKeys\expandafter{%
10884     \DefaultOptionsofSubmit,#1%
10885   }%
10886   \HyField@FlagsPushButton
10887   \HyField@FlagsSubmit
10888   \ifFld@hidden\def\Fld@width{1sp}\fi
10889   \leavevmode
10890   \Hy@escapeform\PDFForm@Submit
10891   \pdfstartlink user {%
10892     \PDFForm@Submit
10893     /AP<</N \SubmitObject/D \SubmitPObject>>%
10894   }%
10895   \relax
10896   \MakeButtonField{#2}%
10897   \pdfendlink
10898   \HyField@AddToFields
10899 \endgroup
10900 }
10901 \def\@Reset[#1]#2{%
10902   \Field@toks={ }%
10903   \def\Fld@width{\DefaultWidthofReset}%
10904   \def\Fld@height{\DefaultHeightofReset}%
10905   \begingroup
10906     \expandafter\HyField@SetKeys\expandafter{%
10907       \DefaultOptionsofReset,#1%
10908     }%
10909     \leavevmode
10910     \ifHy@pdfa
10911       \PackageError{hyperref}{%
10912         PDF/A: Reset action is prohibited%
10913       }{@ehc}
10914       \MakeButtonField{#2}%
10915     \else
10916       \HyField@FlagsPushButton
10917       \ifFld@hidden\def\Fld@width{1sp}\fi
10918       \Hy@escapeform\PDFForm@Reset
10919       \pdfstartlink user {\PDFForm@Reset}\relax
10920       \MakeButtonField{#2}%
10921       \pdfendlink
10922       \HyField@AddToFields
10923     \fi
10924   \endgroup
10925 }
10926 \def\@CheckBox[#1]#2{% parameters, label
10927   \def\Fld@name{#2}%
10928   \def\Fld@default{0}%
10929   \begingroup
10930     \def\Fld@width{\DefaultWidthofCheckBox}%
10931     \def\Fld@height{\DefaultHeightofCheckBox}%
10932     \Field@toks={ }%
10933     \expandafter\HyField@SetKeys\expandafter{%
10934       \DefaultOptionsofCheckBox,#1%
10935     }%
10936     \PDFForm@Name
10937     \HyField@FlagsCheckBox

```

```

10938 \ifFld@hidden\def\Fld@width{1sp}\fi
10939 \LayoutCheckField{#2}{%
10940 \Hy@escapeform\PDFForm@Check
10941 \pdfstartlink user {\PDFForm@Check}\relax
10942 \MakeCheckField{\Fld@width}{\Fld@height}%
10943 \pdfendlink
10944 \HyField@AddToFields
10945 }%
10946 \endgroup
10947 }
10948 \def\Hy@FormObjects{%
10949 \pdfobj {%
10950 <<%
10951 /Type/Encoding%
10952 /Differences[%
10953 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10954 /ring/tilde %
10955 39/quotesingle %
10956 96/grave %
10957 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10958 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10959 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10960 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
10961 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10962 164/currency %
10963 166/brokenbar %
10964 168/dieresis/copyright/ordfeminine %
10965 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10966 /twosuperior/threesuperior/acute/mu %
10967 183/periodcentered/cedilla/onesuperior/ordmasculine %
10968 188/onequarter/onehalf/threequarters %
10969 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10970 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10971 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10972 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10973 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10974 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10975 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10976 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10977 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10978 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10979 ]%
10980 >>%
10981 }%
10982 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
10983 \pdfobj{%
10984 <<%
10985 /Type/Font%
10986 /Subtype/Type1%
10987 /Name/ZaDb%
10988 /BaseFont/ZapfDingbats%
10989 >>%
10990 }%
10991 \xdef\OBJ@ZaDb{\the\pdflastobj}%
10992 \pdfobj{%
10993 <<%
10994 /Type/Font%

```



```

10995      /Subtype/Type1%
10996      /Name/Helv%
10997      /BaseFont/Helvetica%
10998      /Encoding \OBJ@pdfdocencoding\space 0 R%
10999      >>%
11000  }%
11001  \xdef\OBJ@Helv{\the\pdflastobj}%
11002  \global\let\Hy@FormObjects\relax
11003 }
11004 </pdfTeX>

```

47.5 dvipdfm

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

11005 < *dvipdfm >

```

\@Gauge

```

11006 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11007 \typeout{Sorry, dvipdfm does not support FORM gauges}%
11008 }

```

\@Form

```

11009 \def\@Form[#1]{%
11010 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11011 \setkeys{Form}{#1}%
11012 \Hy@FormObjects
11013 \@pdfm@mark{obj @afields []}%
11014 \@pdfm@mark{obj @corder []}%
11015 \@pdfm@mark{%
11016   obj @aform <<%
11017     /Fields @afields%
11018     /DR<<%
11019     /Font<<%
11020     /ZaDb @OBJZaDb%
11021     /Helv @OBJHelv%
11022     >>%
11023     >>%
11024     /DA(/Helv 10 Tf 0 g)%
11025     /CO @corder%
11026     \ifHy@pdfa
11027     \else
11028     /NeedAppearances true%
11029     \fi
11030   >>%
11031 }%
11032 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11033 }

```

\@endForm

```

11034 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

11035 \def\dvipdfm@setdim{%
11036   height \the\ht\pdfm@box\space
11037   width \the\wd\pdfm@box\space
11038   depth \the\dp\pdfm@box\space
11039 }

```

\HyField@AnnotCount

```
11040 \newcount\HyField@AnnotCount
11041 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
11042 \def\HyField@AdvanceAnnotCount{%
11043   \global\advance\HyField@AnnotCount\@ne
11044 }
```

\HyField@TheAnnotCount

```
11045 \def\HyField@TheAnnotCount{%
11046   \the\HyField@AnnotCount
11047 }
```

\@TextField

```
11048 \def\@TextField[#1]#2{% parameters, label
11049   \def\Fld@name{#2}%
11050   \def\Fld@default{}%
11051   \let\Fld@value\@empty
11052   \def\Fld@width{\DefaultWidthofText}%
11053   \def\Fld@height{%
11054     \ifFld@multiline
11055       \DefaultHeightofTextMultiline
11056     \else
11057       \DefaultHeightofText
11058     \fi
11059   }%
11060   \begingroup
11061     \Field@toks={ }%
11062     \expandafter\HyField@SetKeys\expandafter{%
11063       \DefaultOptionsofText,#1%
11064     }%
11065     \PDFForm@Name
11066     \HyField@FlagsText
11067     \ifFld@hidden\def\Fld@width{1sp}\fi
11068     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11069     \setbox\pdfm@box=\hbox{%
11070       \MakeTextField{\Fld@width}{\Fld@height}%
11071     }%
11072     \HyField@AdvanceAnnotCount
11073     \LayoutTextField{#2}{%
11074       \Hy@escapeform\PDFForm@Text
11075       \@pdfm@mark{%
11076         ann @text\HyField@TheAnnotCount\space
11077         \dvipdfm@setdim << \PDFForm@Text >>%
11078       }%
11079     }%
11080     \unhbox\pdfm@box
11081     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11082     % record in @afields array
11083   \endgroup
11084 }
```

\@ChoiceMenu

```
11085 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11086   \def\Fld@name{#2}%
```

```

11087 \let\Fld@default\relax
11088 \let\Fld@value\relax
11089 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11090 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11091 \beginingroup
11092   \Fld@menulength=0 %
11093   \@tempdima\z@
11094   \@for\@curropt:=#3\do{%
11095     \expandafter\Fld@checkequals\@curropt==\%
11096     \Hy@StepCount\Fld@menulength
11097     \settowidth{\@tempdimb}{\@currDisplay}%
11098     \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11099   }%
11100   \advance\@tempdima by 15\p@
11101   \Field@toks={ }%
11102   \beginingroup
11103     \HyField@SetKeys{#1}%
11104   \edef\x{\endgroup
11105     \noexpand\expandafter
11106     \noexpand\HyField@SetKeys
11107     \noexpand\expandafter{%
11108       \expandafter\noexpand\csname DefaultOptionsof%
11109       \ifFld@radio
11110         Radio%
11111       \else
11112         \ifFld@combo
11113           \ifFld@popdown
11114             PopdownBox%
11115           \else
11116             ComboBox%
11117           \fi
11118         \else
11119           ListBox%
11120         \fi
11121       \fi
11122     \endcsname
11123   }%
11124   }\x
11125   \HyField@SetKeys{#1}%
11126   \PDFForm@Name
11127   \ifFld@hidden\def\Fld@width{1sp}\fi
11128   \ifx\Fld@value\relax
11129     \let\Fld@value\Fld@default
11130   \fi
11131   \LayoutChoiceField{#2}{%
11132     \ifFld@radio
11133       \HyField@FlagsRadioButton
11134       \@@Radio{#3}%
11135     \else
11136       \beginingroup
11137         \HyField@FlagsChoice
11138         \ifdim\Fld@width<\@tempdima
11139           \ifdim\@tempdima<1cm\@tempdima1cm\fi
11140         \edef\Fld@width{\the\@tempdima}%
11141       \fi
11142       \ifFld@combo
11143       \else

```

```

11144         \tempdima=\the\Fld@menulength\Fld@charsize
11145         \advance\tempdima by \Fld@borderwidth bp %
11146         \advance\tempdima by \Fld@borderwidth bp %
11147         \edef\Fld@height{\the\tempdima}%
11148     \fi
11149     \@@ListBox{#3}%
11150 \endgroup
11151 \fi
11152 }%
11153 \endgroup
11154 }

\@@Radio
11155 \def\@@Radio#1{%
11156     \Fld@listcount=0 %
11157     \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11158     \@for\@curropt:=#1\do{%
11159         \expandafter\Fld@checkequals\@curropt==\%
11160         \Hy@StepCount\Fld@listcount
11161         \@currDisplay\space
11162         \leavevmode
11163         \Hy@escapeform\PDFForm@Radio
11164         \ifnum\Fld@listcount=1 %
11165             \HyField@AdvanceAnnotCount
11166         \fi
11167         \@pdfm@mark{%
11168             ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
11169             \dvipdfm@setdim
11170             <<%
11171             \PDFForm@Radio
11172             /AP<</N<</\@currValue /null>>>>%
11173             >>%
11174         }%
11175         \unhcopy\pdfm@box\space% deliberate space between radio buttons
11176         \ifnum\Fld@listcount=1 %
11177             \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11178         \fi
11179     }%
11180 }

\Fld@listcount
11181 \newcount\Fld@listcount

\@@ListBox
11182 \def\@@ListBox#1{%
11183     \HyField@PDFChoices{#1}%
11184     \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
11185     \leavevmode
11186     \Hy@escapeform\PDFForm@List
11187     \HyField@AdvanceAnnotCount
11188     \@pdfm@mark{%
11189         ann @list\HyField@TheAnnotCount\space
11190         \dvipdfm@setdim
11191         <<\PDFForm@List>>%
11192     }%
11193     \unhbox\pdfm@box
11194     \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%

```

```

11195 }

\@PushButton
11196 \def\@PushButton[#1]#2{% parameters, label
11197   \def\Fld@name{#2}%
11198   \begingroup
11199     \Field@toks={ }%
11200     \expandafter\HyField@SetKeys\expandafter{%
11201       \DefaultOptionsofPushButton,#1%
11202     }%
11203     \PDFForm@Name
11204     \ifHy@pdfa
11205       \PackageError{hyperref}{%
11206         PDF/A: Push button with JavaScript is prohibited%
11207       }\@ehc
11208       \LayoutPushButtonField{%
11209         \leavevmode
11210         \MakeButtonField{#2}%
11211       }%
11212     \else
11213       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11214       \HyField@FlagsPushButton
11215       \ifFld@hidden\def\Fld@width{1sp}\fi
11216       \HyField@AdvanceAnnotCount
11217       \LayoutPushButtonField{%
11218         \leavevmode
11219         \Hy@escapeform\PDFForm@Push
11220         \@pdfm@mark{%
11221           ann @push\HyField@TheAnnotCount\space
11222           \dvi pdfm@setdim
11223           <<\PDFForm@Push>>%
11224         }%
11225       }%
11226       \unhbox\pdfm@box
11227       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11228     \fi
11229   \endgroup
11230 }

\@Submit
11231 \def\@Submit[#1]#2{%
11232   \Field@toks={ }%
11233   \def\Fld@width{\DefaultWidthofSubmit}%
11234   \def\Fld@height{\DefaultHeightofSubmit}%
11235   \begingroup
11236     \expandafter\HyField@SetKeys\expandafter{%
11237       \DefaultOptionsofSubmit,#1%
11238     }%
11239     \HyField@FlagsPushButton
11240     \HyField@FlagsSubmit
11241     \ifFld@hidden\def\Fld@width{1sp}\fi
11242     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11243     \leavevmode
11244     \Hy@escapeform\PDFForm@Submit
11245     \HyField@AdvanceAnnotCount
11246     \@pdfm@mark{%
11247       ann @submit\HyField@TheAnnotCount\space

```

```

11248      \dvi pdfm@setdim
11249      <<\PDFForm@Submit>>%
11250    }%
11251    \unhbox\pdfm@box%
11252    \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11253  \endgroup
11254 }

\@Reset

11255 \def\@Reset[#1]#2{%
11256   \Field@toks={ }%
11257   \def\Fld@width{\DefaultWidthofReset}%
11258   \def\Fld@height{\DefaultHeightofReset}%
11259   \begingroup
11260     \expandafter\HyField@SetKeys\expandafter{%
11261       \DefaultOptionsofReset,#1%
11262     }%
11263     \leavevmode
11264     \ifHy@pdfa
11265       \PackageError{hyperref}{%
11266         PDF/A: Reset action is prohibited%
11267       }\@ehc
11268       \MakeButtonField{#2}%
11269     \else
11270       \HyField@FlagsPushButton
11271       \ifFld@hidden\def\Fld@width{1sp}\fi
11272       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11273       \Hy@escapeform\PDFForm@Reset
11274       \HyField@AdvanceAnnotCount
11275       \@pdfm@mark{%
11276         ann @reset\HyField@TheAnnotCount\space
11277         \dvi pdfm@setdim
11278         <<\PDFForm@Reset>>%
11279       }%
11280       \unhbox\pdfm@box
11281       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11282     \fi
11283   \endgroup
11284 }

\@CheckBox

11285 \def\@CheckBox[#1]#2{% parameters, label
11286   \def\Fld@name{#2}%
11287   \def\Fld@default{0}%
11288   \begingroup
11289     \def\Fld@width{\DefaultWidthofCheckBox}%
11290     \def\Fld@height{\DefaultHeightofCheckBox}%
11291     \Field@toks={ }%
11292     \expandafter\HyField@SetKeys\expandafter{%
11293       \DefaultOptionsofCheckBox,#1%
11294     }%
11295     \PDFForm@Name
11296     \HyField@FlagsCheckBox
11297     \ifFld@hidden\def\Fld@width{1sp}\fi
11298     \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11299     \HyField@AdvanceAnnotCount
11300     \LayoutCheckField{#2}{%

```

```

11301     \Hy@escapeform\PDFForm@Check
11302     \@pdfm@mark{%
11303         ann @check\HyField@TheAnnotCount\space
11304         \dvipdfm@setdim
11305         <<\PDFForm@Check>>%
11306     }%
11307     \unhbox\pdfm@box
11308     \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11309 }%
11310 \endgroup
11311 }

11312 \def\Hy@FormObjects{%
11313     \@pdfm@mark{obj @OBJpdfdocencoding%
11314         <<%
11315             /Type/Encoding%
11316             /Differences[%
11317                 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11318                 39/quotesingle %
11319                 96/grave %
11320                 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11321                 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11322                 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11323                 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11324                 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11325                 164/currency %
11326                 166/brokenbar %
11327                 168/dieresis/copyright/ordfeminine %
11328                 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11329                 /twosuperior/threesuperior/acute/mu %
11330                 183/periodcentered/cedilla/onesuperior/ordmasculine %
11331                 188/onequarter/onehalf/threequarters %
11332                 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11333                 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11334                 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11335                 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11336                 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11337                 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11338                 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11339                 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
11340                 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11341                 /thorn/ydieresis%
11342             ]%
11343         >>%
11344     }%
11345     \@pdfm@mark{obj @OBJZaDb%
11346         <<%
11347             /Type/Font%
11348             /Subtype/Type1%
11349             /Name/ZaDb%
11350             /BaseFont/ZapfDingbats%
11351         >>%
11352     }%
11353     \@pdfm@mark{obj @OBJHelv%
11354         <<%
11355             /Type/Font%
11356             /Subtype/Type1%
11357             /Name/Helv%

```

```

11358      /BaseFont/Helvetica%
11359      /Encoding @OBJpdfdocencoding%
11360    >>%
11361  }%
11362  \global\let\Hy@FormObjects\relax
11363 }
11364 </dvipdfm>

```

47.6 Common forms part

```

11365 <*pdfform>

```

\Hy@escapestring

```

11366 \begingroup\expandafter\expandafter\expandafter\endgroup
11367 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11368   \let\Hy@escapestring\@firstofone
11369   \def\Hy@escapeform#1{%
11370     \ifHy@escapeform
11371       \def\Hy@escapestring##1{%
11372         \noexpand\Hy@escapestring{\noexpand##1}%
11373       }%
11374       \edef\Hy@temp{#1}%
11375       \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11376       \def\Hy@escapestring##1{%
11377         \@ifundefined{Hy@esc@\string##1}{%
11378           ##1%
11379           \ThisShouldNotHappen
11380         }{%
11381           \csname Hy@esc@\string##1\endcsname
11382         }%
11383       }%
11384     \else
11385       \let\Hy@escapestring\@firstofone
11386     \fi
11387   }%
11388   \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11389     \ifx\#3\%
11390       \else
11391         \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11392         \Hy@ReturnAfterFi{%
11393           \Hy@@escapeform#3\@nil
11394         }%
11395       \fi
11396     }%
11397   \else
11398     \def\Hy@escapeform#1{%
11399       \ifHy@escapeform
11400         \let\Hy@escapestring\pdfescapestring
11401       \else
11402         \let\Hy@escapestring\@firstofone
11403       \fi
11404     }%
11405     \Hy@escapeform{}%
11406   \fi

```

\PDFForm@Name

```

11407 \def\PDFForm@Name{%

```



```

11408 \beginngroup
11409   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11410     \ifHy@unicode
11411       \Hy@unicodedefalse
11412     \fi
11413   \fi
11414   \pdfstringdef\Hy@gtemp\Fld@name
11415 \endgroup
11416 \let\Fld@name\Hy@gtemp
11417 }

```

\PDFForm@Check

```

11418 \def\PDFForm@Check{%
11419   /Subtype/Widget%
11420   \Fld@annotflags
11421   /T(\Fld@name)%
11422   /FT/Btn%
11423   \Fld@flags
11424   /Q \Fld@align
11425   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11426   /MK<<%
11427     \ifnum\Fld@rotation=\z@
11428     \else
11429       /R \Fld@rotation
11430     \fi
11431     \ifx\Fld@bordercolor\relax
11432     \else
11433       /BC[\Fld@bordercolor]%
11434     \fi
11435     \ifx\Fld@bcolor\relax
11436     \else
11437       /BG[\Fld@bcolor]%
11438     \fi
11439     /CA(\Hy@escapestring{\Fld@cbsymbol})%
11440   >>%
11441   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11442     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11443   /H/P%
11444   \ifFld@checked /V/Yes\else /V/Off\fi
11445 }

```

\PDFForm@Push

```

11446 \ifHy@pdfa
11447 \else
11448   \def\PDFForm@Push{%
11449     /Subtype/Widget%
11450     \Fld@annotflags
11451     /T(\Fld@name)%
11452     /FT/Btn%
11453     \Fld@flags
11454     /H/P%
11455     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11456     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11457       \ifx\Fld@bordercolor\relax\else 1\fi
11458       \space
11459     \else
11460       /MK<<%

```

```

11461         \ifnum\Fld@rotation=z@
11462         \else
11463             /R \Fld@rotation
11464         \fi
11465         \ifx\Fld@bordercolor\relax
11466         \else
11467             /BC[\Fld@bordercolor]%
11468         \fi
11469     >>%
11470 \fi
11471 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
11472 }%
11473 \fi

```

\Fld@additionalactions

```

11474 \def\Fld@@additionalactions{%
K input (keystroke) format
11475 \ifx\Fld@keystroke@code\@empty
11476 \else
11477     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11478 \fi
F display format
11479 \ifx\Fld@format@code\@empty
11480 \else
11481     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11482 \fi
V validation
11483 \ifx\Fld@validate@code\@empty
11484 \else
11485     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11486 \fi
C calculation
11487 \ifx\Fld@calculate@code\@empty
11488 \else
11489     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11490 \fi
Fo receiving the input focus
11491 \ifx\Fld@onfocus@code\@empty
11492 \else
11493     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11494 \fi
Bl loosing the input focus (blurred)
11495 \ifx\Fld@onblur@code\@empty
11496 \else
11497     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11498 \fi
D pressing the mouse button (down)
11499 \ifx\Fld@onmousedown@code\@empty
11500 \else
11501     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11502 \fi

```

U releasing the mouse button (up)

```
11503 \ifx\Fld@onmouseup@code\@empty
11504 \else
11505 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11506 \fi
```

E cursor enters the annotation's active area.

```
11507 \ifx\Fld@onenter@code\@empty
11508 \else
11509 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11510 \fi
```

X cursor exits the annotation's active area.

```
11511 \ifx\Fld@onexit@code\@empty
11512 \else
11513 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11514 \fi
11515 }
11516 \def\Fld@additionalactions{%
11517 \if-\Fld@@additionalactions-%
11518 \else
11519 \ifHy@pdfa
11520 \else
11521 /AA<<\Fld@@additionalactions>>%
11522 \fi
11523 \fi
11524 }
```

\PDFForm@List

```
11525 \def\PDFForm@List{%
11526 /Subtype/Widget%
11527 \Fld@annotflags
11528 /T(\Fld@name)%
11529 /FT/Ch%
11530 \Fld@flags
11531 /Q \Fld@align
11532 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11533 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11534 \ifx\Fld@bordercolor\relax\else 1\fi
11535 \ifx\Fld@bcolor\relax \else 1\fi
11536 \space
11537 \else
11538 /MK<<%
11539 \ifnum\Fld@rotation=\z@
11540 \else
11541 /R \Fld@rotation
11542 \fi
11543 \ifx\Fld@bordercolor\relax
11544 \else
11545 /BC[\Fld@bordercolor]%
11546 \fi
11547 \ifx\Fld@bcolor\relax
11548 \else
11549 /BG[\Fld@bcolor]%
11550 \fi
11551 >>%
11552 \fi
11553 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
```

```

11554     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11555     \Fld@choices
11556     \Fld@additionalactions
11557 }

```

\PDFForm@Radio

```

11558 \def\PDFForm@Radio{%
11559   /Subtype/Widget%
11560   \Fld@annotflags
11561   /T(\Fld@name)%
11562   /FT/Btn%
11563   \Fld@flags
11564   /H/P%
11565   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11566   /MK<<%
11567     \ifnum\Fld@rotation=\z@
11568     \else
11569       /R \Fld@rotation
11570     \fi
11571     \ifx\Fld@bordercolor\relax
11572     \else
11573       /BC[\Fld@bordercolor]%
11574     \fi
11575     \ifx\Fld@bcolor\relax
11576     \else
11577       /BG[\Fld@bcolor]%
11578     \fi
11579     /CA(\Fld@radiosymbol)%
11580   >>%
11581   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11582     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11583   \ifx\@currValue\Fld@default
11584     /V/\Fld@default
11585   \else
11586     /V/Off%
11587   \fi
11588   \Fld@additionalactions
11589 }

```

\PDFForm@Text

```

11590 \def\PDFForm@Text{%
11591   /Subtype/Widget%
11592   \Fld@annotflags
11593   /T(\Fld@name)%
11594   /FT/Tx%
11595   \Fld@flags
11596   /Q \Fld@align
11597   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11598   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11599     \ifx\Fld@bordercolor\relax\else 1\fi
11600     \ifx\Fld@bcolor\relax \else 1\fi
11601     \space
11602   \else
11603     /MK<<%
11604     \ifnum\Fld@rotation=\z@
11605     \else
11606       /R \Fld@rotation

```

```

11607     \fi
11608     \ifx\Fld@bordercolor\relax
11609     \else
11610         /BC[\Fld@bordercolor]%
11611     \fi
11612     \ifx\Fld@bcolor\relax
11613     \else
11614         /BG[\Fld@bcolor]%
11615     \fi
11616     >>%
11617 \fi
11618 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11619     \ifx\Fld@color\empty\else\space\Fld@color\fi)%
11620 /DV(\Hy@escapestring{\Fld@default})%
11621 /V(\Hy@escapestring{\Fld@value})%
11622 \Fld@additionalactions
11623 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11624 }

```

\PDFForm@Submit

```

11625 \def\PDFForm@Submit{%
11626 /Subtype/Widget%
11627 \Fld@annotflags
11628 /T(\Fld@name)%
11629 /FT/Btn%
11630 \Fld@flags
11631 /H/P%
11632 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11633 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11634     \ifx\Fld@bordercolor\relax\else 1\fi
11635     \space
11636 \else
11637     /MK<<%
11638     \ifnum\Fld@rotation=\z@
11639     \else
11640         /R \Fld@rotation
11641     \fi
11642     \ifx\Fld@bordercolor\relax
11643     \else
11644         /BC[\Fld@bordercolor]%
11645     \fi
11646     >>%
11647 \fi
11648 /A<<%
11649     /S/SubmitForm%
11650     /F<<%
11651         /FS/URL%
11652         /F(\Hy@escapestring{\Form@action})%
11653     >>%
11654     \Fld@submitflags
11655 >>%
11656 }

```

\PDFForm@Reset

```

11657 \ifHy@pdfa
11658 \else
11659 \def\PDFForm@Reset{%

```

```

11660 /Subtype/Widget%
11661 \Fld@annotflags
11662 /T(\Fld@name)%
11663 /FT/Btn%
11664 \Fld@flags
11665 /H/P%
11666 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11667 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11668 \ifx\Fld@bordercolor\relax\else 1\fi
11669 \space
11670 \else
11671 /MK<<%
11672 \ifnum\Fld@rotation=\z@
11673 \else
11674 /R \Fld@rotation
11675 \fi
11676 \ifx\Fld@bordercolor\relax
11677 \else
11678 /BC[\Fld@bordercolor]%
11679 \fi
11680 % /CA (Clear)
11681 % /AC (Done)
11682 >>%
11683 \fi
11684 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11685 /A<</S/ResetForm>>%
11686 }%
11687 \fi

11688 </pdfform>
11689 <*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 L^AT_EX 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`

```

11690 \def\phantomsection{%
11691   \Hy@GlobalStepCount\Hy@linkcounter
11692   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11693   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11694 }
11695 </package>

```

48.1 Bookmarks

```
11696 <*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.

```

11697 \def\Hy@writebookmark#1#2#3#4#5{%
11698   % section number, text, label, level, file
11699   \ifx\WriteBookmarks\relax%
11700   \else
11701     \ifnum#4>\Hy@bookmarksdepth\relax
11702     \else
11703       \@writetorep{#1}{#2}{#3}{#4}{#5}%
11704     \fi
11705   \fi
11706 }
11707 \def\Hy@currentbookmarklevel{0}
11708 \def\Hy@numberline#1{#1 }
11709 \def\@@writetorep#1#2#3#4#5{%
11710   \begingroup
11711     \edef\Hy@tempa{#5}%
11712     \ifx\Hy@tempa\Hy@bookmarkstype
11713       \edef\Hy@level{#4}%
11714       \ifx\Hy@levelcheck Y%
11715         \@tempcnta\Hy@level\relax
11716         \advance\@tempcnta by -1 %
11717         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11718           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11719           \advance\@tempcnta by 1 %
11720           \Hy@Warning{%
11721             Difference (\the\@tempcnta) between bookmark levels is %
11722             greater \MessageBreak than one, level fixed%
11723           }%
11724           \@tempcnta\Hy@currentbookmarklevel
11725           \advance\@tempcnta by 1 %
11726           \edef\Hy@level{\the\@tempcnta}%
11727         \fi
11728       \else
11729         \global\let\Hy@levelcheck Y%
11730       \fi
11731       \global\let\Hy@currentbookmarklevel\Hy@level
11732       \@tempcnta\Hy@level\relax
11733       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11734       \advance\@tempcnta by -1 %
11735       \edef\Hy@tempa{#3}%
11736       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11737       \ifx\Hy@tempa\Hy@tempb
11738         \Hy@Warning{%
11739           The anchor of a bookmark and its parent's must not%
11740           \MessageBreak be the same. Added a new anchor%
11741         }%
11742         \phantomsection
11743       \fi
11744       \ifHy@bookmarksnumbered
11745         \let\numberline\Hy@numberline
11746         \let\partnumberline\Hy@numberline
11747         \let\chapternumberline\Hy@numberline
11748       \else
11749         \let\numberline\@gobble
11750         \let\partnumberline\@gobble

```

```

11751      \let\chapternumberline@gobble
11752      \fi
11753      \pdfstringdef\Hy@tempa{#2}%
11754      \if@filesw
11755          \protected@write\@outlinefile{%
11756              \protect\BOOKMARK
11757                  [\Hy@level] [\@bookmarkopenstatus{\Hy@level}] {#3}%
11758                  {\Hy@tempa}{\Hy@tempb}%
11759          }%
11760      \fi
11761      \fi
11762      \endgroup
11763 }

```

In the call of `\BOOKMARK` the braces around #4 are omitted, because it is not likely, that the level number contains] .

```

11764 \newcommand{\currentpdfbookmark}{%
11765     \pdfbookmark[\Hy@currentbookmarklevel]%
11766 }
11767 \newcommand{\subpdfbookmark}{%
11768     \@tempcnta\Hy@currentbookmarklevel
11769     \Hy@StepCount\@tempcnta
11770     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11771 }
11772 \newcommand{\belowpdfbookmark}[2]{%
11773     \@tempcnta\Hy@currentbookmarklevel
11774     \Hy@StepCount\@tempcnta
11775     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11776     \advance\@tempcnta by -1 %
11777     \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11778 }

```

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.

```

11779 \renewcommand\pdfbookmark[3][0]{%
11780     \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11781     \hyper@anchorstart{#3.#1}\hyper@anchorend
11782 }
11783 \def\BOOKMARK{\@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}}
11784 \def\@BOOKMARK[#1]{\@ifnextchar[{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}}

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

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.

```

11785 \<vtex>
11786 \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.

```

11787 \begingroup
11788     \catcode'\'=12 %
11789     \ifnum\Hy@VTeXversion<650 %
11790         \catcode'\ "=12 %

```



```

11791 \gdef\hv@pdf@char#1#2#3{%
11792   \char
11793   \ifcase'#1#2#3 %
11794     "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
11795     \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
11796     \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
11797     \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
11798     \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
11799     \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
11800     \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
11801     \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
11802     \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
11803     \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
11804     \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
11805     \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
11806     \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
11807     \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
11808     \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
11809     \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
11810     \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
11811     \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
11812     \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
11813     \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
11814     \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
11815     \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
11816     \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
11817     \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
11818     \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
11819     \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
11820     \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
11821     \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
11822     \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
11823     \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
11824     \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
11825     \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
11826   \fi
11827 }%
11828 \else
11829   \gdef\hv@pdf@char{\char'}%
11830 \fi
11831 \endgroup

```

\@@BOOKMARK

```

11832 \def\@@BOOKMARK[#1][#2]#3#4#5{%
11833   \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%
11834   \edef\@mycount{\the\@serial@counter}%
11835   \Hy@StepCount\@serial@counter
11836   \edef\@parcount{%
11837     \expandafter\ifx\csname @count@#5\endcsname\relax
11838     0%
11839     \else
11840       \csname @count@#5\endcsname
11841     \fi
11842   }%
11843   \immediate\special{%
11844     !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11845     s=\ifx#2-c\else o\fi,t=#4%

```

```

11846 }%
11847 }%

```

\ReadBookmarks

```

11848 \def\ReadBookmarks{%
11849   \begingroup
11850   \def\O{\hv@pdf@char 0}%
11851   \def\1{\hv@pdf@char 1}%
11852   \def\2{\hv@pdf@char 2}%
11853   \def\3{\hv@pdf@char 3}%
11854   \def\({}%
11855   \def\)}%
11856   \def\do##1{%
11857     \ifnum\the\catcode'\##1=\active
11858       \makeother\##1%
11859     \fi
11860   }%
11861   \dospecials
11862   \InputIfFileExists{\jobname.out}{\}%
11863 \endgroup
11864 \ifx\WriteBookmarks\relax
11865 \else
11866   \if@filesw
11867     \newwrite\@outlinefile
11868     \immediate\openout\@outlinefile=\jobname.out\relax
11869     \ifHy@typexml
11870       \immediate\write\@outlinefile{<relaxxml>\relax}%
11871     \fi
11872   \fi
11873 \fi
11874 }

11875 </vtex>

11876 <*\vtex>
11877 \def\ReadBookmarks{%
11878   \begingroup
11879   \escapechar='\'%
11880   \let\escapechar\@gobble %
11881   \def\@BBOOKMARK[##1][##2]###4###5{\calc@bm@number{##5}}%
11882   \InputIfFileExists{\jobname.out}{\}%
11883   \ifx\WriteBookmarks\relax
11884     \global\let\WriteBookmarks\relax
11885   \fi
11886   \def\@BBOOKMARK[##1][##2]###4###5{%
11887     \def\Hy@temp{##4}%
11888 <*pdftex>
11889     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11890     \Hy@OutlineName{}\Hy@pstringName{%
11891       ##2\check@bm@number{##3}%
11892     }%
11893     \expandafter\strip@prefix\meaning\Hy@temp
11894   }%
11895 </pdftex>
11896 <*pdfmark>
11897   \pdfmark{%
11898     pdfmark=/OUT,%
11899     Count={##2\check@bm@number{##3}},%

```

```

11900         Dest={##3},%
11901         Title=\expandafter\strip@prefix\meaning\Hy@temp
11902     }%
11903 </pdfmark>
11904 <dvipdfm>
11905     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11906     \@pdfm@mark{%
11907         outline \ifHy@DvipdfmxOutlineOpen
11908             [%
11909             \ifnum##21>\z@
11910             \else
11911             -%
11912             \fi
11913             ] %
11914             \fi
11915             ##1<<%
11916             /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11917             /A<<%
11918             /S/GoTo%
11919             /D(\Hy@pstringName)%
11920             >>%
11921             >>%
11922         }%
11923 </dvipdfm>
11924     }%
11925     {%
11926         \def\WriteBookmarks{0}%
11927         \InputIfFileExists{\jobname.out}{\relax}%
11928     }%
11929     {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
11930     \ifx\WriteBookmarks\relax
11931     \else
11932         \if@files
11933             \newwrite\@outlinefile
11934             \immediate\openout\@outlinefile=\jobname.out\relax
11935             \ifHy@typexml
11936                 \immediate\write\@outlinefile{<relaxxml>\relax}%
11937             \fi
11938             \fi
11939         \fi
11940     \endgroup
11941 }
11942 <pdfptex>
11943 \def\Hy@OutlineName#1#2#3#4{%
11944     \pdfoutline goto name{#2}count#3{#4}%
11945 }
11946 </pdfptex>
11947 \def\check@bm@number#1{%
11948     \expandafter\ifx\csname B_#1\endcsname\relax
11949     0%
11950     \else
11951         \csname B_#1\endcsname
11952     \fi
11953 }
11954 \def\calc@bm@number#1{%
11955     \@tempcnta=\check@bm@number{#1}\relax
11956     \advance\@tempcnta by 1 %

```

```

11957 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11958 }
11959 \</!vtex>

11960 \ifHy@implicit
11961 \else
11962 \expandafter\endinput
11963 \fi

11964 \</outlines>
11965 \<*outlines | hypertex>

11966 \let\H@old@ssect\@ssect
11967 \def\@ssect#1#2#3#4#5{%
11968 \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11969 \phantomsection
11970 }
11971 \let\H@old@schapter\@schapter
11972 \def\@schapter#1{%
11973 \H@old@schapter{#1}%
11974 \beginngroup
11975 \let\@mkboth\@gobbletwo
11976 \Hy@GlobalStepCount\Hy@linkcounter
11977 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11978 \Hy@raisedlink{%
11979 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11980 }%
11981 \endgroup
11982 }

```

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:

```

11983 \@ifundefined{@chapter}{\%
11984 \let\Hy@org@chapter\@chapter
11985 \def\@chapter{%
11986 \def\Hy@next{%
11987 \Hy@GlobalStepCount\Hy@linkcounter
11988 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11989 \Hy@raisedlink{%
11990 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11991 }%
11992 }%
11993 \ifnum\c@secnumdepth>\m@ne
11994 \@ifundefined{if@mainmatter}%
11995 \iftrue{\csname if@mainmatter\endcsname}%
11996 \let\Hy@next\relax
11997 \fi
11998 \fi
11999 \Hy@next
12000 \Hy@org@chapter
12001 }%
12002 }

12003 \let\H@old@part\@part
12004 \beginngroup\expandafter\expandafter\expandafter\endgroup
12005 \expandafter\ifx\csname chapter\endcsname\relax
12006 \let\Hy@secnum@part\z@
12007 \else
12008 \let\Hy@secnum@part\m@ne

```

```

12009 \fi
12010 \def\@part{%
12011   \ifnum\Hy@secnum@part>\c@secnumdepth
12012     \phantomsection
12013   \fi
12014   \H@old@part
12015 }

12016 \let\H@old@spart\@spart
12017 \def\@spart#1{%
12018   \H@old@spart{#1}%
12019   \Hy@GlobalStepCount\Hy@linkcounter
12020   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
12021   \Hy@raisedlink{%
12022     \hyper@anchorstart{\@currentHref}\hyper@anchorend
12023   }%
12024 }

12025 \let\H@old@sect\@sect
12026 \def\@sect#1#2#3#4#5#6[#7]#8{%
12027   \ifnum #2>\c@secnumdepth
12028     \Hy@GlobalStepCount\Hy@linkcounter
12029     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12030   \fi
12031   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
12032   \ifnum #2>\c@secnumdepth
12033     \Hy@raisedlink{%
12034       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12035     }%
12036   \fi
12037 }

12038 </outlines | hypertex>
12039 <*outlines>

12040 \expandafter\def\csname Parent-4\endcsname{}
12041 \expandafter\def\csname Parent-3\endcsname{}
12042 \expandafter\def\csname Parent-2\endcsname{}
12043 \expandafter\def\csname Parent-1\endcsname{}
12044 \expandafter\def\csname Parent0\endcsname{}
12045 \expandafter\def\csname Parent1\endcsname{}
12046 \expandafter\def\csname Parent2\endcsname{}
12047 \expandafter\def\csname Parent3\endcsname{}
12048 \expandafter\def\csname Parent4\endcsname{}

12049 </outlines>

```

49 Compatibility with koma-script classes

```
12050 <*outlines | hypertex>
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for 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.

```

12051 \def\Hy@tempa{%
12052   \def\@addchap[##1]##2{%
12053     \typeout{##2}%
12054     \if@twoside
12055       \@mkboth{##1}{-}%
12056     \else

```

```

12057 \mkboth{}{##1}%
12058 \fi
12059 \addtocontents{lof}{\protect\addvspace{10\p@}}%
12060 \addtocontents{lot}{\protect\addvspace{10\p@}}%
12061 \Hy@GlobalStepCount\Hy@linkcounter
12062 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12063 \Hy@raisedlink{%
12064 \hyper@anchorstart{\@currentHref}\hyper@anchorend
12065 }%
12066 \if@twocolumn
12067 \topnewpage[\@makeschapterhead{##2}]%
12068 \else
12069 \@makeschapterhead{##2}%
12070 \@afterheading
12071 \fi
12072 \addcontentsline{toc}{chapter}{##1}%
12073 }%
12074 }
12075 \@ifclassloaded{scrbook}{%
12076 \@ifclasslater{scrbook}{2001/01/01}{%
12077 \let\Hy@tempa\@empty
12078 }{}%
12079 }{%
12080 \@ifclassloaded{scrreprt}{%
12081 \@ifclasslater{scrreprt}{2001/01/01}{%
12082 \let\Hy@tempa\@empty
12083 }{}%
12084 }{%
12085 \let\Hy@tempa\@empty
12086 }%
12087 }%
12088 \Hy@tempa
12089 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```

12090 <*pd1enc>
12091 \DeclareFontEncoding{PD1}{}{}

Accents
12092 \DeclareTextAccent{'}{PD1}{\textasciigrave}
12093 \DeclareTextAccent{'\'}{PD1}{\textacute}
12094 \DeclareTextAccent{\`}{PD1}{\textasciicircum}
12095 \DeclareTextAccent{\~}{PD1}{\texttilde}
12096 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
12097 \DeclareTextAccent{\r}{PD1}{\textring}
12098 \DeclareTextAccent{\v}{PD1}{\textasciicaroon}
12099 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
12100 \DeclareTextAccent{\c}{PD1}{\textcedilla}
12101 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
12102 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
12103 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
12104 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}

```

```

12105 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
12106 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
12107 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
12108 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
12109 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
12110 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
12111 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
12112 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
12113 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
12114 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
12115 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
12116 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
12117 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
12118 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
12119 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
12120 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
12121 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
12122 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
12123 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
12124 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
12125 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
12126 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
12127 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
12128 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
12129 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
12130 \DeclareTextCommand{\newtie}{PD1}[1]{\TextSymbolUnavailable{\newtie{#1}}#1}

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

12131 % U+0009 (CHARACTER TABULATION)
12132 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
12133 % U+000A (LINE FEED)
12134 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
12135 % U+000D (CARRIAGE RETURN)
12136 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

12137 % U+02D8 BREVE; breve
12138 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
12139 % U+02C7 CARON; caron
12140 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
12141 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
12142 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
12143 % U+02D9 DOT ABOVE; dotaccent
12144 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
12145 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
12146 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
12147 % U+02DB OGONEK; ogonek
12148 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
12149 % U+02DA RING ABOVE; ring
12150 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
12151 % U+02DC SMALL TILDE; ilde, *tilde
12152 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

12153 % U+0022 QUOTATION MARK; quotedbl

12154 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022

12155 % U+0023 NUMBER SIGN; numbersign

12156 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

12157 % U+0024 DOLLAR SIGN; dollar
 12158 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 12159 % U+0025 PERCENT SIGN; percent
 12160 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 12161 % U+0026 AMPERSAND; ampersand
 12162 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 12163 % U+0028 LEFT PARENTHESIS; parenleft
 12164 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 12165 % U+0029 RIGHT PARENTHESIS; parenright
 12166 \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
 12167 % U+002E FULL STOP; period
 12168 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
 \057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero
 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 12169 % U+003C LESS-THAN SIGN; less
 12170 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 12171 % U+003E GREATER-THAN SIGN; greater
 12172 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 12173 % U+005C REVERSE SOLIDUS; backslash
 12174 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12175 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12176 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12177 % U+005F LOW LINE; underscore
 12178 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 12179 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 12180 % U+0060 GRAVE ACCENT; grave
 12181 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 12182 % U+0069 LATIN SMALL LETTER I; i
 12183 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...

\172: U+007A LATIN SMALL LETTER Z; z
 12184 % U+007B LEFT CURLY BRACKET; braceleft
 12185 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 12186 % U+007C VERTICAL LINE; *bar, verticalbar
 12187 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 12188 % U+007D RIGHT CURLY BRACKET; braceright
 12189 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 12190 % U+007E TILDE; asciitilde
 12191 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 12192 % U+2022 BULLET; bullet
 12193 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 12194 % U+2020 DAGGER; dagger
 12195 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 12196 % U+2021 DOUBLE DAGGER; daggerdbl
 12197 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 12198 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 12199 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 12200 % U+2014 EM DASH; emdash
 12201 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 12202 % U+2013 EN DASH; endash
 12203 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 12204 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12205 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 12206 % U+2044 FRACTION SLASH; fraction
 12207 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 12208 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 12209 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 12210 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 12211 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 12212 % U+2212 MINUS SIGN; minus
 12213 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 12214 % U+2030 PER MILLE SIGN; perthousand
 12215 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 12216 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 12217 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 12218 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 12219 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 12220 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 12221 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 12222 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 12223 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 12224 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 12225 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 12226 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 12227 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 12228 % U+2122 TRADE MARK SIGN; trademark
 12229 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 12230 % U+FB01 LATIN SMALL LIGATURE FI; fi
 12231 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 12232 % U+FB02 LATIN SMALL LIGATURE FL; fl
 12233 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 12234 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 12235 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 12236 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 12237 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 12238 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron

12239 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 12240 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 12241 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
 12242 \DeclareTextCommand{\IJ}{PD1}{\230}
 12243 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 12244 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 12245 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 12246 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 12247 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 12248 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 12249 % U+0153 LATIN SMALL LIGATURE OE; oe
 12250 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 12251 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 12252 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 12253 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 12254 \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.

12255 % U+20AC EURO SIGN; *Euro, euro
 12256 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 12257 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12258 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 12259 % U+00A2 CENT SIGN; cent
 12260 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 12261 % U+00A3 POUND SIGN; sterling
 12262 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 12263 % U+00A4 CURRENCY SIGN; currency
 12264 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 12265 % U+00A5 YEN SIGN; yen
 12266 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 12267 % U+00A6 BROKEN BAR; brokenbar
 12268 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 12269 % U+00A7 SECTION SIGN; section
 12270 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 12271 % U+00A8 DIAERESIS; dieresis
 12272 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 12273 % U+00A9 COPYRIGHT SIGN; copyright
 12274 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 12275 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12276 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 12277 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12278 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 12279 % U+00AC NOT SIGN; logicalnot
 12280 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 12281 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

12282 % U+00AE REGISTERED SIGN; registered
 12283 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12284 % U+00AF MACRON; *macron, overscore
 12285 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12286 % U+00B0 DEGREE SIGN; degree
 12287 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12288 % U+00B1 PLUS-MINUS SIGN; plusminus
 12289 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12290 % U+00B2 SUPERScript TWO; twosuperior
 12291 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12292 % U+00B3 SUPERScript THREE; threesuperior

12293 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
12294 % U+00B4 ACUTE ACCENT; acute
12295 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
12296 % U+00B5 MICRO SIGN; mu, mu1
12297 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
12298 % U+00B6 PILCROW SIGN; paragraph
12299 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
12300 % U+00B7 MIDDLE DOT; middot, *periodcentered
12301 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
12302 % U+00B8 CEDILLA; cedilla
12303 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
12304 % U+00B9 SUPERScript ONE; onesuperior
12305 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
12306 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12307 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
12308 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12309 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
12310 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12311 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
12312 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12313 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
12314 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12315 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
12316 % U+00BF INVERTED QUESTION MARK; questiondown
12317 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
12318 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12319 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
12320 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12321 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
12322 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12323 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
12324 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12325 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
12326 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12327 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
12328 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12329 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
12330 % U+00C6 LATIN CAPITAL LETTER AE; AE
12331 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
12332 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12333 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
12334 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12335 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
12336 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12337 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
12338 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12339 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
12340 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12341 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12342 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12343 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
12344 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12345 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12346 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12347 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12348 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12349 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF

12350 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12351 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12352 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12353 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12354 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12355 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12356 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
12357 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12358 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
12359 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12360 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
12361 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12362 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
12363 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12364 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
12365 % U+00D7 MULTIPLICATION SIGN; multiply
12366 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12367 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12368 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12369 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12370 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
12371 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12372 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
12373 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12374 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
12375 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12376 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
12377 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12378 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
12379 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12380 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12381 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12382 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12383 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12384 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
12385 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12386 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12387 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12388 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12389 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12390 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12391 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12392 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12393 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12394 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12395 % U+00E6 LATIN SMALL LETTER AE; ae
12396 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12397 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12398 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12399 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12400 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
12401 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12402 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12403 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12404 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12405 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12406 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB

12407 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
 12408 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
 12409 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
 12410 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
 12411 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
 12412 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
 12413 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
 12414 \DeclareTextCompositeCommand{\`}{PD1}{i}{\356}% U+00EE
 12415 \DeclareTextCompositeCommand{\`}{PD1}{i}{\356}% U+00EE
 12416 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 12417 \DeclareTextCompositeCommand{\`}{PD1}{i}{\357}% U+00EF
 12418 \DeclareTextCompositeCommand{\`}{PD1}{i}{\357}% U+00EF
 12419 % U+00F0 LATIN SMALL LETTER ETH; eth
 12420 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 12421 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 12422 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
 12423 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 12424 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 12425 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 12426 \DeclareTextCompositeCommand{\`}{PD1}{o}{\363}% U+00F3
 12427 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 12428 \DeclareTextCompositeCommand{\`}{PD1}{o}{\364}% U+00F4
 12429 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 12430 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 12431 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12432 \DeclareTextCompositeCommand{\`}{PD1}{o}{\366}% U+00F6
 12433 % U+00F7 DIVISION SIGN; divide
 12434 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 12435 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12436 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 12437 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12438 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 12439 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12440 \DeclareTextCompositeCommand{\`}{PD1}{u}{\372}% U+00FA
 12441 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12442 \DeclareTextCompositeCommand{\`}{PD1}{u}{\373}% U+00FB
 12443 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12444 \DeclareTextCompositeCommand{\`}{PD1}{u}{\374}% U+00FC
 12445 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12446 \DeclareTextCompositeCommand{\`}{PD1}{y}{\375}% U+00FD
 12447 % U+00FE LATIN SMALL LETTER THORN; thorn
 12448 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 12449 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12450 \DeclareTextCompositeCommand{\`}{PD1}{y}{\377}% U+00FF
 12451 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

12452 \DeclareTextCommand{\SS}{PD1}{SS}
 12453 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

12454 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 12455 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 12456 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 12457 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 12458 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 12459 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 12460 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 12461 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

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12462 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12463 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12464 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12465 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12466 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12467 \DeclareTextCommand{\textbeta}{PD1}{\ss}

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Polish aliases. PDF encoding does not have the characters, but it is useful to Poles to have the plain letters regardless. Requested by Wojciech Myszka ;W.Myszka@immt.pwr.wroc.pl;

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12468 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12469 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
12470 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12471 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
12472 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
12473 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
12474 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
12475 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12476 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
12477 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12478 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
12479 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
12480 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
12481 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

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12482 </pdlenc>

50.2 PU encoding

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12483 <*puenc>
12484 \DeclareFontEncoding{PU}{}{}

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50.2.1 NFSS2 accents

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12485 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
12486 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
12487 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
12488 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
12489 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12490 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
12491 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
12492 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
12493 % U+0304 COMBINING MACRON; macroncmb
12494 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
12495 % U+0306 COMBINING BREVE; brevecmb
12496 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
12497 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
12498 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
12499 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12500 % U+0308 COMBINING DIAERESIS; dieresiscmb
12501 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12502 % U+030A COMBINING RING ABOVE; ringcmb
12503 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12504 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12505 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12506 % U+030C COMBINING CARON; caroncmb
12507 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12508 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
12509 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12510 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F

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12511 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12512 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12513 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
12514 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12515 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12516 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12517 % U+0327 COMBINING CEDILLA; cedillacmb
12518 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12519 % U+0328 COMBINING OGONEK; ogonekcmb
12520 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12521 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12522 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12523 % U+20DD COMBINING ENCLOSING CIRCLE
12524 \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.

```

12525 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
12526 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12527 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciicircum}
12528 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12529 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12530 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12531 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12532 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12533 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12534 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12535 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12536 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12537 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12538 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12539 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12540 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12541 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12542 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12543 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

12544 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
12545 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12546 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciicircum}
12547 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12548 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12549 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12550 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12551 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12552 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12553 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
12554 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12555 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12556 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12557 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12558 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12559 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12560 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12561 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12562 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12563 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}

```

```

12564 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12565 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}
12566 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12567 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12568 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12569 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}
12570 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12571 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12572 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12573 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12574 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12575 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
12576 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12577 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12578 % U+0009 (CHARACTER TABULATION)
12579 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12580 % U+000A (LINE FEED)
12581 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12582 % U+000D (CARRIAGE RETURN)
12583 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

12584 % U+0022 QUOTATION MARK; quotedbl
12585 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
12586 % U+0023 NUMBER SIGN; numbersign
12587 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12588 % U+0024 DOLLAR SIGN; dollar
12589 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
12590 % U+0025 PERCENT SIGN; percent
12591 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
12592 % U+0026 AMPERSAND; ampersand
12593 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
12594 % U+0027 APOSTROPHE; quotesingle
12595 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
12596 % U+0028 LEFT PARENTHESIS; parenleft
12597 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
12598 % U+0029 RIGHT PARENTHESIS; parenright
12599 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
12600 % U+002A ASTERISK; asterisk
12601 \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
12602 % U+003C LESS-THAN SIGN; less
12603 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

```


\80\075: U+003D EQUALS SIGN; equal
 12604 % U+003E GREATER-THAN SIGN; greater
 12605 \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
 12606 % U+005C REVERSE SOLIDUS; backslash
 12607 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12608 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12609 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12610 % U+005F LOW LINE; underscore
 12611 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12612 % U+0060 GRAVE ACCENT; grave
 12613 \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
 12614 % U+0069 LATIN SMALL LETTER I; i
 12615 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 12616 \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
 12617 % U+007B LEFT CURLY BRACKET; braceleft
 12618 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12619 % U+007C VERTICAL LINE; *bar, verticalbar
 12620 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12621 % U+007D RIGHT CURLY BRACKET; braceright
 12622 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12623 % U+007E TILDE; asciitilde
 12624 \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
 12625 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12626 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12627 % U+00A2 CENT SIGN; cent
 12628 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 12629 % U+00A3 POUND SIGN; sterling
 12630 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 12631 % U+00A4 CURRENCY SIGN; currency
 12632 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 12633 % U+00A5 YEN SIGN; yen
 12634 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 12635 % U+00A6 BROKEN BAR; brokenbar
 12636 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 12637 % U+00A7 SECTION SIGN; section
 12638 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 12639 % U+00A8 DIAERESIS; dieresis

12640 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 12641 % U+00A9 COPYRIGHT SIGN; copyright
 12642 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 12643 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12644 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 12645 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12646 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 12647 % U+00AC NOT SIGN; logicalnot
 12648 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 12649 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 12650 % U+00AE REGISTERED SIGN; registered
 12651 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 12652 % U+00AF MACRON; *macron, overscore
 12653 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 12654 % U+00B0 DEGREE SIGN; degree
 12655 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 12656 % U+00B1 PLUS-MINUS SIGN; plusminus
 12657 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 12658 % U+00B2 SUPERSCRIPT TWO; twosuperior
 12659 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 12660 % U+00B3 SUPERSCRIPT THREE; threesuperior
 12661 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 12662 % U+00B4 ACUTE ACCENT; acute
 12663 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 12664 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 12665 % U+00B5 MICRO SIGN; mu, mu1
 12666 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 12667 % U+00B6 PILCROW SIGN; paragraph
 12668 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 12669 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12670 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 12671 % U+00B8 CEDILLA; cedilla
 12672 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 12673 % U+00B9 SUPERSCRIPT ONE; onesuperior
 12674 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 12675 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12676 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 12677 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12678 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 12679 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12680 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 12681 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12682 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 12683 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12684 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 12685 % U+00BF INVERTED QUESTION MARK; questiondown
 12686 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 12687 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 12688 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 12689 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 12690 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 12691 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 12692 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 12693 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 12694 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 12695 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis

12696 \DeclareTextCompositeCommand{"}{PU}{A}{\80\304}% U+00C4
12697 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12698 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
12699 % U+00C6 LATIN CAPITAL LETTER AE; AE
12700 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12701 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12702 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
12703 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12704 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
12705 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12706 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
12707 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12708 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
12709 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12710 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
12711 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12712 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
12713 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12714 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
12715 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12716 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
12717 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12718 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
12719 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12720 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12721 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12722 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
12723 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12724 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
12725 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12726 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
12727 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12728 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
12729 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12730 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
12731 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12732 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
12733 % U+00D7 MULTIPLICATION SIGN; multiply
12734 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12735 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12736 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12737 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12738 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
12739 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12740 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
12741 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12742 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12743 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12744 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
12745 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12746 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12747 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12748 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12749 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12750 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12751 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12752 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0

12753 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12754 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12755 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12756 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12757 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12758 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12759 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12760 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
12761 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12762 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12763 % U+00E6 LATIN SMALL LETTER AE; ae
12764 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12765 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12766 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12767 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12768 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12769 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12770 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12771 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12772 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12773 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12774 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
12775 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12776 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12777 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
12778 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12779 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12780 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\355}% U+00ED
12781 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12782 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12783 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12784 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12785 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12786 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12787 % U+00F0 LATIN SMALL LETTER ETH; eth
12788 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
12789 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12790 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
12791 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12792 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
12793 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12794 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
12795 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12796 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
12797 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12798 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
12799 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12800 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
12801 % U+00F7 DIVISION SIGN; divide
12802 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
12803 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12804 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
12805 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12806 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
12807 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12808 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
12809 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex

12810 \DeclareTextCompositeCommand{\~}{PU}{u}{\80\373}% U+00FB
 12811 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12812 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 12813 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12814 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 12815 % U+00FE LATIN SMALL LETTER THORN; thorn
 12816 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12817 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12818 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12819 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12820 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 12821 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12822 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 12823 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12824 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12825 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12826 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12827 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12828 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12829 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12830 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12831 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12832 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 12833 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12834 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 12835 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12836 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 12837 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 12838 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 12839 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 12840 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 12841 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 12842 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 12843 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 12844 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 12845 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 12846 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 12847 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 12848 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 12849 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 12850 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 12851 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 12852 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 12853 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
 12854 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 12855 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 12856 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 12857 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 12858 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 12859 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 12860 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 12861 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 12862 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 12863 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent

12864 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12865 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12866 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12867 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12868 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12869 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12870 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12871 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12872 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12873 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12874 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12875 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12876 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12877 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12878 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12879 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12880 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12881 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12882 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12883 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12884 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12885 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12886 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
12887 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
12888 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
12889 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
12890 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
12891 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
12892 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
12893 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
12894 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
12895 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
12896 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
12897 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
12898 \DeclareTextCommand{\textHslash}{PU}{\81\047}% U+0127
12899 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
12900 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
12901 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
12902 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12903 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
12904 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
12905 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
12906 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
12907 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12908 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
12909 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
12910 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
12911 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
12912 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12913 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
12914 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
12915 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
12916 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
12917 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12918 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
12919 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
12920 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130

```

12921 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12922 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
12923 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
12924 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
12925 % U+0133 LATIN SMALL LIGATURE IJ; ij
12926 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
12927 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
12928 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
12929 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
12930 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12931 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12932 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
12933 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
12934 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
12935 \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 chosen `\textkra`.

```

12936 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
12937 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
12938 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
12939 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
12940 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
12941 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
12942 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
12943 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
12944 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
12945 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
12946 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
12947 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
12948 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
12949 \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`.

```

12950 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
12951 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
12952 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
12953 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
12954 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12955 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
12956 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12957 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
12958 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
12959 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
12960 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
12961 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
12962 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
12963 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
12964 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
12965 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
12966 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
12967 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
12968 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
12969 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
12970 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
12971 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149

```

12972 % U+014A LATIN CAPITAL LETTER ENG; Eng
12973 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
12974 % U+014B LATIN SMALL LETTER ENG; eng
12975 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
12976 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
12977 \DeclareTextCompositeCommand{=} {PU} {O} {\81\114}% U+014C
12978 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
12979 \DeclareTextCompositeCommand{=} {PU} {o} {\81\115}% U+014D
12980 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
12981 \DeclareTextCompositeCommand{\u} {PU} {O} {\81\116}% U+014E
12982 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
12983 \DeclareTextCompositeCommand{\u} {PU} {o} {\81\117}% U+014F
12984 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
12985 \DeclareTextCompositeCommand{\H} {PU} {O} {\81\120}% U+0150
12986 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
12987 \DeclareTextCompositeCommand{\H} {PU} {o} {\81\121}% U+0151
12988 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12989 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
12990 % U+0153 LATIN SMALL LIGATURE OE; oe
12991 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
12992 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
12993 \DeclareTextCompositeCommand{\'} {PU} {R} {\81\124}% U+0154
12994 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
12995 \DeclareTextCompositeCommand{\'} {PU} {r} {\81\125}% U+0155
12996 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
12997 \DeclareTextCompositeCommand{\c} {PU} {R} {\81\126}% U+0156
12998 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
12999 \DeclareTextCompositeCommand{\c} {PU} {r} {\81\127}% U+0157
13000 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
13001 \DeclareTextCompositeCommand{\v} {PU} {R} {\81\130}% U+0158
13002 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
13003 \DeclareTextCompositeCommand{\v} {PU} {r} {\81\131}% U+0159
13004 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
13005 \DeclareTextCompositeCommand{\'} {PU} {S} {\81\132}% U+015A
13006 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
13007 \DeclareTextCompositeCommand{\'} {PU} {s} {\81\133}% U+015B
13008 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
13009 \DeclareTextCompositeCommand{\` } {PU} {S} {\81\134}% U+015C
13010 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
13011 \DeclareTextCompositeCommand{\` } {PU} {s} {\81\135}% U+015D
13012 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
13013 \DeclareTextCompositeCommand{\c} {PU} {S} {\81\136}% U+015E
13014 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
13015 \DeclareTextCompositeCommand{\c} {PU} {s} {\81\137}% U+015F
13016 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13017 \DeclareTextCompositeCommand{\v} {PU} {S} {\81\140}% U+0160
13018 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13019 \DeclareTextCompositeCommand{\v} {PU} {s} {\81\141}% U+0161
13020 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
13021 \DeclareTextCompositeCommand{\c} {PU} {T} {\81\142}% U+0162
13022 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
13023 \DeclareTextCompositeCommand{\c} {PU} {t} {\81\143}% U+0163
13024 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
13025 \DeclareTextCompositeCommand{\v} {PU} {T} {\81\144}% U+0164
13026 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
13027 \DeclareTextCompositeCommand{\v} {PU} {t} {\81\145}% U+0165
13028 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar

13029 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
13030 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
13031 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
13032 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
13033 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
13034 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
13035 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
13036 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
13037 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
13038 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
13039 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
13040 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
13041 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
13042 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
13043 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
13044 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
13045 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
13046 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
13047 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
13048 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
13049 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
13050 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
13051 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
13052 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
13053 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
13054 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
13055 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
13056 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
13057 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
13058 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
13059 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
13060 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
13061 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
13062 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
13063 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
13064 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13065 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
13066 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
13067 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
13068 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
13069 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
13070 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
13071 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
13072 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
13073 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
13074 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13075 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
13076 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13077 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
13078 % U+017F LATIN SMALL LETTER LONG S; longs, slong
13079 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

13080 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
13081 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
13082 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
13083 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD

13084 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
13085 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
13086 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icarón
13087 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
13088 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
13089 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
13090 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
13091 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocarón
13092 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
13093 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
13094 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
13095 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucarón
13096 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
13097 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
13098 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
13099 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
13100 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
13101 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
13102 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
13103 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcarón
13104 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
13105 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
13106 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
13107 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcarón
13108 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
13109 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
13110 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
13111 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
13112 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
13113 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
13114 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
13115 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcarón
13116 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13117 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13118 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
13119 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
13120 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
13121 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
13122 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
13123 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
13124 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
13125 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
13126 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
13127 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
13128 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
13129 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
13130 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
13131 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
13132 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacut
13133 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
13134 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13135 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13136 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13137 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13138 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13139 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13140 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave

13141 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13142 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13143 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13144 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13145 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13146 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13147 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13148 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13149 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13150 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13151 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13152 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13153 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13154 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13155 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13156 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13157 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13158 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13159 % U+021E LATIN CAPITAL LETTER H WITH CARON
13160 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13161 % U+021F LATIN SMALL LETTER H WITH CARON
13162 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13163 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13164 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
13165 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
13166 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
13167 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
13168 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
13169 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
13170 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
13171 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
13172 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
13173 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
13174 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
13175 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
13176 \DeclareTextCompositeCommand{=} {PU}{Y}{\82\062}% U+0232
13177 % U+0233 LATIN SMALL LETTER Y WITH MACRON
13178 \DeclareTextCompositeCommand{=} {PU}{y}{\82\063}% U+0233
13179 % U+0237 LATIN SMALL LETTER DOTLESS J
13180 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13181 % U+02C7 CARON; caron
13182 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
13183 % U+02D8 BREVE; breve
13184 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
13185 % U+02D9 DOT ABOVE; dotaccent
13186 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
13187 % U+02DA RING ABOVE; ring
13188 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
13189 % U+02DB OGONEK; ogonek
13190 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
13191 % U+02DC SMALL TILDE; ilde, *tilde
13192 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
13193 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13194 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
13195 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD

13196 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13197 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13198 % U+02F7 MODIFIER LETTER LOW TILDE
 13199 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13200 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13201 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13202 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13203 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13204 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 13205 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13206 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13207 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13208 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13209 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13210 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13211 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13212 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13213 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13214 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 13215 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13216 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13217 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13218 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13219 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13220 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13221 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13222 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 13223 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 13224 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 13225 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 13226 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 13227 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 13228 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadieresis
 13229 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 13230 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 13231 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 13232 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 13233 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 13234 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 13235 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 13236 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 13237 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 13238 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 13239 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 13240 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 13241 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 13242 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 13243 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 13244 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 13245 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 13246 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 13247 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 13248 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa

13249 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13250 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13251 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13252 % U+039C GREEK CAPITAL LETTER MU; Mu
13253 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13254 % U+039D GREEK CAPITAL LETTER NU; Nu
13255 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13256 % U+039E GREEK CAPITAL LETTER XI; Xi
13257 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13258 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13259 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13260 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13261 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13262 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13263 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13264 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13265 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13266 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13267 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13268 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13269 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13270 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13271 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13272 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13273 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13274 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13275 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13276 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13277 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13278 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13279 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13280 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13281 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13282 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13283 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13284 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13285 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
13286 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13287 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
13288 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13289 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
13290 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13291 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13292 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
13293 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
13294 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13295 % U+03B2 GREEK SMALL LETTER BETA; beta
13296 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13297 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13298 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13299 % U+03B4 GREEK SMALL LETTER DELTA; delta
13300 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13301 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13302 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13303 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13304 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13305 % U+03B7 GREEK SMALL LETTER ETA; eta

13306 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13307 % U+03B8 GREEK SMALL LETTER THETA; theta
13308 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13309 % U+03B9 GREEK SMALL LETTER IOTA; iota
13310 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13311 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13312 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13313 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13314 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13315 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13316 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13317 % U+03BD GREEK SMALL LETTER NU; nu
13318 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13319 % U+03BE GREEK SMALL LETTER XI; xi
13320 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13321 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13322 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13323 % U+03C0 GREEK SMALL LETTER PI; pi
13324 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13325 % U+03C1 GREEK SMALL LETTER RHO; rho
13326 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13327 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13328 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13329 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13330 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13331 % U+03C4 GREEK SMALL LETTER TAU; tau
13332 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13333 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13334 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13335 % U+03C6 GREEK SMALL LETTER PHI; phi
13336 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13337 % U+03C7 GREEK SMALL LETTER CHI; chi
13338 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13339 % U+03C8 GREEK SMALL LETTER PSI; psi
13340 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13341 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13342 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13343 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13344 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13345 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13346 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13347 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; microntonos
13348 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13349 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13350 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
13351 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
13352 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13353 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
13354 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13355 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13356 % U+03DB GREEK SMALL LETTER STIGMA
13357 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13358 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13359 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13360 % U+03DD GREEK SMALL LETTER DIGAMMA
13361 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13362 % U+03DE GREEK LETTER KOPPA; Koppagreek

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13363 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13364 % U+03DF GREEK SMALL LETTER KOPPA
13365 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13366 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13367 \DeclareTextCommand{\textsampigreek}{PU}{\83\340}% U+03E0
13368 % U+03E1 GREEK SMALL LETTER SAMPI
13369 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

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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.

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13370 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13371 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
13372 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
13373 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13374 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
13375 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13376 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13377 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13378 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
13379 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
13380 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13381 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13382 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
13383 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
13384 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13385 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
13386 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13387 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
13388 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13389 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13390 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
13391 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
13392 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13393 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13394 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13395 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13396 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13397 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13398 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13399 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
13400 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
13401 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13402 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13403 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrrillic, *afii10145
13404 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13405 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13406 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13407 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13408 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13409 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13410 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13411 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13412 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13413 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13414 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13415 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022

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13416 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13417 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13418 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13419 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13420 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13421 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13422 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13423 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13424 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13425 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13426 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13427 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13428 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13429 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13430 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13431 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13432 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13433 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13434 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13435 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13436 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13437 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13438 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13439 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13440 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13441 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13442 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13443 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13444 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13445 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13446 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13447 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13448 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
13449 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13450 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13451 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13452 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13453 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13454 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13455 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13456 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13457 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13458 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13459 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13460 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
13461 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13462 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13463 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13464 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13465 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13466 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13467 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13468 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13469 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13470 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13471 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13472 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic

13473 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13474 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13475 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13476 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13477 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13478 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13479 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13480 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13481 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13482 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13483 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13484 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13485 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13486 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iecyrillic
13487 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13488 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13489 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13490 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13491 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13492 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13493 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13494 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
13495 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13496 \DeclareTextCommand{\cym}{PU}{\84\074}% U+043C
13497 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13498 \DeclareTextCommand{\cym}{PU}{\84\075}% U+043D
13499 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13500 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13501 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13502 \DeclareTextCommand{\cyp}{PU}{\84\077}% U+043F
13503 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13504 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13505 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13506 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
13507 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13508 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13509 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13510 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13511 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13512 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13513 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13514 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13515 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13516 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13517 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
13518 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13519 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13520 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13521 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13522 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13523 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13524 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
13525 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13526 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
13527 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13528 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
13529 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic

13530 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13531 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13532 \DeclareTextCommand{\cyrju}{PU}{\84\116}% U+044E
13533 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13534 \DeclareTextCommand{\cyrja}{PU}{\84\117}% U+044F
13535 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13536 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13537 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13538 \DeclareTextCommand{\cyrjo}{PU}{\84\121}% U+0451
13539 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13540 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13541 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13542 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13543 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13544 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13545 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13546 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13547 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13548 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13549 \DeclareTextCommand{\cyrri}{PU}{\84\126}% U+0456
13550 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13551 \DeclareTextCommand{\cyrji}{PU}{\84\127}% U+0457
13552 \DeclareTextCompositeCommand{\"}{PU}{\cyrri}{\84\127}% U+0457
13553 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13554 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13555 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13556 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
13557 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13558 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13559 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13560 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13561 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13562 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13563 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13564 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13565 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13566 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13567 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13568 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13569 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13570 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13571 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13572 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13573 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13574 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
13575 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13576 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13577 \DeclareTextCommand{\cyrjat}{PU}{\84\143}% U+0463
13578 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13579 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13580 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13581 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13582 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13583 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13584 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13585 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13586 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleiotifiedcyrillic

13587 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 13588 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
 13589 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 13590 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 13591 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 13592 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 13593 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 13594 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
 13595 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 13596 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
 13597 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 13598 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 13599 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 13600 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 13601 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 13602 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 13603 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 13604 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 13605 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 13606 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 13607 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 13608 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 13609 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 13610 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 13611 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 13612 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 13613 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 13614 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 13615 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 13616 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 13617 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 13618 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 13619 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 13620 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 13621 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 13622 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 13623 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 13624 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 13625 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 13626 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 13627 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 13628 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 13629 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 13630 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 13631 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 13632 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 13633 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 13634 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 13635 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 13636 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 13637 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 13638 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 13639 \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
 13640 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 13641 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 13642 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 13643 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 13644 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 13645 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 13646 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 13647 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 13648 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 13649 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 13650 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 13651 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 13652 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 13653 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 13654 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 13655 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 13656 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 13657 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 13658 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 13659 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 13660 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 13661 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 13662 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 13663 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 13664 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 13665 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 13666 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 13667 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 13668 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 13669 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 13670 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 13671 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 13672 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 13673 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 13674 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 13675 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 13676 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 13677 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 13678 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kavertikalstrokecyrillic
 13679 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 13680 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kavertikalstrokecyrillic
 13681 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 13682 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 13683 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 13684 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 13685 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 13686 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 13687 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 13688 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 13689 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 13690 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic

13691 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
13692 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endscendercyrillic
13693 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
13694 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
13695 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
13696 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
13697 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
13698 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
13699 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
13700 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
13701 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
13702 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
13703 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
13704 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
13705 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
13706 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
13707 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
13708 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
13709 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
13710 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
13711 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
13712 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
13713 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
13714 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
13715 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
13716 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
13717 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
13718 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
13719 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
13720 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
13721 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
13722 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
13723 \DeclareTextCommand{\cyrhcrs}{PU}{\84\261}% U+04B1
13724 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
13725 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
13726 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
13727 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
13728 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
13729 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
13730 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
13731 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
13732 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
13733 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
13734 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
13735 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13736 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13737 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13738 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13739 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13740 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13741 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13742 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13743 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13744 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13745 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13746 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13747 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD

13748 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13749 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
13750 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13751 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13752 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13753 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13754 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13755 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13756 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13757 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13758 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13759 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13760 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13761 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13762 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13763 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13764 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13765 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13766 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13767 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
13768 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13769 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13770 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
13771 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
13772 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
13773 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
13774 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
13775 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
13776 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
13777 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
13778 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
13779 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
13780 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
13781 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
13782 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
13783 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
13784 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
13785 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
13786 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
13787 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
13788 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
13789 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
13790 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
13791 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
13792 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
13793 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
13794 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
13795 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
13796 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
13797 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
13798 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
13799 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
13800 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiescyrillic
13801 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
13802 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiescyrillic
13803 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB

13804 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
13805 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
13806 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
13807 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
13808 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
13809 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
13810 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
13811 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
13812 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
13813 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
13814 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
13815 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
13816 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
13817 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
13818 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
13819 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
13820 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
13821 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
13822 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
13823 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
13824 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
13825 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
13826 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
13827 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
13828 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
13829 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
13830 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
13831 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
13832 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
13833 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
13834 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
13835 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
13836 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
13837 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
13838 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
13839 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
13840 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
13841 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
13842 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
13843 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
13844 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
13845 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
13846 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
13847 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
13848 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
13849 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
13850 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
13851 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
13852 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
13853 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
13854 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
13855 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
13856 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
13857 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
13858 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
13859 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
13860 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic

13861 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 13862 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresis Cyrillic
 13863 \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
 13864 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13865 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 13866 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13867 \DeclareTextCommand{\cyrhk}{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

13868 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13869 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13870 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13871 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 13872 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13873 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 13874 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 13875 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 13876 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 13877 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 13878 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 13879 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 13880 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 13881 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 13882 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 13883 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 13884 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 13885 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 13886 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 13887 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 13888 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 13889 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 13890 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 13891 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 13892 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 13893 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 13894 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 13895 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 13896 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 13897 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 13898 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 13899 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 13900 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 13901 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 13902 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 13903 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 13904 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 13905 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 13906 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 13907 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28

13908 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13909 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13910 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13911 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
13912 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13913 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
13914 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13915 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13916 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13917 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13918 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13919 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13920 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13921 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13922 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13923 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
13924 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13925 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
13926 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13927 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13928 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13929 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13930 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
13931 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13932 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13933 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13934 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13935 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13936 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13937 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13938 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
13939 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
13940 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13941 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
13942 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13943 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
13944 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13945 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
13946 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13947 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
13948 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13949 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
13950 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13951 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
13952 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13953 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
13954 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13955 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
13956 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13957 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
13958 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13959 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
13960 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13961 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
13962 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13963 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
13964 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde

13965 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
13966 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13967 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\200}% U+1E80
13968 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13969 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
13970 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13971 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\202}% U+1E82
13972 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13973 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
13974 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13975 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\204}% U+1E84
13976 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13977 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
13978 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13979 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\206}% U+1E86
13980 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13981 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
13982 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13983 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\212}% U+1E8A
13984 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13985 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
13986 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13987 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\214}% U+1E8C
13988 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
13989 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
13990 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
13991 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\216}% U+1E8E
13992 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
13993 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
13994 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
13995 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\220}% U+1E90
13996 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
13997 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
13998 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
13999 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\224}% U+1E94
14000 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
14001 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
14002 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
14003 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
14004 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
14005 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
14006 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
14007 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
14008 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
14009 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
14010 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
14011 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
14012 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
14013 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
14014 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
14015 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
14016 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
14017 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
14018 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
14019 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
14020 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
14021 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8

14022 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 14023 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

14024 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 14025 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 14026 % U+2013 EN DASH; endash
 14027 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 14028 % U+2014 EM DASH; emdash
 14029 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 14030 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 14031 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 14032 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 14033 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 14034 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 14035 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 14036 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 14037 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 14038 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 14039 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 14040 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 14041 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 14042 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 14043 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 14044 % U+2020 DAGGER; dagger
 14045 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 14046 % U+2021 DOUBLE DAGGER; daggerdbl
 14047 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 14048 % U+2022 BULLET; bullet
 14049 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 14050 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14051 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 14052 % U+2030 PER MILLE SIGN; perthousand
 14053 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14054 % U+2031 PER TEN THOUSAND SIGN
 14055 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14056 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 14057 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14058 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 14059 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14060 % U+203B REFERENCE MARK; referencemark
 14061 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14062 % U+203D INTERROBANG
 14063 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 14064 % U+2044 FRACTION SLASH; fraction
 14065 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 14066 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 14067 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 14068 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 14069 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 14070 % U+2052 COMMERCIAL MINUS SIGN
 14071 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14072 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 14073 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 14074 % U+2074 SUPERSCRIPT FOUR; foursuperior

14075 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
14076 % U+2075 SUPERSCRIPT FIVE; fivesuperior
14077 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
14078 % U+2076 SUPERSCRIPT SIX; sixsuperior
14079 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
14080 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
14081 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
14082 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
14083 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
14084 % U+2079 SUPERSCRIPT NINE; ninesuperior
14085 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
14086 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
14087 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
14088 % U+207B SUPERSCRIPT MINUS
14089 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
14090 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
14091 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
14092 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
14093 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
14094 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
14095 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
14096 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
14097 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
14098 % U+2080 SUBSCRIPT ZERO; zeroinferior
14099 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
14100 % U+2081 SUBSCRIPT ONE; oneinferior
14101 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
14102 % U+2082 SUBSCRIPT TWO; twoinferior
14103 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
14104 % U+2083 SUBSCRIPT THREE; threeinferior
14105 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}% U+2083
14106 % U+2084 SUBSCRIPT FOUR; fourinferior
14107 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
14108 % U+2085 SUBSCRIPT FIVE; fiveinferior
14109 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
14110 % U+2086 SUBSCRIPT SIX; sixinferior
14111 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
14112 % U+2087 SUBSCRIPT SEVEN; seveninferior
14113 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
14114 % U+2088 SUBSCRIPT EIGHT; eightinferior
14115 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
14116 % U+2089 SUBSCRIPT NINE; nineinferior
14117 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
14118 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
14119 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
14120 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
14121 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14122 % U+20A1 COLON SIGN; *colonmonetary, colonsign
14123 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
14124 % U+20A4 LIRA SIGN; afii08941, *lira
14125 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
14126 % U+20A6 NAIRA SIGN
14127 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
14128 % U+20A7 PESETA SIGN; peseta
14129 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7

14130 % U+20A9 WON SIGN; won
14131 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
14132 % U+20AB DONG SIGN; dong
14133 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
14134 % U+20AC EURO SIGN; *Euro, euro
14135 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
14136 % U+20B1 PESO SIGN
14137 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
14138 % U+20B2 GUARANI SIGN
14139 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14140 % U+2103 DEGREE CELSIUS; centigrade
14141 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
14142 % U+2116 NUMERO SIGN; *afii61352, numero
14143 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
14144 % U+2117 SOUND RECORDING COPYRIGHT
14145 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
14146 % U+211E PRESCRIPTION TAKE; prescription
14147 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
14148 % U+2120 SERVICE MARK
14149 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
14150 % U+2122 TRADE MARK SIGN; trademark
14151 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
14152 % U+2126 OHM SIGN; Ohm, Omega
14153 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
14154 % U+2127 INVERTED OHM SIGN
14155 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
14156 % U+212B ANGSTROM SIGN; angstrom
14157 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
14158 % U+212E ESTIMATED SYMBOL; estimated
14159 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
14160 % U+2135 ALEF SYMBOL; aleph
14161 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14162 % U+2190 LEFTWARDS ARROW; arrowleft
14163 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
14164 % U+2191 UPWARDS ARROW; arrowup
14165 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
14166 % U+2192 RIGHTWARDS ARROW; arrowright
14167 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
14168 % U+2193 DOWNWARDS ARROW; arrowdown
14169 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14170 % U+2212 MINUS SIGN; minus
14171 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
14172 % U+221A SQUARE ROOT; radical
14173 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14174 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
14175 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
14176 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
14177 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14178 % U+2422 BLANK SYMBOL
14179 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
14180 % U+2423 OPEN BOX; blank
14181 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14182 % U+2460 CIRCLED DIGIT ONE; onecircle
14183 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
14184 % U+2461 CIRCLED DIGIT TWO; twocircle
14185 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
14186 % U+2462 CIRCLED DIGIT THREE; threecircle
14187 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
14188 % U+2463 CIRCLED DIGIT FOUR; fourcircle
14189 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
14190 % U+2464 CIRCLED DIGIT FIVE; fivecircle
14191 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
14192 % U+2465 CIRCLED DIGIT SIX; sixcircle
14193 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
14194 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
14195 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
14196 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
14197 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
14198 % U+2468 CIRCLED DIGIT NINE; ninecircle
14199 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14200 % U+2469 CIRCLED NUMBER TEN; tencircle
14201 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14202 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14203 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14204 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14205 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14206 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
14207 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
14208 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
14209 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
14210 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
14211 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
14212 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14213 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14214 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14215 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14216 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14217 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14218 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14219 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
14220 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
14221 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
14222 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
14223 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
14224 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
14225 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
14226 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
14227 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
14228 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
14229 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
14230 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
14231 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA

14232 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14233 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14234 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14235 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14236 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14237 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14238 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14239 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14240 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14241 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14242 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14243 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14244 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14245 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14246 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14247 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14248 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14249 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14250 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14251 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14252 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14253 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14254 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14255 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14256 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14257 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14258 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14259 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14260 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14261 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14262 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 14263 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 14264 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 14265 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 14266 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 14267 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 14268 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 14269 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 14270 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 14271 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 14272 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 14273 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 14274 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 14275 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14276 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 14277 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14278 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14279 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14280 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14281 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14282 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 14283 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14284 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14285 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14286 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14287 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14288 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle

14289 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14290 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14291 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14292 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcicle
 14293 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14294 % U+24DA CIRCLED LATIN SMALL LETTER K; kcicle
 14295 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14296 % U+24DB CIRCLED LATIN SMALL LETTER L; lcicle
 14297 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14298 % U+24DC CIRCLED LATIN SMALL LETTER M; mcicle
 14299 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14300 % U+24DD CIRCLED LATIN SMALL LETTER N; ncicle
 14301 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14302 % U+24DE CIRCLED LATIN SMALL LETTER O; ocicle
 14303 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14304 % U+24DF CIRCLED LATIN SMALL LETTER P; pcicle
 14305 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14306 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcicle
 14307 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14308 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcicle
 14309 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14310 % U+24E2 CIRCLED LATIN SMALL LETTER S; scicle
 14311 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14312 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcicle
 14313 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14314 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucicle
 14315 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14316 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcicle
 14317 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14318 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcicle
 14319 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14320 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcicle
 14321 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14322 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycicle
 14323 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14324 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcicle
 14325 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14326 % U+24EA CIRCLED DIGIT ZERO
 14327 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14328 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14329 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14330 % U+25EF LARGE CIRCLE; largecircle
 14331 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

14332 % U+266A EIGHTH NOTE; musicalnote
 14333 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 14334 % U+26AD MARRIAGE SYMBOL
 14335 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 14336 % U+26AE DIVORCE SYMBOL
 14337 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

14338 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 14339 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6


```

14340 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
14341 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

```

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```

14342 % U+FB01 LATIN SMALL LIGATURE FI; fi
14343 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
14344 % U+FB02 LATIN SMALL LIGATURE FL; fl
14345 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

```

50.2.25 Miscellaneous

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14346 \DeclareTextCommand{\SS}{PU}{SS}

```

50.2.26 Aliases

Aliases (german.sty)

```

14347 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
14348 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
14349 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
14350 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
14351 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
14352 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
14353 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
14354 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

```

Aliases (math names)

```

14355 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
14356 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
14357 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
14358 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
14359 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
14360 </puenc>

```

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

14361 <*puvnc>

14362 \DeclareTextCommand{\abreve}{PU}{\81\003}
14363 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14364 \DeclareTextCommand{\dj}{PU}{\81\021}
14365 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14366 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14367 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14368 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14369 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14370 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
14371 \DeclareTextCommand{\DJ}{PU}{\81\020}
14372 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14373 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14374 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14375 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14376 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14377 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14378 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14379 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14380 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14381 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}

```

14382 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14383 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14384 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14385 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14386 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14387 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14388 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14389 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14390 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14391 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14392 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14393 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
14394 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14395 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14396 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14397 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14398 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
14399 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
14400 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
14401 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
14402 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
14403 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14404 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
14405 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
14406 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
14407 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
14408 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
14409 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
14410 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
14411 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
14412 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14413 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14414 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
14415 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14416 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14417 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
14418 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
14419 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
14420 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
14421 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
14422 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14423 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
14424 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
14425 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
14426 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
14427 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
14428 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
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14496 </puvnenc>

50.4 PU encoding, additions for Arabi

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14497 <*puarenc>

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14498 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14499 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14500 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14501 \DeclareTextCommand{\wawhamza}{PU}{\86\044} % 0624;afii57412;ARABIC LETTER WAW WITH HAMZA AE
14502 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14503 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14504 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14505 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14506 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14507 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14508 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14509 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14510 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14511 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14512 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14513 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14514 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14515 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14516 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14517 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14518 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14519 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14520 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14521 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14522 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14523 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN
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14525 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14526 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14527 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
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14537 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14538 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14539 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
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14546 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii?????;FARSI LETTER KAF
14547 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14548 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii?????;FARSI LETTER YEH

14549 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14550 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14551 \</puarenc>

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51 End of file hyccheck.tex

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14553 \<typeout{}>
14554 \<begin{document}>
14555 \<end{document}>
14556 \</check>

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