## The accsupp package

# Heiko Oberdiek\* <heiko.oberdiek at googlemail.com>

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#### Abstract

Since PDF 1.5 portions of a page can be marked for better accessibility support. For example, replacement texts or expansions of abbreviations can be provided. Package accsupp starts with providing a minimal low-level interface for programmers. Status is experimental.

## Contents

1	Dog	cumentation 2				
	1.1	Macros				
		1.1.1 Feature options				
		1.1.2 Input methods				
	1.2	Workaround, option space				
	1.3	Driver options				
		1.3.1 Option pdftex				
		1.3.2 Option luatex				
		1.3.3 Option dvipdfm				
		1.3.4 Option dvips				
		1.3.5 Turning off page stream compression				
2	Example					
	2.1	Example \notparallel				
	2.2	Example with pdfstringdef				
3	Imr	plementation 5				
_	3.1	Package				
	3.2	Space setup				
	3.3	Driver detection and setup				
	3.4	Main macro				
		3.4.1 Input methods				
	3.5	Drivers				
		3.5.1 Driver pdftex				
		3.5.2 Driver luatex				
		3.5.3 Driver dvipdfm				
		3.5.4 Driver dvips				
4	Tes	11				
4	4.1	<del></del>				
	4.1	Catcode checks for loading				

 $<sup>{\</sup>rm ^*Please\ report\ any\ issues\ at\ https://github.com/ho-tex/oberdiek/issues}$ 

<b>5</b>	Insta	llation	12
	5.1   1	Download	12
	5.2 - 1	Bundle installation	12
	5.3 - 1	Package installation	12
	5.4 - 1	Refresh file name databases	13
	5.5	Some details for the interested	13
6	Catal	logue	13
7	Refer	rences	14
8	Histo	ory	14
	[2007]	/03/21 v0.1]	14
	[2007]	/11/14 v0.2]	14
		/01/16 v0.3]	14
	[2016]	/05/16 v0.4]	14
	[2018]	/03/28 v0.5]	14
9	Index	C C	15

#### 1 Documentation

#### 1.1 Macros

Section "10.8 Accessibility Support" of the PDF reference [1] lists some features that can be added by operators for marked content.

#### \BeginAccSupp $\{\langle options \rangle\}$

It puts the operator BDC in the page stream:

```
/Span <<...>> % property dictionary BDC
```

The contents of the dictionary is controlled by  $\langle options \rangle$ . See sections 1.1.1 and 1.1.2.

#### 

It puts the operator EMC in the page stream. The only option is pdfliteral, see section 1.3.1.

**Note:** The caller is responsible for the placement of \BeginAccSupp and \EndAccSupp pairs. Especially page breaks are not allowed in between.

#### 1.1.1 Feature options

The PDF reference [1] describes and explains the different features. The names of the feature options are the same as the key names for the property dictionary for operator BDC, see \BeginAccSupp.

**ActualText:** Provides a replacement text, see examples in section 2.

**Alt:** Provides an alternate description.

**E:** Provides the expansion of an abbreviation or an acronym.

Lang: Specifies the language.

#### 1.1.2 Input methods

Except for Lang option method controls how the argument for ActualText, Alt, and E are interpreted.

method=plain: The string is only expanded and written without further treatment. Special characters are not protected, thus this method may result in an invalid PDF file.

**method=escape:** The string is expanded and special characters are escaped. The result is a valid PDF string.

**method=hex:** The string is given in hexadecimal notation. Section 2.1 shows an example.

**method=pdfstringdef:** If package hyperref is loaded, then its \pdfstringdef is used. This method is slow, but useful if the string contains arbitrary TeX code.

unicode: This option is needed, if the string is given as Unicode string (16 bit). Internally it adds the string prefix for Unicode. In case of method=pdfstringdef it passes the option to \hypersetup.

#### 1.2 Workaround, option space

PDF specification says in "10.8.3 Replacement Text"

Just as alternative descriptions can be provided for images and other items that do not translate naturally into text (...), replacement text can be specified for content that does translate into text but that is represented in a nonstandard way. These nonstandard representations might include, for example, glyphs for ligatures or custom characters, or inline graphics corresponding to letters in an illuminated manustript or to dropped capitals.

However, the ActualText is ignored in Acrobat Reader (until version 9 at least), if the content does not contain glyphs. Option space adds such an invisible glyph, a space character. The font name can be configured by option spacefont, the default font is phvr8r. The character slot is given by option spacechar, default is 32, the usual position of the space character.

These options can also be given as package options or in macro \AccSuppSetup that takes a key value list as argument. Usually only option space is necessary, if the contents does not contain glyphs otherwise. Option space is enabled by space or space=true and disabled by space=false. It is disabled as default. The option is evaluated by \BeginAccSupp and ignored by \EndAccSupp.

Note: Even with option space I get sometimes wrong texts when cut & paste from AR7/Linux or AR8/Linux, e.g.

```
\label{eq:Hello} \begin{split} & \text{Hello} \, \to \, \text{Helo}, \, \text{Helol}, \, \text{Hell}, \, \dots \\ & \text{Hello World} \, \to \, \text{Helo WorldW}, \, \text{Helo World}, \, \dots \end{split}
```

I do not know what Acrobat Reader is doing here, thus feedback and insights are welcome.

#### 1.3 Driver options

Driver options are package options only. The special TEX compilers pdfTEX, LuaTEX and XETEX are detected automatically. The default for unrecognized drivers can be set by defining \ActualTextDriverDefault. This can be done in the configuration file accsupp.cfg.

#### 1.3.1 Option pdftex

Package option pdftex is used for pdfTEX in PDF mode. Additionally \BeginAccSupp and \EndAccSupp understand option pdfliteral. It controls the modifier keyword for \pdfliteral:

```
pdfliteral=direct ⇒ \pdfliteral direct{...}
```

#### 1.3.2 Option luatex

Package option luatex is used for LuaTEX in PDF mode. Additionally \BeginAcc-Supp and \EndAccSupp understand option pdfliteral. It controls the modifier keyword for \pdfextension literal:

```
pdfliteral=direct \Rightarrow \pdfextension literal direct{...}
```

#### 1.3.3 Option dvipdfm

Package option dvipdfm and its aliases dvipdfmx xetex are used for drivers that support dvipdfm specials.

#### 1.3.4 Option dvips

Package option dvips and its alias dvipsone write pdfmark specials in the output. Unhappily these pdfmark operators are ignored by ghostscript (latest tested version is 8.54). Perhaps they are recognized by commercial distiller applications.

#### 1.3.5 Turning off page stream compression

For debugging it is useful to have uncompressed page stream objects. This can be done afterwards via pdftk:

```
pdftk file.pdf output file-uncompressed.pdf uncompress
```

Or the PDF file is generated uncompressed:

```
pdfTEX: \pdfcompresslevel=0
dvipdfm: dvipdfm -z0 ...
dvipdfmx: dvipdfmx -z0 ...
ghostscript/ps2pdf: ps2pdf -dCompressPages=false input.ps output.pdf
```

## 2 Example

#### 2.1 Example \notparallel

```
1 (*example1)
    2 %<<END
    3 \documentclass{article}
    4 \usepackage{accsupp}[2007/11/14]
    5 \usepackage{centernot}
    6 \% U+2226 NOT PARALLEL
    7 % \mathrel{...} prevents page break in between
    8 \newcommand*{\notparallel}{%
                   \ensuremath{%
10
                                 \mathrel{%
                                          \verb|\BeginAccSupp{method=hex,unicode,ActualText=2226}| % \cite{ActualText} = (ActualText) | % \cite{ActualText} = (ActualT
11
12
                                          \centernot{\parallel}%
                                         \EndAccSupp{}%
13
14
                               }%
15 }%
```

```
16 }
17 \begin{document}
18 \begin{equation}
19 A\notparallel B
20 \end{equation}
21 \end{document}
22 %END
23 \( /example1 \)
```

### 2.2 Example with pdfstringdef

```
24 (*example2)
25 %<<END
26 \documentclass{article}
27 \usepackage[unicode]{hyperref}
28 \space{2007/11/14}
29 \begin{document}
   \begin{equation}
30
     \BeginAccSupp{
31
      method=pdfstringdef,
32
      unicode,
33
      ActualText={%
34
       a\texttwosuperior +b\texttwosuperior
35
        =c\texttwosuperior
36
37
38
     }
     a^2 + b^2 = c^2
39
     \EndAccSupp{}
40
   \end{equation}
41
42 \end{document}
43 %END
44 (/example2)
```

## 3 Implementation

#### 3.1 Package

```
45 (*package)
 46 \begingroup\catcode61\catcode48\catcode32=10\relax%
 47 \catcode13=5 % ^^M
                         \endlinechar=13 %
 48
                         \catcode123=1 % {
 49
 50
                         \catcode125=2 % }
 51
                          \catcode64=11 % @
 52
                          \def\x{\endgroup
 53
                                   \expandafter\edef\csname ACCSUPP@AtEnd\endcsname{%
 54
                                             \endlinechar=\the\endlinechar\relax
                                             \verb|\catcode13=\\ \verb|\catcode13| relax|
 55
                                             \verb|\catcode32=\\ \verb|\catcode32\\ \verb|\relax|
 56
                                             \verb|\catcode35=\\ \verb|\catcode35| relax|
 57
                                             \colored{catcode61=\theta}\
 58
                                             \colored{catcode64} \to \colored{catcode64}
 59
                                             \color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=\color=
 60
                                             \color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\t
 61
 62
                                  }%
 63 }%
 64 \x\catcode61\catcode48\catcode32=10\relax%
65 \catcode13=5 \% ^M
66 \endlinechar=13 \%
67 \catcode35=6 % #
 68 \catcode64=11 % @
 69 \catcode123=1 % {
```

```
70 \catcode125=2 % }
  71 \def\TMP@EnsureCode#1#2{%
         \edef\ACCSUPP@AtEnd{%
  72
            \ACCSUPP@AtEnd
  73
            \color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\t
  74
  75 }%
  76
        \color= 1=\#2\relax
 77 }
 78 \TMP@EnsureCode{10}{12}% ^^J
 79 \TMP@EnsureCode{33}{12}%!
 80 \TMP@EnsureCode{39}{12}% '
 81 \TMP@EnsureCode{40}{12}% (
  82 \TMP@EnsureCode{41}{12}%)
 83 \TMP@EnsureCode{42}{12}% *
 84 \TMP@EnsureCode{44}{12}%,
  85 \TMP@EnsureCode{45}{12}% -
  86 \TMP@EnsureCode{46}{12}%.
  87 \TMP@EnsureCode{47}{12}% /
  88 \TMP@EnsureCode{58}{12}%:
  89 \TMP@EnsureCode{60}{12}% <
 90 \TMP@EnsureCode\{62\}\{12\}\% >
 91 \TMP@EnsureCode{94}{7}% ^ (superscript)
 92 \TMP@EnsureCode{96}{12}%
 93 \TMP@EnsureCode{254}{12}% ^^fe
 94 \TMP@EnsureCode{255}{12}% ^^ff
 95 \edef\ACCSUPP@AtEnd\\noexpand\endinput}
      Package identification.
  96 \NeedsTeXFormat{LaTeX2e}
 97 \ProvidesPackage{accsupp}%
 98 [2018/03/28 v0.5 Accessibility support by marked content (HO)]
 99 \RequirePackage{pdfescape}[2007/02/25]
100 \RequirePackage{ifpdf}
101 \RequirePackage{ifxetex}
102 \RequirePackage{kvoptions}
103 \SetupKeyvalOptions{%
104 family=ACCSUPP,%
105 prefix=ACCSUPP@%
106 }
3.2 Space setup
107 \DeclareBoolOption{space}
108 \DeclareStringOption[phvr8r]{spacefont}
109 \DeclareStringOption[32]{spacechar}
         Driver detection and setup
Driver declarations.
110 \def\ACCSUPP@DefineDriverKey{%
111
        \@dblarg\ACCSUPP@@DefineDriverKey
112 }
113 \def\ACCSUPP@@DefineDriverKey[#1]#2{%
114 \define@key{ACCSUPP}{#2}[]{%
            \def\ACCSUPP@driver{#1}%
115
116 }%
117
         \g@addto@macro\ACCSUPP@DisableOptions{%
            \DisableKeyvalOption{ACCSUPP}{#2}%
119 }%
120 }
121 \let\ACCSUPP@DisableOptions\@empty
122 \ACCSUPP@DefineDriverKey{pdftex}
123 \ACCSUPP@DefineDriverKey{luatex}
```

124 \ACCSUPP@DefineDriverKey{dvips}

```
125 \ACCSUPP@DefineDriverKey[dvips]{dvipsone}
126 \ACCSUPP@DefineDriverKey{dvipdfm}
127 \ACCSUPP@DefineDriverKey[dvipdfm]{dvipdfmx}
128 \ACCSUPP@DefineDriverKey[dvipdfm]{xetex}
129 \let\ACCSUPP@driver\relax
130 \InputIfFileExists{accsupp.cfg}{}{}
131 \providecommand*{\ActualTextDriverDefault}{dvips}
132 \ifpdf
133 \ifx\pdfextension\@undefined
     \def\ACCSUPP@driver{pdftex}%
134
135
     \def\ACCSUPP@driver{luatex}%
136
137 \fi
138 \else
139
     \def\ACCSUPP@driver{dvipdfm}%
140
141
     \ifx\ACCSUPP@driver\relax
142
       \let\ACCSUPP@driver\ActualTextDriverDefault
143
144
145 \fi
146 \fi
Process options.
147 \ProcessKeyvalOptions*
148 \ACCSUPP@DisableOptions
Driver validation and loading.
149 \ \texttt{\def}\ \texttt{\ACCSUPP@temp{pdftex}}\%
150 \ifpdf
    \ifx\pdfextension\@undefined\else
151
     \def\ACCSUPP@temp{luatex}%
152
153
    \fi
    \ifx\ACCSUPP@temp\ACCSUPP@driver
154
155
    \else
     \PackageWarningNoLine{accsupp}{%
156
157
       Wrong driver `\ACCSUPP@driver', using `pdftex' instead%
158
159 ed as
     \let\ACCSUPP@driver\ACCSUPP@temp
160
161 \fi
162 \else
    \ifx\ACCSUPP@temp\ACCSUPP@driver
163
     \PackageError{accsupp}{%
164
       Wrong driver, pdfTeX is not running in PDF mode.\MessageBreak
165
       Package loading is aborted%
166
167
     \\\ \@ehc
     \expandafter\expandafter\ACCSUPP@AtEnd
168
169 \fi
    \def\ACCSUPP@temp{dvipdfm}%
170
171 \ifxetex
     \ifx\ACCSUPP@temp\ACCSUPP@driver
172
173
174
       \PackageWarningNoLine{accsupp}{%
        Wrong driver `\ACCSUPP@driver',\MessageBreak
175
        using `dvipdfm' for XeTeX instead%
176
177
       \let\ACCSUPP@driver\ACCSUPP@temp
178
179
     \fi
180 \fi
```

181 \fi%

```
182 \ifx\ACCSUPP@driver\relax
183 \PackageError{accsupp}{%
184
     Missing driver option.\MessageBreak
      Package loading is aborted%
185
186 }\@ehc
187
    \expandafter\ACCSUPP@AtEnd
188 \fi%
189 \label{locality} $$189 \label{locality} InputIfFileExists{accsupp-\ACCSUPP@driver.def}{}{\% }$$
190 \PackageError{accsupp}{%
      Unsupported driver `\ACCSUPP@driver'.\MessageBreak
191
     Package loading is aborted%
192
193 }\@ehc
194 \ACCSUPP@AtEnd
195 }%
```

#### 3.4 Main macro

```
196 \DeclareBoolOption{unicode}
197 \DeclareStringOption[page]{pdfliteral}
198 \DeclareStringOption{Lang}
199 \def\ACCSUPP@method{escape}
200 \ensuremath{\mbox{\sc ACCSUPP}{method}} \ensuremath{\mbox{\sc M}}
202
     \PackageError{accsupp}{%
      Ignoring unknown method `#1'%
203
     }\@ehc
204
205 }{%
     \edef\ACCSUPP@method{#1}%
206
207 }%
208 }
209 \let\ACCSUPP@Lang\relax
210 \def\ACCSUPP@temp#1{%
212 }
213 \def\ACCSUPP@@temp#1#2{\%
214 \let#1\relax
215 \quad \texttt{\define@key{ACCSUPP}{\#2}{\%}}
     \def#1{##1}%
216
217
     \ifx#1\@empty
      \def#1{()}%
218
219
220
      \csname ACCSUPP@method@\ACCSUPP@method\endcsname#1%
221
     \fi
222 }%
223 }
224 \ACCSUPP@temp{Alt}
225 \ACCSUPP@temp{ActualText}
226 \ACCSUPP@temp{E}
227 \newcommand*{\BeginAccSupp}[1]{%
    \begingroup
     \verb|\setkeys{ACCSUPP}{#1}| %
229
     \edef\ACCSUPP@span{%
230
      /Span<<%
231
        \ifx\ACCSUPP@Lang\relax
232
233
         /Lang\ACCSUPP@Lang
234
235
        \ifx\ACCSUPP@Alt\relax
236
237
238
        /Alt\ACCSUPP@Alt
239
        \ifx\ACCSUPP@ActualText\relax
240
```

```
241
        \else
          /ActualText\ACCSUPP@ActualText
242
243
         \ifx\ACCSUPP@E\relax
245
        \else
         /E\ACCSUPP@E
246
247
        \fi
248
       >>%
     }%
249
      \ACCSUPP@bdc
250
      \ACCSUPP@space
251
    \endgroup
252
253 }
254 \newcommand*{\EndAccSupp}[1]{%
    \begingroup
255
      \setkeys{ACCSUPP}{#1}%
256
      \ACCSUPP@emc
257
258 \endgroup
259 }
260 \ \texttt{ACCSUPP@space} \{ \%
261 \ifACCSUPP@space
262
     \begingroup
       \@ifundefined{ACCSUPP@Font}{%
263
         \global\font\ACCSUPP@Font=\ACCSUPP@spacefont\relax
264
265
266
       \leavevmode
       \verb|\color| ACCSUPP@Font\char\ACCSUPP@spacechar| % \\
267
       \wd\z@\z@
^{268}
269
       ht\z@\z@
       \dp\z@\z@
270
       \copy\z@
271
272
      \endgroup
273 \fi
274 }
275 \newcommand*{\AccSuppSetup}{%
276 \setkeys{ACCSUPP}%
277 }
3.4.1 Input methods
278 \def\ACCSUPP@method@plain#1{%
279 \csname @safe@activestrue\endcsname
280 \edef#1{%
281
     \ifACCSUPP@unicode
282
      \sqrt{376} \sqrt{377\%}
283
     \fi
284
285
     #1%
286
     )%
287
288
    \ensuremath{\verb{@onelevel@sanitize\#1\%}}
289 }
290 \def\ACCSUPP@method@escape#1\%
    \EdefEscapeString#1{%
291
     \ifACCSUPP@unicode
292
       ^^fe^^ff%
293
     \fi
294
     #1%
295
296 }%
297 \edef#1{(#1)}%
298 }%
299 \def\ACCSUPP@method@hex#1{%
300 \edef#1{%
```

```
301
      <%
      \ifACCSUPP@unicode
302
303
      FEFF%
304
305
      #1%
306
     >%
307 }%
308 }
309 \def\ACCSUPP@method@pdfstringdef#1{%
310 \ifACCSUPP@unicode
     \@ifundefined{hypersetup}{}{%
       \hypersetup{unicode}%
313
    }%
314 \fi
315 \@ifundefined{pdfstringdef}{%
     \PackageError{accsupp}{%
316
       Method `pdfstringdef' requires package `hyperref'%
317
     }\@ehc
318
     \let\ACCSUPP@temp\@empty
319
320 }{%
321
     \begingroup
322
       \setbox0=\hbox{%
323
        \pdfstringdef\ACCSUPP@temp#1%
324
        \global\let\ACCSUPP@temp\ACCSUPP@temp
       }%
325
     \endgroup
326
327 }%
    \edef#1{(\ACCSUPP@temp)}%
328
329 }
330 \ACCSUPP@AtEnd%
331 (/package)
     Drivers
3.5
3.5.1 Driver pdftex
332 (*pdftex)
333 \NeedsTeXFormat{LaTeX2e}
334 \ProvidesFile{accsupp-pdftex.def}%
335 [2018/03/28 v0.5 accsupp driver for pdfTeX (HO)]%
336 \def\ACCSUPP@bdc{%
337 \pdfliteral\ACCSUPP@pdfliteral{\ACCSUPP@span BDC}%
338 }
339 \def\ACCSUPP@emc{\%
340 \pdfliteral\ACCSUPP@pdfliteral{EMC}%
341 }
342 \langle /pdftex \rangle
3.5.2 Driver luatex
343 (*luatex)
344 \NeedsTeXFormat{LaTeX2e}
345 \ProvidesFile{accsupp-luatex.def}%
346 [2018/03/28 v0.5 accsupp driver for pdfTeX (HO)]%
347 \verb|\protected\def\ACCSUPP@pdf@literal{\pdfextension literal}|
348 \def\ACCSUPP@bdc{%
349 \ \ACCSUPP@pdf@literal\ACCSUPP@pdfliteral{\ACCSUPP@span BDC} \%
350 }
351 \def\ACCSUPP@emc{%
352 \ACCSUPP@pdf@literal\ACCSUPP@pdfliteral{EMC}%
353 }
354 (/luatex)
```

#### 3.5.3 Driver dvipdfm

```
355 (*dvipdfm)
356 \NeedsTeXFormat{LaTeX2e}
357 \ProvidesFile{accsupp-dvipdfm.def}%
358 [2018/03/28 v0.5 accsupp driver for dvipdfm (HO)]%
359 \def\ACCSUPP@bdc{\%
360 \special{pdf:content \ACCSUPP@span BDC}%
361 }
362 \def\ACCSUPP@emc{\%}
363 \special{pdf:content EMC}%
364 }
365 (/dvipdfm)
3.5.4 Driver dvips
366 (*dvips)
367 \NeedsTeXFormat{LaTeX2e}
368 \ProvidesFile{accsupp-dvips.def}%
369 [2018/03/28 v0.5 accsupp driver for dvips (HO)]%
_{370} \ensuremath{\mbox{\sc SUPP@bdc}}\%
371 \ \protect\ \special{ps:[\ACCSUPP@span/BDC pdfmark}\%
372 }
373 \def\ACCSUPP@emc{%
374 \special{ps:[/EMC pdfmark}%
375 }
376 \langle /dvips \rangle
```

#### 4 Test

#### 4.1 Catcode checks for loading

```
377 (*test1)
378 \NeedsTeXFormat\{LaTeX2e\}
379 \documentclass{minimal}
380 \makeatletter
381 \def\RestoreCatcodes{}
382 \count@=0 %
383 \loop
384 \edef\RestoreCatcodes{\%}
385
      \RestoreCatcodes
      \catcode\the\count@=\the\catcode\count@\relax
386
387 }%
388 \ifnum\count@<255 \%
389 \advance\count@\@ne
390 \repeat
391
392 \def\RangeCatcodeInvalid#1#2{%
393 \count@=#1\relax
394 \loop
     \catcode\count@=15 %
396 \ifnum\count@<#2\relax
397
     \advance\count@\@ne
398 \repeat
399 }
400 \left\lceil \text{Test} \right\rceil
401 \RangeCatcodeInvalid{0}{47}%
402 \RangeCatcodeInvalid{58}{64}%
403 \RangeCatcodeInvalid{91}{96}%
404 \RangeCatcodeInvalid{123}{127}%
405 \catcode`\@=12 %
406 \catcode`\\=0 %
```

```
\color=1 \%
407
   \color=2 \%
408
   \color=6 \%
409
   \cite{12 }%
410
   \color=12 \%
411
   \color=14 \%
412
413
   \color=10 \%
414
   \catcode13=5 %
   415
416 \RestoreCatcodes
417 }
418 \Test
419 \csname @@end\endcsname
420 \end
421 (/test1)
```

#### 5 Installation

#### 5.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

CTAN:macros/latex/contrib/oberdiek/accsupp.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/accsupp.pdf Documentation.

**Bundle.** All the packages of the bundle 'oberdiek' are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

#### CTAN:install/macros/latex/contrib/oberdiek.tds.zip

TDS refers to the standard "A Directory Structure for TeX Files" (CTAN:tds/tds.pdf). Directories with texmf in their name are usually organized this way.

#### 5.2 Bundle installation

**Unpacking.** Unpack the oberdiek.tds.zip in the TDS tree (also known as texmf tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

Script installation. Check the directory TDS:scripts/oberdiek/ for scripts that need further installation steps. Package attachfile2 comes with the Perl script pdfatfi.pl that should be installed in such a way that it can be called as pdfatfi. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

#### 5.3 Package installation

Unpacking. The .dtx file is a self-extracting docstrip archive. The files are extracted by running the .dtx through plain  $T_EX$ :

 ${\tt tex\ accsupp.dtx}$ 

<sup>&</sup>lt;sup>1</sup>http://ctan.org/pkg/accsupp

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as texmf tree):

```
\rightarrow tex/latex/oberdiek/accsupp.sty
accsupp.sty
accsupp-pdftex.def
                        \rightarrow tex/latex/oberdiek/accsupp-pdftex.def
accsupp-luatex.def
                        → tex/latex/oberdiek/accsupp-luatex.def
acc supp-dvipdfm.def \quad \rightarrow \ tex/latex/oberdiek/acc supp-dvipdfm.def
                       \rightarrow tex/latex/oberdiek/accsupp-dvips.def
accsupp-dvips.def
                        \rightarrow doc/latex/oberdiek/accsupp.pdf
accsupp.pdf
accsupp-example1.tex \rightarrow doc/latex/oberdiek/accsupp-example1.tex
accsupp-example2.tex → doc/latex/oberdiek/accsupp-example2.tex
test/accsupp-test1.tex \rightarrow doc/latex/oberdiek/test/accsupp-test1.tex
accsupp.dtx
                        → source/latex/oberdiek/accsupp.dtx
```

If you have a docstrip.cfg that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

#### 5.4 Refresh file name databases

If your TEX distribution (teTEX, mikTEX, ...) relies on file name databases, you must refresh these. For example, teTEX users run texhash or mktexlsr.

#### 5.5 Some details for the interested

Unpacking with IATEX. The .dtx chooses its action depending on the format:

plain TeX: Run docstrip and extract the files.

LATEX: Generate the documentation.

If you insist on using  $\LaTeX$  for docstrip (really, docstrip does not need  $\LaTeX$ ), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{accsupp.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file ltxdoc.cfg. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfIATEX:

```
pdflatex accsupp.dtx
makeindex -s gind.ist accsupp.idx
pdflatex accsupp.dtx
makeindex -s gind.ist accsupp.idx
pdflatex accsupp.dtx
```

## 6 Catalogue

The following XML file can be used as source for the TEX Catalogue. The elements caption and description are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is accsupp.xml.

```
422 \langle *catalogue \rangle
423 \langle ?xml version='1.0' encoding='us-ascii'?>
424 \langle !DOCTYPE entry SYSTEM 'catalogue.dtd'>
```

```
425 <entry datestamp='$Date$' modifier='$Author$' id='accsupp'>
426 <name>accsupp</name>
    <caption>Better accessibility support for PDF files.
427
    <authorref id='auth:oberdiek'/>
428
    <copyright owner='Heiko Oberdiek' year='2007,2010'/>
430
    clicense type='lppl1.3'/>
431
    <version number='0.4'/>
432
     <description>
      Since PDF 1.5 portions of a page can be marked for better accessibility
433
      support. For example, replacement texts or expansions of abbreviations can
434
      be provided. This package starts with providing a minimal low-level
435
      interface for programmers; its status is experimental.
436
437
      The package is part of the xref refid='oberdiek'>oberdiek bundle.
438
439 </description>
440 <documentation details='Package documentation'
441
       href='ctan:/macros/latex/contrib/oberdiek/accsupp.pdf'/>
442 <ctan file='true' path='/macros/latex/contrib/oberdiek/accsupp.dtx'/>
443 <miktex location='oberdiek'/>
444 <texlive location='oberdiek'/>
445 <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'/>
446 </entry>
447 (/catalogue)
```

#### 7 References

[1] Adobe Systems Incorporated, *PDF Reference*, 6th edition, 2006. http://www.adobe.com/devnet/acrobat/pdfs/pdf\_reference.pdf

## 8 History

## [2007/03/21 v0.1]

• First version.

#### [2007/11/14 v0.2]

- · Various bug fixes.
- Catcode section rewritten, test added.

## [2010/01/16 v0.3]

- \AccSuppSetup added.
- Options space, spacefont, spacechar added.

## [2016/05/16 v0.4]

• Documentation updates.

## [2018/03/28 v0.5]

LuaTeX support added.

## 9 Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.

Symbols	\ActualTextDriverDefault 131, 143
\# 409	\advance 389, 397
\% 412	
\@ 405	В
\@dblarg 111	\begin
\Qenc 167, 186, 193, 204, 318	\BeginAccSupp
\Qempty 121, 217, 319 \Qifundefined 201, 263, 311, 315	${f C}$
\@ne 389, 397	\catcode 46, 47,
\@onelevel@sanitize 288	49, 50, 51, 55, 56, 57, 58, 59,
\@undefined 133, 151	60, 61, 64, 65, 67, 68, 69, 70,
\[	74, 76, 386, 395, 405, 406, 407,
\\	408, 409, 410, 411, 412, 413, 414 \centernot \cdot \cd
\{	\char
\]	\copy
-	\count@ 382,
Numbers	386, 388, 389, 393, 395, 396, 397
\3 283	\csname 53, 211, 220, 279, 419
	D
\ 413	\DeclareBoolOption 107, 196
	\DeclareStringOption 108, 109, 197, 198
A	\define@key 114, 200, 215
\ACCSUPP@@DefineDriverKey 111, 113 \ACCSUPP@@temp 211, 213	\DisableKeyvalOption
\ACCSUPP@ActualText 240, 242	\documentclass
\ACCSUPP@Alt 236, 238	\dp 270
\ACCSUPP@AtEnd	${f E}$
$\dots$ 72, 73, 95, 168, 187, 194, 330	\EdefEscapeString 291
\ACCSUPP@bdc 250, 336, 348, 359, 370	\end 20, 21, 41, 42, 420
\ACCSUPP@DefineDriverKey . 110, 122, 123, 124, 125, 126, 127, 128	\EndAccSupp 2, 13, 40, 254
\ACCSUPP@DisableOptions	\endcsname 53, 211, 220, 279, 419 \endinput 95
	\endlinechar
\ACCSUPP@driver 115, 129, 134, 136,	\ensuremath 9
140, 142, 143, 154, 157, 160,	
163, 172, 175, 178, 182, 189, 191	$\mathbf{F}$
\ACCSUPP@E	\font 264
\ACCSUPP@Font 264, 267	${f G}$
\ACCSUPP@Lang 209, 232, 234	\g@addto@macro 117
\ACCSUPP@method 199, 206, 220	
\ACCSUPP@method@escape 290	Н
\ACCSUPP@method@hex 299	\hbox
\ACCSUPP@method@pdfstringdef 309 \ACCSUPP@method@plain 278	\ht
\ACCSUPP@pdf@literal . 347, 349, 352	(hypersecup 512
\ACCSUPP@pdfliteral 337, 340, 349, 352	I
\ACCSUPP@space 251, 260	\ifACCSUPP@space 261
\ACCSUPP@spacechar 267	\ifACCSUPP@unicode 282, 292, 302, 310
\ACCSUPP@spacefont 264	\ifnum
\ACCSUPP@span 230, 337, 349, 360, 371 \ACCSUPP@temp 149, 152, 154,	\ifpdf
160, 163, 170, 172, 178, 210,	172, 182, 217, 232, 236, 240, 244
224, 225, 226, 319, 323, 324, 328	\ifxetex
\AccSuppSetup 275	\InputIfFileExists

L \leavevmode	\repeat
M \makeatletter	S \setbox
\NeedsTeXFormat	T \Test
PackageError       . 164, 183, 190, 202, 316         .PackageWarningNoLine       . 156, 174         .parallel       . 12         .pdfextension       . 133, 151, 347         .pdfliteral       . 337, 340         .pdfstringdef       . 323         .ProcessKeyvalOptions       . 147	\TMP@EnsureCode
	$f U$ \usepackage $\dots \dots \dots$
\protected	\wd
R \RangeCatcodeInvalid	<b>Z</b> \z@ 267, 268, 269, 270, 271