The **pdfcolfoot** package

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Abstract

Since version 1.40 pdfTeX supports several color stacks. This package uses a separate color stack for footnotes that can break across pages.

Contents

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*Please report any issues at https://github.com/ho-tex/oberdiek/issues

1 User interface

Just load the package:

```
\usepackage{pdfcolfoot}
```

The package assigns a color stack for footnotes and patches the appropriate internal macros to support this color stack.

1.1 Other packages or classes

This package pdfcolfoot redefines `\@makecol` and `\@makefntext`. This can cause conflicts if other packages or classes also change these macro in an incompatible way. Sometimes it can help to change the package order.

2 Interface for package or class writers

Two macros `\pdfcolfoot@switch` and `\pdfcolfoot@current` need to be added to get support of the color stack for footnotes. This package pdfcolfoot already patches many macros to add these two macros. If a package or class that deals with `\@makefntext` or `\@makecol` is not recognized by this package, the package/class author can add these two macros in his package/class.

2.1 Macro `\pdfcolfoot@switch`

Color commands inside footnotes should use the special color stack for footnotes. Macro `\pdfcolfoot@switch` sets this special color stack. (It can be called several times). But caution, footnotes for minipages should not be affected. This package patches `\@makefntext` for this purpose.

2.2 Macro `\pdfcolfoot@current`

In LaTeX the footnote stuff goes into box `\footins` that is placed on the page (`\@makecol`). Two things need consideration:

- The footnote area should not interfere with the normal color stack. Macro `\normalcolor` inside a group helps it stores the current color of the normal stack and restores it after the group.

- If a footnote is broken across a page boundary, we need the latest color of the footnote area in the previous page. This is set by macro `\pdfcolfoot@current`.

As example the changes for `\@makecol` are shown (however this macro is already patched by this package):

```
\gdef\@makcol{%
  ...
  \setbox\@outputbox\vbox{% or similar
    ...
    \color@begingroup
      \normalcolor
      \footnoterule % using normal color (black)
      \csname pdfcolfoot@current\endcsname
      \unvbox\footins
    \color@endgroup
  }%
  ...
}
```

We use `\csname` to call macro `\pdfcolfoot@current`. If package pdfcolfoot is not loaded, `\pdfcolfoot@current` is not defined. In this case `\csname` defines the undefined macro with meaning `\relax` and we do not get an error because of undefined command.

3 Implementation

3.1 Identification

```
1 ⟨*package⟩
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfcolfoot}%
4   [2016/05/16 v1.3 Color stack for footnotes with pdfTeX (HO)]%
```

3.2 Load package **pdfcol**

```
5 \RequirePackage{pdfcol}[2007/09/09]
6 \ifpdfcolAvailable
7 \else
8   \PackageInfo{pdfcolfoot}{%
9     Loading aborted, because color stacks are not available%
10  }%
11  \expandafter\endinput
12 \fi
```

3.3 Color stack for footnotes

Version 1.0 has used `\current@color` as initial color stack value, since version 1.1 package pdfcol with its default setting is used.

```
13 \pdfcolInitStack{foot}
```

3.4 Patch `\@makefntext`

\pdfcolfoot@switch   Macro `\pdfcolfoot@switch` switches the color stack. Subsequent color calls uses the color stack for footnotes.

```
14 \newcommand*{\pdfcolfoot@switch}{%
15  \pdfcolSwitchStack{foot}%
16 }
```

```
17 \AtBeginDocument{%
18  \newcommand*{\pdfcolfoot@makefntext}{}%
19  \let\pdfcolfoot@makefntext\@makefntext
20  \renewcommand{\@makefntext}[1]{%
21    \pdfcolfoot@makefntext{%
22      \if@minipage
23      \else
24        \pdfcolfoot@switch
25      \fi
26      #1%
27    }%
28  }%
29 }
```

3.5 Patch `\@makecol`

\pdfcolfoot@current   When the footnote area starts, the color should continue with the latest color value of the previous footnote area. This color is available on the current top of the color stack.

```
30 \newcommand*{\pdfcolfoot@current}{%
31  \pdfcolSetCurrent{foot}%
32 }
```

For convenience we use \detokenize for patching \@makecol and related macros.

```
33 \begingroup\expandafter\expandafter\expandafter\endgroup
34 \expandafter\ifx\csname detokenize\endcsname\relax
35  \PackageWarningNoLine{pdfcolfoot}{%
36    Missing e-TeX for patching \string\@makecol
37  }%
38  \expandafter\endinput
39 \fi
40 \newif\ifPCF@result
41 \def\pdfcolfoot@patch#1{%
42  \ifx#1\@undefined
43  \else
44   \ifx#1\relax
45   \else
46    \begingroup
47     \toks@{}%
48     \let\on@line\@empty
49     \expandafter\PCF@CheckPatched
50       \detokenize\expandafter{#1pdfcolfoot@current}\@nil
51     \ifPCF@result
52      \PackageInfo{pdfcolfoot}{\string#1\space is already patched}%
53     \else
54      \expandafter\PCF@CanPatch
55       \detokenize\expandafter{%
56         #1\setbox\@outputbox\vbox{\footnoterule}%
57       }%
58       \@nil
59      \ifPCF@result
60       \PackageInfo{pdfcolfoot}{\string#1 is being patched}%
61       \expandafter\PCF@PatchA#1\PCF@nil#1%
62      \else
63       \PackageInfo{pdfcolfoot}{%
64         \string#1\space cannot be patched%
65       }%
66      \fi
67     \fi
68     \expandafter\endgroup
69     \the\toks@
70   \fi
71  \fi
72 }
73 \expandafter\def\expandafter\PCF@CheckPatched
74   \expandafter#\expandafter1\detokenize{pdfcolfoot@current}#2\@nil{%
75  \ifx\\#2\\%
76   \PCF@resultfalse
77  \else
78   \PCF@resulttrue
79  \fi
80 }
81 \edef\PCF@BraceLeft{\string{}
82 \edef\PCF@BraceRight{\string}}
83 \begingroup
84  \edef\x{\endgroup
85   \def\noexpand\PCF@CanPatch
86     ##1\detokenize{\setbox\@outputbox\vbox}\PCF@BraceLeft
87     ##2\detokenize{\footnoterule}##3\PCF@BraceRight
88  }%
89 \x#4\@nil{%
90  \ifx\\#2#3#4\\%
91    \PCF@resultfalse
92  \else
```

4

```
 93     \PCF@resulttrue
 94   \fi
 95 }
 96 \def\PCF@PatchA#1\setbox\@outputbox\vbox#2#3\PCF@nil#4{%
 97   \PCF@PatchB{#1}#2\PCF@nil{#3}#4%
 98 }
 99 \def\PCF@PatchB#1#2\footnoterule#3\PCF@nil#4#5{%
100   \toks@{%
101     \def#5{%
102       #1%
103       \setbox\@outputbox\vbox{%
104         #2%
105         \footnoterule
106         \pdfcolfoot@current
107         #3%
108       }%
109       #4%
110     }%
111   }%
112 }
113 \def\pdfcolfoot@all#1{%
114   \begingroup
115     \let\on@line\@empty
116     \PackageInfo{pdfcolfoot}{%
117       Patching \string\@makecol\space macros (#1)%
118     }%
119   \endgroup
```

LATEX base macro:

```
120   \pdfcolfoot@patch\@makecol
```

Class aastex:

```
121   \pdfcolfoot@patch\@makecol@pptt
```

Class memoir:

```
122   \pdfcolfoot@patch\mem@makecol
123   \pdfcolfoot@patch\mem@makecolbf
124   \pdfcolfoot@patch\m@mopfootnote
```

Class revtex4:

```
125   \pdfcolfoot@patch\@combineinserts
```

Package changebar:

```
126   \pdfcolfoot@patch\ltx@makecol
```

Package dblfnote:

```
127   \pdfcolfoot@patch\dfn@latex@makecol
```

Package fancyhdr:

```
128   \pdfcolfoot@patch\latex@makecol
```

Package lscape:

```
129   \pdfcolfoot@patch\LS@makecol
```

Package lineno:

```
130   \pdfcolfoot@patch\@LN@orig@makecol
```

Package stfloats:

```
131   \pdfcolfoot@patch\org@makecol
132   \pdfcolfoot@patch\fn@makecol
133 }
134 \AtBeginDocument{\pdfcolfoot@all{AtBeginDocument}}
135 \pdfcolfoot@all{AtEndOfPackage}

136 ⟨/package⟩
```

4 Test

137 ⟨*test1⟩
138 \NeedsTeXFormat{LaTeX2e}
139 \AtEndDocument{%
140   \typeout{}%
141   \typeout{*************************************}%
142   \typeout{*** \space Check the PDF file manually! \space ***}%
143   \typeout{*************************************}%
144   \typeout{}%
145 }
146 \begingroup\expandafter\expandafter\expandafter\endgroup
147 \expandafter\ifx\csname pdfcompresslevel\endcsname\relax
148 \else
149   \pdfcompresslevel=0 %
150 \fi
151 \documentclass[12pt,a5paper]{article}
152 \usepackage{pdfcolfoot}[2016/05/16]
153 \dimen\footins=\baselineskip % for testing
154 \begin{document}
155   Black\footnote{Black \textcolor{blue}{Blue\\Blue} Black} %
156   \textcolor{red}{Red\newpage Red} Black%
157 \end{document}
158 ⟨/test1⟩

5 Installation

5.1 Download

Package. This package is available on CTAN[1]:

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

CTAN:macros/latex/contrib/oberdiek/pdfcolfoot.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/

---

[1]http://ctan.org/pkg/pdfcolfoot

5.3 Package installation

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

    tex pdfcolfoot.dtx

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

    pdfcolfoot.sty   → tex/latex/oberdiek/pdfcolfoot.sty
    pdfcolfoot.pdf   → doc/latex/oberdiek/pdfcolfoot.pdf
    test/pdfcolfoot-test1.tex → doc/latex/oberdiek/test/pdfcolfoot-test1.tex
    pdfcolfoot.dtx   → source/latex/oberdiek/pdfcolfoot.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 LaTeX. 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{pdfcolfoot.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 pdfLaTeX:

    pdflatex pdfcolfoot.dtx
    makeindex -s gind.ist pdfcolfoot.idx
    pdflatex pdfcolfoot.dtx
    makeindex -s gind.ist pdfcolfoot.idx
    pdflatex pdfcolfoot.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 `pdfcolfoot.xml`.

159 ⟨*catalogue⟩
160 <?xml version='1.0' encoding='us-ascii'?>
161 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>

```
162 <entry datestamp='$Date$' modifier='$Author$' id='pdfcolfoot'>
163  <name>pdfcolfoot</name>
164  <caption>Separate color stack for footnotes with pdfTeX.</caption>
165  <authorref id='auth:oberdiek'/>
166  <copyright owner='Heiko Oberdiek' year='2007,2012'/>
167  <license type='lppl1.3'/>
168  <version number='1.3'/>
169  <description>
170    Since version 1.40 <xref refid='pdftex'>pdfTeX</xref> supports
171    several colour stacks. This package uses a separate colour stack
172    for footnotes that can break across pages.
173    <p/>
174    The package is part of the <xref refid='oberdiek'>oberdiek</xref>
175    bundle.
176  </description>
177  <documentation details='Package documentation'
178      href='ctan:/macros/latex/contrib/oberdiek/pdfcolfoot.pdf'/>
179  <ctan file='true' path='/macros/latex/contrib/oberdiek/pdfcolfoot.dtx'/>
180  <miktex location='oberdiek'/>
181  <texlive location='oberdiek'/>
182  <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'/>
183 </entry>
184 ⟨/catalogue⟩
```

7 References

[1] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
    CTAN:macros/latex/contrib/oberdiek/pdfcol.pdf.

8 History

[2007/01/08 v1.0]

- First version.

[2007/09/09 v1.1]

- Use of package pdfcol.

- Test file added.

[2012/01/02 v1.2]

- Support updated for memoir 2011/03/06 v3.6j. (Thanks Bob for the bug report.)

[2016/05/16 v1.3]

- Documentation updates.

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.

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