

The pdfcolfoot package

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Abstract

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

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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.

*Please report any issues at <https://github.com/ho-tex/pdfcolfoot/issues>

1.1 Other packages or classes

This package `pdfcolfoot` redefines `\@makecol` and `\@makefnctext`. 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 `\@makefnctext` 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 `\@makefnctext` 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 [2023-01-10 v1.4 Color stack for footnotes with pdfTeX (H0)]%

```

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 \color@begingroup
27 #1%
28 \color@endgroup
29 }%
30 }%
31 }

```

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.

```

32 \newcommand*{\pdfcolfoot@current}{%
33 \pdfcolSetCurrent{foot}%
34 }

```

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

```

35 \begingroup\expandafter\expandafter\expandafter\endgroup
36 \expandafter\ifx\csname detokenize\endcsname\relax
37 \PackageWarningNoLine{pdfcolfoot}{%
38 Missing e-TeX for patching \string\@makecol
39 }%

```

```

40 \expandafter\endinput
41 \fi

42 \newif\ifPCF@result
43 \def\pdfcolfoot@patch#1{%
44   \ifx#1\@undefined
45   \else
46   \ifx#1\relax
47   \else
48     \begingroup
49     \toks@{}%
50     \let\on@line\@empty
51     \expandafter\PCF@CheckPatched
52     \detokenize\expandafter{#1pdfcolfoot@current}\@nil
53     \ifPCF@result
54     \PackageInfo{pdfcolfoot}{\string#1\space is already patched}%
55     \else
56     \expandafter\PCF@CanPatch
57     \detokenize\expandafter{%
58       #1\setbox\@outputbox\vbox{\footnoterule}%
59     }%
60     \@nil
61     \ifPCF@result
62     \PackageInfo{pdfcolfoot}{\string#1 is being patched}%
63     \expandafter\PCF@PatchA#1\PCF@nil#1%
64     \else
65     \PackageInfo{pdfcolfoot}{%
66       \string#1\space cannot be patched%
67     }%
68     \fi
69     \fi
70     \expandafter\endgroup
71     \the\toks@
72   \fi
73 \fi
74 }
75 \expandafter\def\expandafter\PCF@CheckPatched
76   \expandafter#\expandafter1\detokenize{pdfcolfoot@current}#2\@nil{%
77   \ifx\#2\%
78     \PCF@resultfalse
79   \else
80     \PCF@resulttrue
81   \fi
82 }
83 \edef\PCF@BraceLeft{\string{}}
84 \edef\PCF@BraceRight{\string{}}
85 \begingroup
86   \edef\x{\endgroup
87     \def\noexpand\PCF@CanPatch
88       ##1\detokenize{\setbox\@outputbox\vbox}\PCF@BraceLeft
89       ##2\detokenize{\footnoterule}##3\PCF@BraceRight
90   }%
91   \x#4\@nil{%
92     \ifx\#2#3#4\%
93       \PCF@resultfalse
94     \else
95       \PCF@resulttrue
96     \fi
97   }
98 \def\PCF@PatchA#1\setbox\@outputbox\vbox#2#3\PCF@nil#4{%
99   \PCF@PatchB{#1}#2\PCF@nil{#3}#4%
100 }
101 \def\PCF@PatchB#1#2\footnoterule#3\PCF@nil#4#5{%

```

```

102 \toks@{%
103   \def#5{%
104     #1%
105     \setbox\@outputbox\vbox{%
106       #2%
107       \footnoterule
108       \pdfcolfoot@current
109       #3%
110     }%
111     #4%
112   }%
113 }%
114 }
115 \def\pdfcolfoot@all#1{%
116   \begingroup
117   \let\on@line\@empty
118   \PackageInfo{pdfcolfoot}{%
119     Patching \string\@makecol\space macros (#1)%
120   }%
121   \endgroup

```

LaTeX base macro:

```

122 \pdfcolfoot@patch\@makecol

```

Class aastex:

```

123 \pdfcolfoot@patch\@makecol@pptt

```

Class memoir:

```

124 \pdfcolfoot@patch\mem@makecol
125 \pdfcolfoot@patch\mem@makecolbf
126 \pdfcolfoot@patch\m@mopfootnote

```

Class revtex4:

```

127 \pdfcolfoot@patch\@combineinserts

```

Package changebar:

```

128 \pdfcolfoot@patch\ltx@makecol

```

Package dblfnote:

```

129 \pdfcolfoot@patch\dfn@latex@makecol

```

Package fancyhdr:

```

130 \pdfcolfoot@patch\latex@makecol

```

Package lscape:

```

131 \pdfcolfoot@patch\LS@makecol

```

Package lineno:

```

132 \pdfcolfoot@patch\@LN@orig@makecol

```

Package stfloats:

```

133 \pdfcolfoot@patch\org@makecol
134 \pdfcolfoot@patch\fn@makecol
135 }
136 \AtBeginDocument{\pdfcolfoot@all{AtBeginDocument}}
137 \pdfcolfoot@all{AtEndOfPackage}
138 \endpackage

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

¹[CTAN:pkg/pdfcolfoot](https://ctan.org/pkg/pdfcolfoot)

[CTAN:macros/latex/contrib/pdfcolfoot/pdfcolfoot.dtx](#) The source file.

[CTAN:macros/latex/contrib/pdfcolfoot/pdfcolfoot.pdf](#) Documentation.

4.2 Package installation

The package should be installed with the package manager of your \TeX system. If for some reason a manual installation is needed follow the following instructions.

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/pdfcolfoot/pdfcolfoot.sty
pdfcolfoot.pdf → doc/latex/pdfcolfoot/pdfcolfoot.pdf
pdfcolfoot.dtx → source/latex/pdfcolfoot/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.

4.3 Refresh file name databases

If your \TeX distribution (\TeX Live, MiK \TeX , ...) relies on file name databases, you must refresh these. For example, \TeX Live users run `texhash` or `mktexlsr`.

4.4 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 pdf \LaTeX :

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

5 References

- [1] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
[CTAN:pkg/pdfcol](#).

6 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.

[2023-01-10 v1.4]

- Added a group to avoid that the wrong color stack is reset after the footnote.

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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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