

The pdfcolparcolumns package

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Abstract

Since version 1.40 pdfTeX supports several color stacks. This package uses them to fix color problems in package parcolumns.

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1 Usage

```
\usepackage{pdfcolparcolumns}
```

The package `pdfcolparcolumns` loads package `parcolumns` [1]. If color stacks are available then the macros of `parcolumns` are patched to add support for color stacks.

1.1 Option `rulebetweencolor`

Package `pdfcolparcolumns` also fixes the color for the rule between columns (if `rulebetween` is set). Default color is `\normalcolor`. But this can be changed by using option `rulebetweencolor`. It takes a color specification as value. If the value is empty, then the default (`\normalcolor`) is used. Examples:

```
rulebetweencolor=blue,
rulebetweencolor={red},
rulebetweencolor={}, % \normalcolor is used
rulebetweencolor=[rgb]{1,0,.5} % see below
```

If used inside the optional argument of environment `parcolumns` and the value contains an optional argument, then whole value must be put in curly braces:

```
\begin{parcolumns}[
  rulebetween,
  rulebetweencolor={ [rgb]{1,0,.5} },
]{2}
...
\end{parcolumns}
```

This option `rulebetweencolor` can also be set using `\setkeys`:

```
\setkeys{parcolumns}{rulebetweencolor=green}
```

1.2 Future

Currently package `parcolumns` does not seem to be maintained. Nevertheless if there will be a new version that adds support for color stacks, then this package may become obsolete.

2 Implementation

2.1 Identification

```
1 \<*package>
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfcolparcolumns}%
4 [2010/01/11 v1.3 Color stacks for parcolumns (H0)]%
```

2.2 Load packages

2.2.1 Package `parcolumns`

Currently package `parcolumns` does not define options. Thus it is just a precaution that the options of package `pdfcolparcolumns` are passed to package `parcolumns`.

```

5 \DeclareOption*{%
6   \PassoptionsToPackage{\CurrentOption}{parcolumns}%
7 }
8 \ProcessOptions\relax
9 \RequirePackage{parcolumns}[2004/11/25]

```

2.2.2 Package pdfcol

```

10 \RequirePackage{pdfcol}[2007/09/09]
11 \ifpdfcolAvailable
12 \else
13   \PackageInfo{pdfcolparcolumns}{%
14     Loading aborted, because color stacks are not available%
15   }%
16   \expandafter\endinput
17 \fi

```

2.2.3 Package infwarerr

```

18 \RequirePackage{infwarerr}[2007/09/09]

```

2.3 Color stack macros

`\pcpc@MaxStack` Macro `\pcpc@MaxStack` holds the highest number of allocated stacks.

```

19 \global\chardef\pcpc@MaxStack=\z@

```

`\pcpc@InitStacks` Macro `\pcpc@InitStacks` takes the number of columns as argument and ensures that there are enough color stacks for all columns.

```

20 \def\pcpc@InitStacks#1{%
21   \ifnum#1>\pcpc@MaxStack
22     \begingroup
23       \count@\pcpc@MaxStack
24       \loop
25         \advance\count@\@ne
26         \pdfcolInitStack{pcpc@\the\count@}%
27       \ifnum#1>\count@
28         \repeat
29       \global\chardef\pcpc@MaxStack=\count@
30     \endgroup
31   \fi
32 }

```

`\pcpc@SwitchStack`

```

33 \def\pcpc@SwitchStack#1{%
34   \pdfcolSwitchStack{pcpc@\number#1}%
35 }

```

`\pcpc@SetCurrent`

```

36 \def\pcpc@SetCurrent#1{%
37   \pdfcolSetCurrent{pcpc@\number#1}%
38 }

```

2.4 Patches

Now the color stack macros are patched into the macros of package `parcolumns`.

2.4.1 Init stacks

`\pcpc@InitStacks` should go into the definition of environment `parcolumns`. `\pc@alloccolumns` is executed there and nowhere else, thus we hook into it.

```
39 \g@addto@macro\pc@alloccolumns{%  
40   \pcpc@InitStacks\pc@columncount  
41 }
```

2.4.2 Switch stack

`\pcpc@SwitchStack` should be called by marco `\colchunk@`. However it is easier to patch `\pc@setcolumnwidth` that is executed in `\colchunk@` only.

```
42 \g@addto@macro\pc@setcolumnwidth{%  
43   \pcpc@SwitchStack\pc@columnctr  
44 }
```

2.4.3 Set current stack color

`\pcpc@SetCurrent` is set at the begin of each line. It must be inserted into `\pc@placeboxes`. Unhappily there is no easy way. Therefore we check and redefine `\pc@placeboxes`.

```
45 \begingroup  
46   \def\x{%  
47     \global\let\@tempa\relax  
48     \count@\z@  
49     \hb@xt@\linewidth{%  
50       \vfuzz30ex %  
51       \vbadness\@M  
52       \splittopskip\z@skip  
53       \loop  
54         \ifnum\count@<\pc@columncount  
55           \advance\count@\@ne  
56           \expandafter\ifvoid\csname pc@column@\number\count@\endcsname  
57             \hskip\csname pc@column@width@\number\count@\endcsname  
58           \else  
59             \expandafter\setbox\expandafter\@tempboxa\expandafter  
60               \vsplit\csname pc@column@\number\count@\endcsname  
61               to \dp\strutbox  
62             \vbox{%  
63               \unvbox\@tempboxa  
64             }%  
65           \fi  
66           \expandafter\ifvoid\csname pc@column@\number\count@\endcsname  
67           \else  
68             \global\let\@tempa\pc@placeboxes  
69           \fi  
70         \ifnum\count@<\pc@columncount  
71           \strut  
72           \hfill  
73           \ifpc@rulebetween  
74             \vrule  
75             \hfill  
76           \fi  
77         \fi  
78       \repeat  
79     }%  
80   \@tempa
```

```

81 }%
82 \ifx\x\pc@placeboxes
83 \else
84 \@PackageWarningNoLine{pdfcolparcolumns}{%
85   Command \string\pc@placeboxes\space has changed.\MessageBreak
86   Supported versions of package 'parcolumns':\MessageBreak
87   \space\space 2004/08/05.\MessageBreak
88   The redefinition of \string\pc@placeboxes\space may not%
89   \MessageBreak
90   behave correctly depending on the changes%
91 }%
92 \fi
93 \endgroup

```

\pc@placeboxes

```

94 \renewcommand*{\pc@placeboxes}{%
95   \global\let\@tempa\relax
96   \count@\z@
97   \hb@xt@\linewidth{%
98     \vfuzz30ex %
99     \vbadness\@M
100    \splittopskip\z@skip
101    \loop
102    \ifnum\count@<\pc@columncount
103      \advance\count@\@ne
104      \expandafter\ifvoid\csname pc@column@\number\count@\endcsname
105      \hskip\csname pc@column@width@\number\count@\endcsname
106    \else
107      \expandafter\setbox\expandafter\@tempboxa\expandafter
108      \vsplit\csname pc@column@\number\count@\endcsname
109      to \dp\strutbox
110      \vbox{%
111        \pcpc@SetCurrent\count@
112        \unvbox\@tempboxa
113      }%
114    \fi
115    \expandafter\ifvoid\csname pc@column@\number\count@\endcsname
116    \else
117      \global\let\@tempa\pc@placeboxes
118    \fi
119    \ifnum\count@<\pc@columncount
120      \strut
121      \hfill
122      \ifpc@rulebetween
123        \begingroup
124        \pcpc@RuleBetweenColor
125        \vrule
126        \endgroup
127        \hfill
128      \fi
129    \fi
130    \repeat
131  }%
132  \@tempa
133 }

```

\pcpc@RuleBetweenColorDefault

```

134 \def\pcpc@RuleBetweenColorDefault{%

```

```

135 \normalcolor
136 }

\pcpc@RuleBetweenColor

137 \let\pcpc@RuleBetweenColor\pcpc@RuleBetweenColorDefault

138 \define@key{parcolumns}{rulebetweencolor}{%
139 \edef\pcpc@temp{#1}%
140 \ifx\pcpc@temp\@empty
141 \let\pcpc@RuleBetweenColor\pcpc@RuleBetweenColorDefault
142 \else
143 \edef\pcpc@temp{%
144 \noexpand\@ifnextchar[{%
145 \def\noexpand\pcpc@RuleBetweenColor{%
146 \noexpand\color\pcpc@temp
147 }%
148 \noexpand\pcpc@GobbleNil
149 }{%
150 \def\noexpand\pcpc@RuleBetweenColor{%
151 \noexpand\color{\pcpc@temp}%
152 }%
153 \noexpand\pcpc@GobbleNil
154 }%
155 \pcpc@temp\noexpand\@nil
156 }%
157 \pcpc@temp
158 \fi
159 }

\pcpc@GobbleNil

160 \long\def\pcpc@GobbleNil#1\@nil{}

161 \end{package}

```

3 Test

The test file is a modified version of the file that Donald Goodman has posted in [comp.text.tex](http://groups.google.com/group/comp.text.tex/msg/8eda74ed292012bb): “[Re: xcolor glitches](http://groups.google.com/group/comp.text.tex/msg/8eda74ed292012bb)”¹

```

162 \test1
163 \NeedsTeXFormat{LaTeX2e}
164 \AtEndDocument{%
165 \typeout{}%
166 \typeout{*****}%
167 \typeout{*** \space Check the PDF file manually! \space ***}%
168 \typeout{*****}%
169 \typeout{}%
170 }
171 \documentclass{article}
172 \usepackage{xcolor}
173 \usepackage{pdfcolparcolumns}
174
175 \newcommand{\instruct}[1]{%
176 \noindent
177 \footnotesize
178 \textcolor{red}{#1}%

```

¹Url: <http://groups.google.com/group/comp.text.tex/msg/8eda74ed292012bb>

```

179 }
180
181 \begin{document}
182 \begin{parcolumns}[colwidths={1=2.3in,2=2.3in},sloppy]{2}%
183 \colchunk[1]{%
184 \instruct{Et non dicitur versus} %
185 Fidelium anim\ae\ %
186 \instruct{%
187 sed immediate subiungitur antiphona finalis %
188 beat\ae\ Mari\ae\ Virginis%
189 } %
190 100.%
191 }%
192 \colchunk[2]{%
193 \instruct{%
194 And the verse %
195 \textcolor{black}{May the souls of the faithful} %
196 is not said, but the final antiphon of the %
197 Blessed Virgin Mary, %
198 \textcolor{black}{100,} %
199 is immediately joined.%
200 }%
201 }%
202 \end{parcolumns}%
203 \end{document}
204 \end{test1}

```

4 Installation

4.1 Download

Package. This package is available on CTAN²:

[CTAN:macros/latex/contrib/oberdiek/pdfcolparcolumns.dtx](http://ctan.org/macros/latex/contrib/oberdiek/pdfcolparcolumns.dtx) The source file.

[CTAN:macros/latex/contrib/oberdiek/pdfcolparcolumns.pdf](http://ctan.org/macros/latex/contrib/oberdiek/pdfcolparcolumns.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](http://ctan.org/install/macros/latex/contrib/oberdiek.tds.zip)

TDS refers to the standard “A Directory Structure for T_EX Files” ([CTAN:tds/tds.pdf](http://ctan.org/tds/tds.pdf)). Directories with `texmf` in their name are usually organized this way.

4.2 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
```

²[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

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/
```

4.3 Package installation

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

```
tex pdfcolparcolumns.dtx
```

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

<code>pdfcolparcolumns.sty</code>	→ <code>tex/latex/oberdiek/pdfcolparcolumns.sty</code>
<code>pdfcolparcolumns.pdf</code>	→ <code>doc/latex/oberdiek/pdfcolparcolumns.pdf</code>
<code>test/pdfcolparcolumns-test1.tex</code>	→ <code>doc/latex/oberdiek/test/pdfcolparcolumns-test1.tex</code>
<code>pdfcolparcolumns.dtx</code>	→ <code>source/latex/oberdiek/pdfcolparcolumns.dtx</code>

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`.

4.4 Refresh file name databases

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

4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk pdfcolparcolumns.pdf unpack_files output .
```

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{pdfcolparcolumns.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 pdfL^AT_EX:

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

5 Catalogue

The following XML file can be used as source for the [T_EX 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 `pdfcolparcolumns.xml`.

```
205 (*catalogue)
206 <?xml version='1.0' encoding='us-ascii'?>
207 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
208 <entry datestamp='$Date$' modifier='$Author$' id='pdfcolparcolumns'>
209   <name>pdfcolparcolumns</name>
210   <caption>Fix colour problems in package 'parcolumns'.</caption>
211   <authorref id='auth:oberdiek'>/>
212   <copyright owner='Heiko Oberdiek' year='2007,2008,2010'>/>
213   <license type='lppl1.3'>/>
214   <version number='1.3'>/>
215   <description>
216     Since version 1.40 pdfTeX supports colour stacks.
217     This package uses them to fix colour problems in
218     package <xref refid='parcolumns'>parcolumns</xref>.
219   <p/>
220     The package is part of the <xref refid='oberdiek'>oberdiek</xref>
221     bundle.
222   </description>
223   <documentation details='Package documentation'
224     href='ctan:/macros/latex/contrib/oberdiek/pdfcolparcolumns.pdf'>/>
225   <ctan file='true' path='/macros/latex/contrib/oberdiek/pdfcolparcolumns.dtx'>/>
226   <miktex location='oberdiek'>/>
227   <texlive location='oberdiek'>/>
228   <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'>/>
229 </entry>
230 </catalogue>
```

6 References

- [1] Jonathan Sauer: *The parcolumns package*; 2004/11/25;
[CTAN:macros/latex/contrib/sauerj/parcolumns.pdf](#).
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
[CTAN:macros/latex/contrib/oberdiek/pdfcol.pdf](#).

7 History

[2007/07/26 v1.0]

- First version, published in the newsgroup `comp.text.tex` with the name `parcolumns-colorstacks`: “[Re: xcolor glitches](#)”³

[2007/09/09 v1.1]

- CTAN version, package name renamed to `pdfcolparcolumns`.
- Uses package `pdfcol`.
- Documentation added.
- Test file added.

[2008/08/11 v1.2]

- Code is not changed.
- URLs updated.

[2010/01/11 v1.3]

- Fix for rule `color`.
- New option `rulebetweencolor` for environment `parcolumns`.

8 Index

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³Url: <http://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414>

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