

# 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 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 [2008/08/11 v1.2 Color stacks support for parcolumns (HO)]%
```

### 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 macro `\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 \begin{group}
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        \vrule
124        \hfill
125      \fi
126    \fi
127    \repeat
128  }%
129  \@tempa
130 }

```

131 `</package>`

### 3 Test

The test file is a modified version of the file that Donald Goodman has posted in [comp.text.tex](#): “Re: xcolor glitches”<sup>1</sup>

```
132 <test1>
133 \NeedsTeXFormat{LaTeX2e}
134 \AtEndDocument{%
135   \typeout{%
136     \typeout{*****}%
137     \typeout{*** \space Check the PDF file manually! \space ***}%
138     \typeout{*****}%
139   \typeout}%
140 }
141 \documentclass{article}
142 \usepackage{xcolor}
143 \usepackage{pdfcolparcolumns}
144
145 \newcommand{\instruct}[1]{%
146   \noindent
147   \footnotesize
148   \textcolor{red}{#1}%
149 }
150
151 \begin{document}
152   \begin{parcolumns}[colwidths={1=2.3in,2=2.3in},sloppy]{2}%
153     \colchunk[1]{%
154       \instruct{Et non dicitur versus} %
155       Fidelium anim\ae %
156       \instruct{%
157         sed immediate subiungitur antiphona finalis %
158         beat\ae Mari\ae Virginis%
159       } %
160       100.%
161     }%
162     \colchunk[2]{%
163       \instruct{%
164         And the verse %
165         \textcolor{black}{May the souls of the faithful} %
166         is not said, but the final antiphon of the %
167         Blessed Virgin Mary, %
168         \textcolor{black}{100,} %
169         is immediately joined.%
170       }%
171     }%
172   \end{parcolumns}%
173 \end{document}
174 </test1>
```

### 4 Installation

#### 4.1 Download

**Package.** This package is available on CTAN<sup>2</sup>:

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

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

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

<sup>2</sup><ftp://ftp.ctan.org/tex-archive/>

**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 T<sub>E</sub>X Files” ([CTAN: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
```

**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-T<sub>E</sub>X:

```
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 T<sub>E</sub>X distribution (teT<sub>E</sub>X, miK<sub>T</sub>E<sub>X</sub>, ...) relies on file name databases, you must refresh these. For example, teT<sub>E</sub>X 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 L<sup>A</sup>T<sub>E</sub>X.** The `.dtx` chooses its action depending on the format:  
**plain-T<sub>E</sub>X:** Run `docstrip` and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for `docstrip` (really, `docstrip` does not need L<sup>A</sup>T<sub>E</sub>X), 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.

\PassOptionsToClass{a4paper}{article}

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

<b>B</b>		<b>P</b>	
\begin	151, 152	\PackageInfo	13
<b>C</b>		\PassoptionsToPackage	6
\chardef	19, 29	\pc@alloccolumns	39
\colchunk	153, 162	\pc@columncount	40, 54, 70, 102, 119
\count@	23, 25, 26, 27, 29, 48, 54, 55, 56, 57, 60, 66, 70, 96, 102, 103, 104, 105, 108, 111, 115, 119	\pc@columnctr	43
\csname	56, 57, 60, 66, 104, 105, 108, 115	\pc@placeboxes	68, 82, 85, 88, 94
\CurrentOption	6	\pc@setcolumnwidth	42
<b>D</b>		\pcpc@InitStacks	20, 40
\DeclareOption	5	\pcpc@MaxStack	19, 21, 23, 29
\documentclass	141	\pcpc@SetCurrent	36, 111
\dp	61, 109	\pcpc@SwitchStack	33, 43
<b>E</b>		\pdfcolInitStack	26
\end	172, 173	\pdfcolSetCurrent	37
\endcsname	56, 57, 60, 66, 104, 105, 108, 115	\pdfcolSwitchStack	34
\endinginput	16	\ProcessOptions	8
<b>F</b>		\ProvidesPackage	3
\footnotesize	147	<b>R</b>	
<b>G</b>		\renewcommand	94
\g@addto@macro	39, 42	\repeat	28, 78, 127
<b>H</b>		\RequirePackage	9, 10, 18
\hb@xt@	49, 97	<b>S</b>	
\hfill	72, 75, 121, 124	\setbox	59, 107
\hskip	57, 105	\space	85, 87, 88, 137
<b>I</b>		\splittopskip	52, 100
\ifnum	21, 27, 54, 70, 102, 119	\strut	71, 120
\ifpc@rulebetween	73, 122	\strutbox	61, 109
\ifpdfcolAvailable	11	<b>T</b>	
\ifvoid	56, 66, 104, 115	\textcolor	148, 165, 168
\ifx	82	\the	26
\instruct	145, 154, 156, 163	\typeout	135, 136, 137, 138, 139
<b>L</b>		<b>U</b>	
\linewidth	49, 97	\unvbox	63, 112
\loop	24, 53, 101	\usepackage	142, 143
<b>M</b>		<b>V</b>	
\MessageBreak	85, 86, 87, 89	\vbadness	51, 99
<b>N</b>		\vbox	62, 110
\NeedsTeXFormat	2, 133	\vfuzz	50, 98
\newcommand	145	\vrule	74, 123
\noindent	146	\vsplit	60, 108
\number	34, 37, 56, 57, 60, 66, 104, 105, 108, 115	<b>X</b>	
		\x	46, 82
		<b>Z</b>	
		\z@	19, 48, 96
		\z@skip	52, 100