The pdfcolparcolumns package

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Abstract
Since version 1.40 pdf\LaTeX{} supports several color stacks. This package uses them to fix color problems in package parcolumns.

Contents
1 Usage 2
   1.1 Option \texttt{rulebetweencolor} 2
   1.2 Future 2
2 Implementation 2
   2.1 Identification 2
   2.2 Load packages 2
      2.2.1 Package \texttt{parcolumns} 2
      2.2.2 Package pdfcol 3
      2.2.3 Package infwarerr 3
   2.3 Color stack macros 3
   2.4 Patches 3
      2.4.1 Init stacks 3
      2.4.2 Switch stack 3
      2.4.3 Set current stack color 4
3 Test 6
4 Installation 7
   4.1 Download 7
   4.2 Bundle installation 7
   4.3 Package installation 7
   4.4 Refresh file name databases 7
   4.5 Some details for the interested 8
5 Catalogue 8
6 References 9
7 History 9
   [2007/07/26 v1.0] 9
   [2007/09/09 v1.1] 9
   [2008/08/11 v1.2] 9
   [2010/01/11 v1.3] 9
   [2016/05/16 v1.4] 9
8 Index 9

∗Please report any issues at https://github.com/ho-tex/oberdiek/issues
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 \texttt{\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 (\texttt{\normalcolor}) is used. Examples:

\begin{verbatim}
rulebetweencolor=blue,
rulebetweencolor={red},
rulebetweencolor={}, \% normalcolor is used
rulebetweencolor={\texttt{\texttt{\texttt{\texttt{rgb}}}}}{1,0,5} \% see below
\end{verbatim}

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

This option rulebetweencolor can also be set using \texttt{\texttt{\texttt{\texttt{\setkeys}}}}:

\begin{verbatim}
\setkeys{parcolumns}{rulebetweencolor=green}
\end{verbatim}

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

\begin{verbatim}
1 ⟨*package⟩
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfcolparcolumns}[2016/05/16 v1.4 Color stacks for parcolumns (HO)]
\end{verbatim}

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.

\begin{verbatim}
5 \DeclareOption*{\%
6 \PassOptionsToPackage{\CurrentOption}{parcolumns}\%
7 }
8 \ProcessOptions\relax
9 \RequirePackage{parcolumns}[2004/11/25]
\end{verbatim}
2.2.2 Package pdfcol
\RequirePackage{pdfcol}[2007/09/09]
\ifpdfcolAvailable
\PackageInfo{pdfcolparcolumns}{Loading aborted, because color stacks are not available}%
\fi
\expandafter\endinput
2.2.3 Package infwarerr
\RequirePackage{infwarerr}[2007/09/09]

2.3 Color stack macros
\pcpc@MaxStack \pcpc@MaxStack holdsthe highest number of allocated stacks.
\global\chardef\pcpc@MaxStack=\z@
\pcpc@InitStacks \pcpc@InitStacks takes the number of columns as argument and ensures that there are enough color stacks for all columns.
\def\pcpc@InitStacks#1{\ifnum#1>\pcpc@MaxStack\begingroup\count@\pcpc@MaxStack\loop\advance\count@1\pdfcolInitStack{pcpc@\the\count@}\repeat\global\chardef\pcpc@MaxStack=\count\endgroup\fi}

\pcpc@SwitchStack \pcpc@SwitchStack should be called by macro \colchunk@. However it is easier to patch \pc@setcolumnwidth that is executed in \colchunk@ only.
\g@addto@macro\pc@setcolumnwidth{\pdfcolSwitchStack{pcpc@\number\value{\@currentlabel}}}

\pcpc@SetCurrent \pcpc@SetCurrent
\g@addto@macro\pc@setcolumnwidth{% 

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

2.4.1 Init stacks
\pcpc@InitStacks \pcpc@InitStacks should go into the definition of environment parcolumns.\pc@alloccolumns is executed there and nowhere else, thus we hook into it.
\g@addto@macro\pc@alloccolumns{% 

2.4.2 Switch stack
\pcpc@SwitchStack \pcpc@SwitchStack should be called by macro \colchunk@. However it is easier to patch \pc@setcolumnwidth that is executed in \colchunk@ only.
\g@addto@macro\pc@setcolumnwidth{%
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.

\begingroup
\def\x{\global\let\@tempa\relax\count@\z@\hb@xt@\linewidth{\vfuzz30ex\vbadness@M\splittopskip\z@skip\loop\ifnum\count@<\pc@columncount\advance\count@\@ne\expandafter\ifvoid\csname pc@column@\number\count@\endcsname\hskip\csname pc@column@width@\number\count@\endcsname\else\expandafter\setbox\expandafter\@tempboxa\expandafter\vsplit\csname pc@column@\number\count@\endcsname to \dp\strutbox\vbox{\unvbox\@tempboxa}\fi\expandafter\ifvoid\csname pc@column@\number\count@\endcsname\else\global\let\@tempa\pc@placeboxes\fi\ifnum\count@<\pc@columncount\strut\hfill\ifpc@rulebetween\vrule\hfill\fi\fi\repeat\@tempa\ifx\x\pc@placeboxes\else\@PackageWarningNoLine{pdfcolparcolumns}{Command \string\pc@placeboxes\space has changed.\MessageBreak\Supported versions of package `parcolumns':\MessageBreak\space\space 2004/08/05.\MessageBreak\The redefinition of \string\pc@placeboxes\space may not\MessageBreak\space behave correctly depending on the changes%\}\fi\fi\endgroup
3 Test

The test file is a modified version of the file that Donald Goodman has posted in comp.text.tex: “Re: xcolor glitches”¹

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

4.1 Download

Package. This package is available on CTAN:


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.

4.2 Bundle installation

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

unzip obiediektds.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 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):

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

4.4 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 mktexlar.

2http://ctan.org/pkg/pdfcolparcolumns
4.5 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{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 \texttt{\textbackslash{}txdoc.cfg}. For instance, put this line into this file, if you want to have A4 as paper format:

\latex \PassOptionsToClass{a4paper}{article}

An example follows how to generate the documentation with pdf\TeX:

\texttt{pdflatex pdfcolparcolumns.dtx}
\texttt{makeindex -s gind.ist pdfcolparcolumns.idx}
\texttt{pdflatex pdfcolparcolumns.dtx}
\texttt{makeindex -s gind.ist pdfcolparcolumns.idx}
\texttt{pdflatex pdfcolparcolumns.dtx}

5 Catalogue

The following XML file can be used as source for the \TeX Catalogue. The elements \texttt{caption} and \texttt{description} are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is \texttt{pdfcolparcolumns.xml}.

\begin{verbatim}
\end{verbatim}
6 References


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.

[2016/05/16 v1.4]
• Documentation updates.

8 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.

<table>
<thead>
<tr>
<th>Symbols</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>@M</td>
<td>51, 99</td>
<td>\advance</td>
<td>25, 55, 103</td>
</tr>
<tr>
<td>@PackageWarningNoLine</td>
<td>84</td>
<td>\ae</td>
<td>185, 188</td>
</tr>
<tr>
<td>@empty</td>
<td>140</td>
<td>\AtEndDocument</td>
<td>164</td>
</tr>
<tr>
<td>@ifnextchar</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ne</td>
<td>25, 55, 103</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>@nil</td>
<td>155, 160</td>
<td>\begin</td>
<td>181, 182</td>
</tr>
<tr>
<td>@tempa</td>
<td>47, 68, 80, 95, 117, 132</td>
<td>\tempboxa</td>
<td>59, 63, 107, 112</td>
</tr>
<tr>
<td>@tempboxa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\u</td>
<td>185, 188</td>
<td>\colchunk</td>
<td>183, 192</td>
</tr>
<tr>
<td></td>
<td></td>
<td>\color</td>
<td>146, 151</td>
</tr>
</tbody>
</table>

\(^3\)Url: http://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414