

# The `pdfcolparallel` package

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2016/05/16 v1.4

## Abstract

This packages fixes bugs in `parallel` and improves color support by using several color stacks that are provided by pdfTeX since version 1.40.

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## 1 Usage

\usepackage{pdfcolparallel}

---

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

The package `pdfcolparallel` loads package `parallel` [1] and redefines some macros to fix bugs.

If color stacks are available then package `parallel` is further patched to support them.

## 1.1 Option `rulebetweencolor`

Package `pdfcolparallel` also fixes the color for the rule between columns. Default color is `\normalcolor`. But this can be changed by using option `rulebetweencolor` for `\setkeys{parallel}` (see package `keyval`). The option takes a color specification as value. If the value is empty, then the default (`\normalcolor`) is used. Examples:

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

## 1.2 Future

If there will be a new version of package `parallel` that adds support for color stacks, then this package may become obsolete.

# 2 Implementation

## 2.1 Identification

```
1 /*package  
2 \NeedsTeXFormat{LaTeX2e}  
3 \ProvidesPackage{pdfcolparallel}{%  
4   [2016/05/16 v1.4 Color stacks support for parallel (HO)]%
```

## 2.2 Load and fix package `parallel`

Package `parallel` is loaded. Before options of package `pdfcolparallel` are passed to package `parallel`.

```
5 \DeclareOption*{  
6   \PassOptionsToPackage{\CurrentOption}{parallel}  
7 }  
8 \ProcessOptions\relax  
9 \RequirePackage{parallel}[2003/04/13]  
10 \RequirePackage{infwarerr}[2007/09/09]
```

```
\pcp@ColorPatch  
11 \begingroup\expandafter\expandafter\expandafter\endgroup  
12 \expandafter\ifx\csname currentgrouplevel\endcsname\relax  
13   \def\pcp@ColorPatch{}%  
14 \else  
15   \def\pcp@ColorPatchf{}%  
16   \@ifundefined{set@color}{}%  
17     \gdef\pcp@ColorPatch{}%  
18   }{}%  
19   \gdef\pcp@ColorPatchf{}%  
20     \gdef\pcp@ColorResets{}%  
21   \bgroup
```

```

22      \aftergroup\pcp@ColorResets
23      \aftergroup\egroup
24      \let\pcp@OrgSetColor\set@color
25      \let\set@color\pcp@SetColor
26      \edef\pcp@GroupLevel{\the\currentgrouplevel}%
27      }%
28      }%
29      \pcp@ColorPatch
30      }%


\pcp@SetColor
31  \def\pcp@SetColor{%
32      \ifnum\pcp@GroupLevel=\currentgrouplevel
33          \let\pcp@OrgAfterGroup\aftergroup
34          \def\aftergroup{%
35              \g@addto@macro\pcp@ColorResets
36          }%
37          \pcp@OrgSetColor
38          \let\aftergroup\pcp@OrgAfterGroup
39      \else
40          \pcp@OrgSetColor
41      \fi
42  }%
43 \fi


\pcp@CmdCheckRedef
44 \def\pcp@CmdCheckRedef#1{%
45   \begingroup
46   \def\pcp@cmd{#1}%
47   \afterassignment\pcp@CmdDo
48   \long\def\reserved@a
49 }
50 \def\pcp@CmdDo{%
51   \expandafter\ifx\pcp@cmd\reserved@a
52   \else
53     \edef\x*{\expandafter\string\pcp@cmd}%
54     \PackageWarningNoLine{pdfcolparallel}{%
55       Command \x* has changed.\MessageBreak
56       Supported versions of package ‘parallel’: \MessageBreak
57       \space\space 2003/04/13\MessageBreak
58       The redefinition of \x* may\MessageBreak
59       not behave correctly depending on the changes%
60     }%
61   \fi
62   \expandafter\endgroup
63   \expandafter\def\pcp@cmd
64 }

65 \def\pcp@SwitchStack#1#2{}
66 \def\pcp@SetCurrent#1{}


\ParallelText
67 \pcp@CmdCheckRedef\ParallelText{%
68   \everypar{}%
69   \restorepar
70   \begingroup
71     \hbadness=3000 %
72     \let\footnote=\ParallelFootnote

```

```

73   \ParallelWhichBox=0 %
74   \global\setbox\ParallelLBox=\vbox\bgroup
75     \hsize=\ParallelLWidth
76     \aftergroup\ParallelAfterText
77     \begingroup
78       \afterassignment\ParallelCheckOpenBrace
79       \let\x=%
80 }{%
81   \everypar{}%
82   \restorepar
83   \nobreakfalse
84   \begingroup
85     \hbadness=3000 %
86     \let\footnote=\ParallelFootnote
87     \ParallelWhichBox=0 %
88     \global\setbox\ParallelLBox=\vbox\bgroup
89       \hsize=\ParallelLWidth
90       \linewidth=\ParallelLWidth
91       \pcp@SwitchStack{Left}\ParallelLBox
92       \aftergroup\ParallelAfterText
93       \pcp@ColorPatch
94       \begingroup
95         \afterassignment\ParallelCheckOpenBrace
96         \let\x=%
97 }

\ParallelRText
98 \pcp@CmdCheckRedef\ParallelRText{%
99   \everypar{}%
100  \restorepar
101  \begingroup
102    \hbadness=3000 %
103    \ifnum\ParallelFNMode=\@ne
104      \let\footnote=\ParallelRFootnote
105    \else
106      \let\footnote=\ParallelLFootnote
107    \fi
108    \ParallelWhichBox=\@ne
109    \global\setbox\ParallelRBox=\vbox\bgroup
110      \hsize=\ParallelRWidth
111      \aftergroup\ParallelAfterText
112      \begingroup
113        \afterassignment\ParallelCheckOpenBrace
114        \let\x=%
115 }{%
116   \everypar{}%
117   \restorepar
118   \nobreakfalse
119   \begingroup
120     \hbadness=3000 %
121     \ifnum\ParallelFNMode=\@ne
122       \let\footnote=\ParallelRFootnote
123     \else
124       \let\footnote=\ParallelLFootnote
125     \fi
126     \ParallelWhichBox=\@ne
127     \global\setbox\ParallelRBox=\vbox\bgroup
128       \hsize=\ParallelRWidth

```

```

129      \linewidth=\ParallelRWidth
130      \pcp@SwitchStack{Right}\ParallelRBox
131      \aftergroup\ParallelAfterText
132      \pcp@ColorPatch
133      \begingroup
134          \afterassignment\ParallelCheckOpenBrace
135          \let\x=%
136 }

\ParallelParTwoPages
137 \pcp@CmdCheckRedef\ParallelParTwoPages{%
138   \ifnum\ParallelBoolVar=\@ne
139     \par
140     \begingroup
141       \global\ParallelWhichBox=\@ne
142       \newpage
143       \vbadness=10000 %
144       \vfuzz=3ex %
145       \splittopskip=\z@skip
146       \loop%
147         \ifnum\ParallelBoolVar=\@ne%
148           \ifnum\ParallelWhichBox=\@ne
149             \ifvoid\ParallelLBox
150               \mbox{} %
151               \newpage
152             \else
153               \global\ParallelWhichBox=\z@
154             \fi
155           \else
156             \ifvoid\ParallelRBox
157               \mbox{} %
158               \newpage
159             \else
160               \global\ParallelWhichBox=\@ne
161             \fi
162           \fi
163           \ifnum\ParallelWhichBox=\z@
164             \ifodd\thepage
165               \mbox{} %
166               \newpage
167             \fi
168             \hbox to\textwidth{%
169               \vbox{\vsplit\ParallelLBox to.98\textheight}%
170             }%
171           \else
172             \ifodd\thepage\relax
173               \else
174                 \mbox{} %
175                 \newpage
176               \fi
177               \hbox to\textwidth{%
178                 \vbox{\vsplit\ParallelRBox to.98\textheight}%
179               }%
180             \fi
181             \vspace*{\fill}%
182             \newpage
183           \fi
184           \ifvoid\ParallelLBox

```

```

185      \ifvoid\ParallelRBox
186          \global\ParallelBoolVar=\z@
187      \fi
188      \fi
189      \ifnum\ParallelBoolVar=\@ne
190          \repeat
191          \par
192      \endgroup
193  \fi
194 }{%

```

Additional fixes:

- Unnecessary white space removed.
- \ifodd\thepage changed to \ifodd\value{page}.

```

195  \ifnum\ParallelBoolVar=\@ne
196      \par
197      \begingroup
198          \global\ParallelWhichBox=\@ne
199          \newpage
200          \vbadness=10000 %
201          \vfuzz=3ex %
202          \splittopskip=\z@skip
203          \loop%
204              \ifnum\ParallelBoolVar=\@ne%
205                  \ifnum\ParallelWhichBox=\@ne
206                      \ifvoid\ParallelLBox
207                          \mbox{}%
208                          \newpage
209                      \else
210                          \global\ParallelWhichBox=\z@
211                      \fi
212                  \else
213                      \ifvoid\ParallelRBox
214                          \null
215                          \newpage
216                      \else
217                          \global\ParallelWhichBox=\@ne
218                      \fi
219                  \fi
220                  \ifnum\ParallelWhichBox=\z@
221                      \ifodd\value{page}%
222                          \null
223                          \newpage
224                      \fi
225                      \hbox to\textwidth{%
226                          \pcp@SetCurrent{Left}%
227                          \setbox\z@=\vsplit\ParallelLBox to.98\textheight
228                          \vbox to.98\textheight{%
229                              \texttop
230                              \unvbox\z@
231                              \textbottom
232                          }%
233                      }%
234                  \else
235                      \ifodd\value{page}%
236                      \else
237                          \mbox{}%

```

```

238          \newpage
239          \fi
240          \hbox to\textwidth{%
241              \pcp@SetCurrent{Right}%
242              \setbox\z@=\vsplit\ParallelRBox to.98\textheight
243              \vbox to.98\textheight{%
244                  \texttop
245                  \unvbox\z@
246                  \textbottom
247              }%
248          }%
249          \fi
250          \vspace*\{\fill\}%
251          \newpage
252          \fi
253          \ifvoid\ParallelLBox
254              \ifvoid\ParallelRBox
255                  \global\ParallelBoolVar=\z@
256              \fi
257          \fi
258          \ifnum\ParallelBoolVar=\@ne
259              \repeat
260          \par
261          \endgroup
262          \pcp@SetCurrent{}%
263      \fi
264 }

```

### 2.3 Color stack support

```

265 \RequirePackage{pdfcol}[2007/12/12]
266 \ifpdfcolAvailable
267 \else
268     \PackageInfo{pdfcolparallel}{%
269         Loading aborted, because color stacks are not available%
270     }%
271     \expandafter\endinput
272 \fi
273 \pdfcolInitStack{pcp@Left}
274 \pdfcolInitStack{pcp@Right}

\pcp@Box
275 \newbox\pcp@Box

\pcp@SwitchStack
276 \def\pcp@SwitchStack#1#2{%
277     \pdfcolSwitchStack{pcp@#1}%
278     \global\setbox\pcp@Box=\vbox to 0pt{%
279         \pdfcolSetColor
280     }%
281     \aftergroup\pcp@FixBox
282     \aftergroup#2%
283 }

\pcp@FixBox
284 \def\pcp@FixBox#1{%
285     \global\setbox#1=\vbox{%
286         \unvbox\pcp@Box

```

```

287      \unvbox#1%
288  }%
289 }

\pcp@SetCurrent

290 \def\pcp@SetCurrent#1{%
291   \ifx\\#1\\%
292     \pdfcolSetCurrent{}%
293   \else
294     \pdfcolSetCurrent{\pcp@#1}%
295   \fi
296 }

```

## 2.4 Redefinitions

\ParallelParOnePage

```

297 \pcp@CmdCheckRedef\ParallelParOnePage{%
298   \ifnum\ParallelBoolVar=\@ne
299     \par
300     \begingroup
301       \leftmargin=\z@%
302       \rightmargin=\z@%
303       \parskip=\z@skip
304       \parindent=\z@%
305       \vbadness=10000 %
306       \vfuzz=3ex %
307       \splittopskip=\z@skip
308       \loop
309         \ifnum\ParallelBoolVar=\@ne
310           \noindent
311           \hbox to\textwidth{%
312             \hskip\ParallelLeftMargin
313             \hbox to\ParallelTextWidth{%
314               \ifvoid\ParallelLBox
315                 \hskip\ParallelLWidth
316               \else
317                 \ParallelWhichBox=\z@
318                 \vbox{%
319                   \setbox\ParallelBoxVar
320                     =\vsplit\ParallelLBox to\dp\strutbox
321                   \unvbox\ParallelBoxVar
322                 }%
323               \fi
324               \strut
325               \ifnum\ParallelBoolMid=\@ne
326                 \hskip\ParallelMainMidSkip
327                 \vrule
328               \else
329                 \hss
330               \fi
331               \hss
332               \ifvoid\ParallelRBox
333                 \hskip\ParallelRWidth
334               \else
335                 \ParallelWhichBox=\@ne
336                 \vbox{%
337                   \setbox\ParallelBoxVar
338                     =\vsplit\ParallelRBox to\dp\strutbox

```

```

339          \unvbox\ParallelBoxVar
340      }%
341      \fi
342  }%
343  }%
344  \ifvoid\ParallelLBox
345      \ifvoid\ParallelRBox
346          \global\ParallelBoolVar=\z@
347      \fi
348  \fi}%
349  \fi}%
350  \ifnum\ParallelBoolVar=\@ne
351      \penalty\interlinepenalty
352  \repeat
353  \par
354  \endgroup
355 \fi
356 }{%
357 \ifnum\ParallelBoolVar=\@ne
358 \par
359 \begingroup
360     \leftmargin=\z@
361     \rightmargin=\z@
362     \parskip=\z@skip
363     \parindent=\z@
364     \vbadness=10000 %
365     \vfuzz=3ex %
366     \splittopskip=\z@skip
367     \loop
368         \ifnum\ParallelBoolVar=\@ne
369             \noindent
370             \hbox to\textwidth{%
371                 \hskip\ParallelLeftMargin
372                 \hbox to\ParallelTextWidth{%
373                     \ifvoid\ParallelLBox
374                         \hskip\ParallelLWidth
375                     \else
376                         \pcp@SetCurrent{Left}%
377                         \ParallelWhichBox=\z@
378                         \vbox{%
379                             \setbox\ParallelBoxVar
380                             =\vsplit\ParallelLBox to\dp\strutbox
381                             \unvbox\ParallelBoxVar
382                         }%
383                     \fi
384                     \strut
385                     \ifnum\ParallelBoolMid=\@ne
386                         \hskip\ParallelMainMidSkip
387                         \begingroup
388                             \pcp@RuleBetweenColor
389                             \vrule
390                         \endgroup
391                     \else
392                         \hss
393                     \fi
394                     \hss
395                     \ifvoid\ParallelRBox
396                         \hskip\ParallelRWidth

```

```

397          \else
398              \pcp@SetCurrent{Right}%
399              \ParallelWhichBox=\@ne
400              \vbox{%
401                  \setbox\ParallelBoxVar
402                      =\vsplit\ParallelRBox to\dp\strutbox
403                  \unvbox\ParallelBoxVar
404              }%
405          \fi
406      }%
407  }%
408  \ifvoid\ParallelLBox
409      \ifvoid\ParallelRBox
410          \global\ParallelBoolVar=\z@
411      \fi
412  \fi%
413  \fi%
414  \ifnum\ParallelBoolVar=\@ne
415      \penalty\interlinepenalty
416      \repeat
417      \par
418  \endgroup
419  \pcp@SetCurrent{}%
420 \fi
421 }

\pcp@RuleBetweenColorDefault
422 \def\pcp@RuleBetweenColorDefault{%
423     \normalcolor
424 }

\pcp@RuleBetweenColor
425 \let\pcp@RuleBetweenColor\pcp@RuleBetweenColorDefault
426 \RequirePackage{keyval}
427 \define@key{parallel}{rulebetweencolor}{%
428     \edef\pcp@temp{\#1}%
429     \ifx\pcp@temp\empty
430         \let\pcp@RuleBetweenColor\pcp@RuleBetweenColorDefault
431     \else
432         \edef\pcp@temp{%
433             \noexpand\@ifnextchar[{%
434                 \def\noexpand\pcp@RuleBetweenColor{%
435                     \noexpand\color{\pcp@temp}%
436                 }%
437                 \noexpand\pcp@GobbleNil
438             }{%
439                 \def\noexpand\pcp@RuleBetweenColor{%
440                     \noexpand\color{\pcp@temp}%
441                 }%
442                 \noexpand\pcp@GobbleNil
443             }%
444             \pcp@temp\noexpand\@nil
445         }%
446         \pcp@temp
447     \fi
448 }

\pcp@GobbleNil

```

```
449 \long\def\pcp@GobbleNil#1\@nil{}  
450 ⟨/package⟩
```

## 3 Installation

### 3.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

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

[CTAN:macros/latex/contrib/oberdiek/pdfcolparallel.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:pkg/tds](#)). Directories with `texmf` in their name are usually organized this way.

### 3.2 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
```

### 3.3 Package installation

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

```
tex pdfcolparallel.dtx
```

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

```
pdfcolparallel.sty → tex/latex/oberdiek/pdfcolparallel.sty  
pdfcolparallel.pdf → doc/latex/oberdiek/pdfcolparallel.pdf  
pdfcolparallel.dtx → source/latex/oberdiek/pdfcolparallel.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`.

### 3.4 Refresh file name databases

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

---

<sup>1</sup>[CTAN:pkg/pdfcolparallel](#)

### 3.5 Some details for the interested

**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{pdfcolparallel.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<sup>A</sup>T<sub>E</sub>X:

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

## 4 References

- [1] Matthias Eckermann: *The parallel-package*; 2003/04/13;  
[CTAN:pkg/parallel](#).
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;  
[CTAN:pkg/pdfcol](#).

## 5 History

### [2007/09/09 v1.0]

- First version.

### [2007/12/12 v1.1]

- Adds patch for setting `\ linewidth` to fix bug in package `parallel`.
- Package `parallel` is also fixed if color stacks are not available.
- Bug fix, switched stacks now initialized with current color.
- Fix for package `parallel`: `\raggedbottom` is respected.

### [2008/08/11 v1.2]

- Code is not changed.
- URLs updated.

[2010/01/11 v1.3]

- Option ‘rulebetweencolor’ added.

[2016/05/16 v1.4]

- Documentation updates.

## 6 Index

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