

# The `pdfcolparallel` package

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## 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.

## Contents

<b>1</b>	<b>Usage</b>	<b>1</b>
1.1	Option <code>rulebetweencolor</code>	2
1.2	Future	2
<b>2</b>	<b>Implementation</b>	<b>2</b>
2.1	Identification	2
2.2	Load and fix package <code>parallel</code>	2
2.3	Color stack support	7
2.4	Redefinitions	7
<b>3</b>	<b>Installation</b>	<b>10</b>
3.1	Download	10
3.2	Bundle installation	10
3.3	Package installation	10
3.4	Refresh file name databases	11
3.5	Some details for the interested	11
<b>4</b>	<b>References</b>	<b>11</b>
<b>5</b>	<b>History</b>	<b>11</b>
[2007/09/09 v1.0]		11
[2007/12/12 v1.1]		12
[2008/08/11 v1.2]		12
[2010/01/11 v1.3]		12
[2016/05/16 v1.4]		12
[2019/12/29 v1.5]		12
<b>6</b>	<b>Index</b>	<b>12</b>

## 1 Usage

```
\usepackage{pdfcolparallel}
```

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.

---

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

## 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 [2019/12/29 v1.5 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{infrarerr}[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@ColorPatch{}%  
16   \@ifundefined{set@color}{%  
17     \gdef\pcp@ColorPatch{}%  
18   }{%  
19     \gdef\pcp@ColorPatch{}%  
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\ParallelBox=\vbox\bgroup
75       \hsize=\ParallelWidth
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=\ParallelWidth
90          \linewidth=\ParallelWidth
91          \pcp@SwitchStack{Left}\ParallelLBox
92          \aftergroup\ParallelAfterText
93          \pcp@ColorPatch
94          \begingroup
95              \afterassignment\ParallelCheckOpenBrace
96              \let\x=%
97 }

\ParallelRTText
98 \pcp@CmdCheckRedef\ParallelRTText{%
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     \pdfcolSetCurrentColor
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=0
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=0
310           \noindent
311           \hbox to\textwidth{%
312             \hspace{\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 T<sub>E</sub>X 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 T<sub>E</sub>X:

```
tex pdfcolparallel.dtx
```

---

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

**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`.

### 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 TeX:** 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.

## [2019/12/29 v1.5]

- `\PassOptionsToPackage` not `\PassoptionsToPackage`

## 6 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.

Symbols	D
<code>\@PackageWarningNoLine</code> .....	54
<code>\@empty</code> .....	429
<code>\@ifnextchar</code> .....	433
<code>\@ifundefined</code> .....	16
<code>\@ne</code> 103, 108, 121, 126, 138, 141, 147, 148, 160, 189, 195, 198, 204, 205, 217, 258, 298, 309, 325, 335, 350, 357, 368, 385, 399, 414	
<code>\@nil</code> .....	444, 449
<code>\nobreakfalse</code> .....	83, 118
<code>\restorepar</code> .....	69, 82, 100, 117
<code>\textbottom</code> .....	231, 246
<code>\texttop</code> .....	229, 244
<code>\`</code> .....	291
<b>A</b>	
<code>\afterassignment</code> .	47, 78, 95, 113, 134
<code>\aftergroup</code> .....	22, 23, 33, 34, 38, 76, 92, 111, 131, 281, 282
<b>C</b>	
<code>\color</code> .....	435, 440
<code>\csname</code> .....	12
<code>\currentgrouplevel</code> .....	26, 32
<code>\CurrentOption</code> .....	6
<b>D</b>	
<code>\DeclareOption</code> .....	5
<code>\define@key</code> .....	427
<code>\dp</code> .....	320, 338, 380, 402
<b>E</b>	
<code>\endcsname</code> .....	12
<code>\endinput</code> .....	271
<code>\everypar</code> .....	68, 81, 99, 116
<b>F</b>	
<code>\fill</code> .....	181, 250
<code>\footnote</code> ...	72, 86, 104, 106, 122, 124
<b>G</b>	
<code>\g@addto@macro</code> .....	35
<code>\gdef</code> .....	17, 19, 20
<b>H</b>	
<code>\badness</code> .....	71, 85, 102, 120
<code>\hbox</code> .....	168, 177, 225, 240, 311, 313, 370, 372
<code>\hsize</code> .....	75, 89, 110, 128
<code>\hskip</code> .....	312, 315, 326, 333, 371, 374, 386, 396
<code>\hss</code> .....	329, 331, 392, 394

	<b>I</b>
\ifnum	..... 32, 103, 121, 138, 147, 148, 163, 189, 195, 204, 205, 220, 258, 298, 309, 325, 350, 357, 368, 385, 414
\ifodd	..... 164, 172, 221, 235
\ifpdfcolAvailable	..... 266
\ifvoid	..... 149, 156, 184, 185, 206, 213, 253, 254, 314, 332, 344, 345, 373, 395, 408, 409
\ifx	..... 12, 51, 291, 429
\interlinepenalty	..... 351, 415
	<b>L</b>
\leftmargin	..... 301, 360
\linewidth	..... 90, 129
\loop	..... 146, 203, 308, 367
	<b>M</b>
\mbox	..... 150, 157, 165, 174, 207, 237
\MessageBreak	..... 55, 56, 57, 58
	<b>N</b>
\NeedsTeXFormat	..... 2
\newbox	..... 275
\newpage	... 142, 151, 158, 166, 175, 182, 199, 208, 215, 223, 238, 251
\noindent	..... 310, 369
\normalcolor	..... 423
\null	..... 214, 222
	<b>P</b>
\PackageInfo	..... 268
\par	139, 191, 196, 260, 299, 353, 358, 417
\ParallelAfterText	... 76, 92, 111, 131
\ParallelBoolMid	..... 325, 385
\ParallelBoolVar	... 138, 147, 186, 189, 195, 204, 255, 258, 298, 309, 346, 350, 357, 368, 410, 414
\ParallelBoxVar	..... 319, 321, 337, 339, 379, 381, 401, 403
\ParallelCheckOpenBrace	..... 78, 95, 113, 134
\ParallelFNMode	..... 103, 121
\ParallelLBox	..... 74, 88, 91, 149, 169, 184, 206, 227, 253, 314, 320, 344, 373, 380, 408
\ParallelLeftMargin	..... 312, 371
\ParallelLFootnote	... 72, 86, 106, 124
\ParallelLTText	..... 67
\ParallelLWidth	... 75, 89, 90, 315, 374
\ParallelMainMidSkip	..... 326, 386
\ParallelParOnePage	..... 297
\ParallelParTwoPages	..... 137
\ParallelRBox	..... 109, 127, 130, 156, 178, 185, 213, 242, 254, 332, 338, 345, 395, 402, 409
\ParallelRFootnote	..... 104, 122
\ParallelRTText	..... 98
\ParallelRWidth	110, 128, 129, 333, 396
\ParallelTextWidth	..... 313, 372
\ParallelWhichBox	..... 73, 87, 108, 126, 141,
	<b>R</b>
\repeat	..... 190, 259, 352, 416
\RequirePackage	..... 9, 10, 265, 426
\reserved@a	..... 48, 51
\rightmargin	..... 302, 361
	<b>S</b>
\set@color	..... 24, 25
\setbox	.... 74, 88, 109, 127, 227, 242, 278, 285, 319, 337, 379, 401
\space	..... 57
\splittopskip	.... 145, 202, 307, 366
\strut	..... 324, 384
\strutbox	..... 320, 338, 380, 402
	<b>T</b>
\textheight	169, 178, 227, 228, 242, 243
\textwidth	168, 177, 225, 240, 311, 370
\the	..... 26
\thepage	..... 164, 172
	<b>U</b>
\unvbox	..... 230, 245, 286, 287, 321, 339, 381, 403
	<b>V</b>
\value	..... 221, 235
\vbadness	..... 143, 200, 305, 364

\vbox 74, 88, 109, 127, 169, 178, 228, **X**  
243, 278, 285, 318, 336, 378, 400 \x ..... 53, 55, 58, 79, 96, 114, 135  
\vfuzz ..... 144, 201, 306, 365 **Z**  
\vrule ..... 327, 389 \z@ 153, 163, 186, 210, 220, 227, 230,  
\vspace ..... 181, 250 242, 245, 255, 301, 302, 304,  
\vsplit ..... 169, 317, 346, 360, 361, 363, 377, 410  
178, 227, 242, 320, 338, 380, 402 \z@skip ... 145, 202, 303, 307, 362, 366