

The midfloat package

Sigitas Tolušis
sigitas@vtex.lt

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1 Introduction

It is denoted to place some material (from the left column) in full-width at any place (but not at the top) on double-column page (`\twocolumn` mode). Existing text remains as it was before insert. Placement is restricted to one page. (It is some kind of dbfloat intext).

2 Usage

`strip` Provides new environment:

```
\begin{strip}[<top strip stretch skip>/<bottom strip skip>]  
  <wide onecolumn material>  
\end{strip}
```

Puts `\vbox{<wide onecolumn material>}` in full-width on double-column page.

Adds `\stripsep` glue before and after (by default: 15pt).

It can be problems with floats and footnotes. In the case of problems with footnotes it is possible to correct the situation using commands `\footnotemark` and `\footnotetext`.

Parameters `<top strip stretch skip>` and `<bottom strip skip>` are optional. By default `<top strip stretch skip>=0pt` and `<bottom strip skip>=0pt`. The material on the right column under strip is stretched down by `<top strip stretch skip>` and below strip is moved down by `<bottom strip skip>`.

3 Implementation

```
1 \NeedsTeXFormat{LaTeX2e}  
2 \ProvidesPackage{midfloat}[1997/10/01]  
3 \newif\if@vihproof \@vihprooftrue
```

```

4 \newtoks\jua@sar \jua@sar={}
5 \@ifundefined{stripsep}{\newskip\stripsep \stripsep 15\p}{%
6 \newskip\m@addvipersep \m@addvipersep\z@
7 \newskip\c@addvipersep \c@addvipersep\z@
8 \newdimen\ht@strip
9 \newdimen\right@cor
10 \newdimen\cor@height \cor@height=\z@
11 \newdimen\jua@pr
12 \newdimen\jua@ht
13 \newdimen\c@colht
14 \newbox\@viper
15 \newbox\@rightcolumn
16 \newcount\jua@sk
17 \def\@ca#1#2#3#4{%

\add@strip

18 \def\add@strip#1#2#3#4{%
19 \begingroup
20 \xdef\ex@\{global\noexpand\jua@sar\the\jua@sar\noexpand\@ca{#1}{#2}{#3}{#4}\}%
21 \ex@
22 \endgroup
23 }

\remove@strip

24 \def\remove@strip#1{\ifx#1\@empty\global\jua@sk=0\else
25 \global\advance\jua@sk by-1\expandafter\next@item\the #1\@ca#1\fi}

\next@item

26 \def\next@item \@ca #1#2#3#4#5\@ca#6{\global #6={#5}\global\jua@pr=#1\global\jua@ht=#2%
27 \global\cor@height=#3\global\m@addvipersep=#4}

\strip

28 \def\strip{\@ifnextsym[{\@strip}{\@strip[0pt/0pt]}}

\@strip

29 \def\@strip[#1/#2]{\global\@tempdima=#1\global\@tempdimb=#2%
30 \global \setbox\@viper\vbox\bgroup%
31 \hsize\textwidth
32 \@parboxrestore
33 \col@number \@ne
34 \vrule height\topskip width0pt depth0pt
35 }

\endstrip

36 \def\endstrip{%
37 \egroup
38 \if@firstcolumn
39 \ifdim\pagetotal>\z@
40 \vskip\stripsep

```

```

41         \global\ht@strip\pagegoal
42         \global\advance\ht@strip by-\pagetotal
43         \global\advance\ht@strip by-\stripsep
44         \global\advance\ht@strip by-\ht\@viper
45         \global\advance\ht@strip by-\stripsep
46         \global\jua@ht=\ht\@viper
47     \else
48         \global\ht@strip\z@
49     \fi
50     \ifdim\ht@strip>\z@
51         \unvbox\@viper
52         \vskip\stripsep
53         \add@strip{\the\pagetotal}{\the\jua@ht}{\the\@tempdima}{\the\@tempdimb}%
54         \global\advance\jua@sk by1
55     \else
56         \@latex@error{Strip needs more place!}\@ehc
57         \if@vihproof
58             \framebox[\columnwidth]{??? Strip ???}%
59         \fi
60     \fi
61 \else
62     \@latex@error{Strip is used only on left column!}\@ehc
63     \if@vihproof
64         \framebox[\columnwidth]{??? Strip ???}%
65     \fi
66 \fi
67 }

```

\@outputdblcol

```

68 \def\@outputdblcol{%
69     \if@firstcolumn
70         \global \@firstcolumnfalse
71         \global \setbox\@leftcolumn \box\@outputbox
72         \global\c@colht\@colht\global\c@addvipersep\z@
73         \ifnum\jua@sk>0
74             \remove@strip\jua@sar
75             \global\@colht\the\jua@pr
76             \ifdim\right@cor>\z@
77                 \global\advance\@colht by\right@cor
78             \fi
79             \global\advance\@colht by\cor@height
80             \global\cor@height=0pt
81         \fi
82         \global \setbox\@rightcolumn \vbox{%
83     \else
84         \ifdim\c@colht>\@colht
85             \@tempdima\@colht
86             \ifdim\@colht>\z@
87                 \global\setbox\@rightcolumn \vbox{%
88                     \unvbox\@rightcolumn

```

```

89             \vbox to\@tempdima{%
90                 \vskip\c@advipersep\unvbox\@outputbox}%
91             \vskip\stripsep
92             \vrule height\the\jua@ht width Opt depth Opt
93             \vskip\stripsep
94             }%
95         \global\c@advipersep\m@advipersep
96     \else
97         \global\setbox\@rightcolumn \vbox{%
98             \unvbox\@rightcolumn
99             \vrule height\the\jua@ht width Opt depth Opt
100             \vskip\stripsep
101             }%
102     \fi
103     \ifnum\jua@sk>0
104         \remove@strip\jua@sar
105         \global\@colht\the\jua@pr
106         \global\advance\@colht by -\ht\@rightcolumn
107         \global\advance\@colht by\cor@height
108         \global\cor@height=0pt
109     \else
110         \global\advance\c@colht by-\ht\@rightcolumn
111         \global\@colht\c@colht
112     \fi
113 \else
114 \global \@firstcolumntrue
115 \global\setbox\@outputbox\vbox to\ht\@leftcolumn{%
116     \unvbox\@rightcolumn
117     \vskip\c@advipersep
118     \unvbox\@outputbox
119     }%
120 \setbox\@outputbox \vbox {%
121     \hb@xt@\textwidth {%
122         \hb@xt@\columnwidth {%
123             \box\@leftcolumn \hss}%
124         \hfil
125         \vrule \@width\columnseprule
126         \hfil
127         \hb@xt@\columnwidth {%
128             \box\@outputbox \hss}%
129             }%
130     }%
131 \@combinedblfloats
132 \@outputpage
133 \begingroup
134 \@dblfloatplacement
135 \@startdblcolumn
136 \@whiles\if@fcolmade \fi
137 {\@outputpage
138     \@startdblcolumn}%

```

```

139     \endgroup
140     \global\jua@sk=0\global\jua@sar={} %
141     \global\cor@height\z@\global\c@addvipersep\z@
142     \fi
143   \fi
144 }

\@cflt
145 \def \@cflt{%
146   \let \@elt \@comflet
147   \setbox\@tempboxa \vbox{%
148     \@toplist
149     \global\right@cor\ht\@tempboxa
150     \ifdim\right@cor>\z@
151       \global\advance\right@cor by-\floatsep
152       \global\advance\right@cor by\textfloatsep
153     \fi
154     \setbox\@outputbox \vbox{%
155       \boxmaxdepth \maxdepth
156       \unvbox\@tempboxa
157       \vskip -\floatsep
158       \topfigrule
159       \vskip \textfloatsep
160       \unvbox\@outputbox
161     }%
162   \let\@elt\relax
163   \xdef\@freelist{\@freelist\@toplist}%
164   \global\let\@toplist\empty
165 }

\@ifnextsym
166 \def\@ifnextsym#1#2#3{%
167   \let\reserved@d=#1%
168   \def\reserved@a{#2}\def\reserved@b{#3}%
169   \futurelet\@let@token\@ifnsymb}

\@ifnsymb
170 \def\@ifnsymb{%
171   \ifx\@let@token\@sptoken
172     \let\reserved@c\reserved@b
173   \else
174     \ifx\@let@token\reserved@d
175       \let\reserved@c\reserved@a
176     \else
177       \let\reserved@c\reserved@b
178     \fi
179   \fi
180   \reserved@c}

181 %\endinput

```