

Package hvfloat Rotating Objects and Captions ver 1.1

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Abstract

This `hvfloat.sty` defines a macro to place objects and captions of floats in different positions with different rotating angles.

All objects and captions are framed, which is only for demonstration here and has no additional sense.

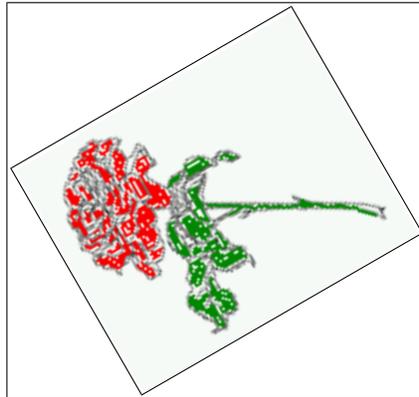


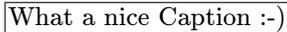
Figure 1: What a nice Caption :-)

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Contents

1	The Package Options	4
2	The Macros	4
2.1	The Options	5
3	The Default Use of Floating Environments	6
4	Caption Right or Left	7
4.1	Caption Right and Rotated	7
5	Vertical Position of the Caption	9
6	Horizontal Position of the Float	10
7	Framed Caption and/or Object	11
8	Full Page Width in Landscape Mode	12
9	The nonfloat Option	15
10	Tables as Objects	16
11	Text and Objects	16
A	Problems	18
B	To Do	18
C	The Package Source	18

List of Figures

1		1
2	Without any Options (only the fbox package option)	6
3	Caption on top of a table	6
4	Caption beside object and vertically centered	7
5	Centered Caption beside Object	8
6	Centered Caption beside Object	8
7	Caption at bottom right beside the float	9
8	Caption at top left beside the float	9
9	Caption centered right beside the float	10
10	Caption at top right beside the float and object position left . . .	10
11	Caption at top left beside the float and object position right . . .	11
12	Disabled global package Option fbox for the caption	11
13	Disabled global package Option fbox for caption and object . . .	12

14	Caption at top and together with the object rotated	13
15	Rotated Caption	14
16	Nonfloat Captions	15

1 The Package Options

fbox The objects and captions are put into a `\fbox` command, like in this documentation. This doesn't make real sense and is only for some demonstration useful. This global package option set the macro options `framedCaption` and `framedObject` to `true`, which can locally be overwritten.

The length `\belowcaptionskip` is set by \LaTeX to `0pt` and changed in `hvfloating` to the same value than `\abovecaptionskip`. This length can be changed to another value in the usual way with `\setlength` or `\addtolength`.

2 The Macros

The syntax for the `\hvFloat` macro is

```
\hvFloat[<options>]%
    {<float type>}%
    {<floating object>}%
    [<short caption>]{<long caption>}%
    {<label>}
```

If the second parameter `<float type>` is empty, then `hvfloating` switches by default to a nonfloat (see table 2) object, which is not important for the user. All other parameters may also be empty and the short caption as second optional parameter missing. This one is as usual the caption for the `listoffigures`.

There are some more macros defined, more or less for internally use in `hvfloating`, but they can be used for own purposes.

```
\figcaption[<short caption text>]{<caption text>}
\tabcaption[<short caption text>]{<caption text>}
```

They are used for the nonfloat option, where these macros write captions in the same way but outside of a float environment. The default caption cannot be used here. It is no problem to use the `\tabcaption` command to place a caption anywhere, like here in an inlined mode:

Table 1: A Caption without any sense and any object

A label can be put inside the argument or after the command in the usual way, so that a reference to the not existing table 1 is no problem.

```
[...] It is no problem to use the \verb|\tabcaption| command to
place a caption anywhere, like here in an inlined mode:
\tabcaption[The Caption without sense ...]{A Caption without any
sense and any object}\label{dummy} A label can be put inside the
argument or after the command in the usual way, so that a
reference to the not existing table \ref{dummy} is no problem.
```

2.1 The Options

There are following options:

Table 2: The Options for the Macro hvFloat

Option	Default	Description
floatPos	htb	This is the same placement option like the one from the floats.
rotAngle	0	The value for the angle if both, the object and the caption should be rotated in the same way.
capWidth	0.8	The width of the caption. Can be "w" for the width of the object or "h" for the height of the object or a scale for <code>\columnwidth</code> .
capAngle	0	The value for the angle if the caption should be rotated. Counted anti clockwise.
capPos	b	The position of the caption relative to the object. Possible values are (l) eft (b) ottom (t) op (r) ight.
capVPos	c	This is only important for <code>capPos=l r</code> . Only in this case the caption can vertically placed at the (b) ottom (c) enter (t) op.
objectPos	c	The horizontal placement of the object relative to the document. Possible values are (l) eft (c) enter (r) ight.
objectAngle	0	The value for the angle if the object should be rotated. Counted anti clockwise.
floatCapSep	5	The additional width between the object and a left or right placed caption. The default unit is pt.
useOBox	false	Instead of passing the object as parameter to the hvFloat, the contents maybe saved in the box <code>\hvOBox</code> With <code>useOBox=true</code> the contents of this box will be used.
nonFloat	false	The object isn't put in a floating environment. It is printed as standard text with an additional caption. The float counters are increased as usual and can be referenced.
framedCaption	false	The caption gets framed with a predefined <code>\fboxsep=1pt</code> . This option is set to true, if the global package option <code>fbox</code> is used.
framedObject	false	Same as the forgoing option, but only for the object.

3 The Default Use of Floating Environments

In this case there is no essential difference to the well known figure or table environment, f.ex.:

```
\begin{figure}  
... object ...  
\caption{...}% caption below the object  
\end{figure}
```

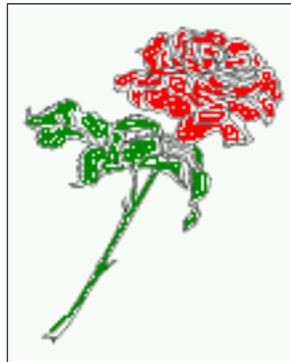


Figure 2: Without any Options (only the fbox package option)

Code for figure 2:

```
1 \hvFloat{figure}{\includegraphics{rose}}{Without any Options (only the  
  \texttt{fbox} package option)}{fig:0}
```

Figure 3: With the only Option capPos=t to place the caption on top of the table, which is often the default

Name	Type	Description
hvFloat	command	places object and caption in different ways
figcaption	command	writes a figure caption in a non floating environment
tabcaption	command	writes a table caption in a non floating environment
setDefault	command	sets all options to the defaults

Code for table 3:

```
1 \hvFloat[capPos=t]{figure}{%  
2 \begin{tabularx}{\textwidth}{1|1|X}  
3 Name & Type & Description\\\hline  
4 \CMD{hvFloat} & command & places object and caption in different ways\\  
5 \CMD{figcaption} & command & writes a figure caption in a non floating environment\\
```

```

6 \CMD{tabcaption} & command & writes a table caption in a non floating environment\\
7 \CMD{setDefault} & command & sets all options to the defaults
8 \end{tabularx}%
9 }{With the only Option \texttt{capPos=t} to place the caption on top of the table, which
   is often the default}{tab:0}

```

See section 10 for some more informations about tabulars as objects.

4 Caption Right or Left

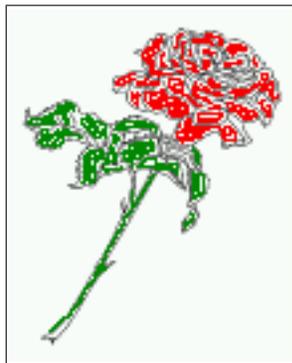


Figure 4: Caption vertically centered right beside the float with a caption width of 0.5\columnwidth and `floatcapsep=5pt` (the default)

Code for figure 4:

```

1 \hvFloat[%
2 floatPos=htb,%
3 capWidth=0.5,% of \columnwidth
4 capPos=r,%
5 capVPos=c,%
6 objectPos=c]{figure}{\includegraphics{rose}}%
7 [Caption beside object and vertically centered]{%
8 Caption vertically centered right beside the float with a caption
   width of \texttt{0.5\textbackslash columnwidth} and \texttt{floatcapsep=5pt} (the default)}{fig:1}

```

4.1 Caption Right and Rotated

Code for figure 5:

```

1 \hvFloat[%
2 floatPos=htb,%
3 capWidth=h,% of \columnwidth
4 capPos=r,%
5 capAngle=90,%
6 capVPos=c,%
7 objectPos=c]{figure}{\includegraphics{rose}}%
8 [Centered Caption beside Object]{%
9 Caption vertically centered right beside the float with a caption
   width of \texttt{0.5\textbackslash columnwidth} and \texttt{floatcapsep=5pt} (the default)}{fig:2}

```



Figure 5: Caption vertically centered right beside the float with a caption width of 0.5\columnwidth and floatcapsep=5pt (the default)

It is no problem to rotate the object, too. But with a different angle value than for the caption. Do not ask for the sense, it is only a demonstration of what is possible ... The object (image) is rotated by -30 degrees with the `rotatebox` macro.

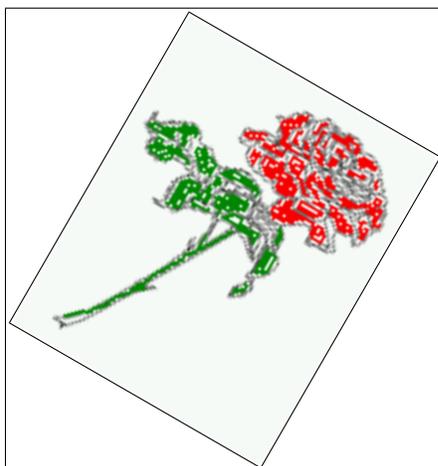


Figure 6: Caption vertically centered right beside the float with a caption width of the image and floatcapsep=5pt (the default)

Code for figure 6:

```

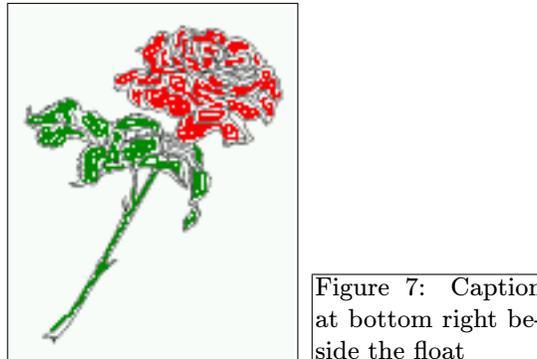
1 \hvFloat[
2   floatPos=htb,
3   capWidth=h
4   capPos=r,
5   capAngle=180,
6   objectAngle=-30,
7   capVPos=c,
8   objectPos=c]{figure}{\fbox{\includegraphics{rose}}}%
9   [Centered Caption beside Object]{
10  Caption vertically centered right beside the float with a caption
      width of the height of the image and \texttt{floatcapsep=5pt} (the
      default)}{fig:3}

```

5 Vertical Position of the Caption

The caption can be placed beside the object in the positions

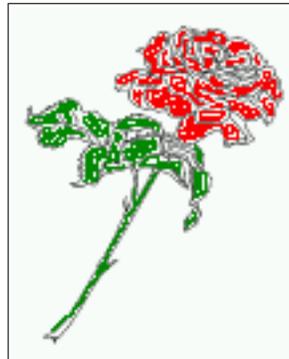
(c)enter | (b)ottom | (t)op



The code for figure 7:

```
1 \hvFloat[%  
2 floatPos=htb,%  
3 capWidth=0.25,%  
4 capPos=r,%  
5 capVPos=b,%  
6 ]{figure}{\includegraphics{rose}}{Caption at bottom right beside the  
float}{fig:4}
```

Figure 8: Caption at top left beside the float



The code for figure 8:

```
1 \hvFloat[%  
2 floatPos=htb,%  
3 capWidth=0.25,%  
4 capPos=r,%  
5 capVPos=t,%  
6 ]{figure}{\includegraphics{rose}}{Caption at top left beside the float  
}{fig:5}
```

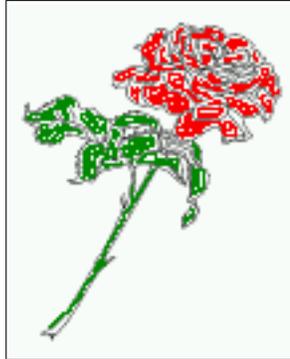


Figure 9: Caption centered right beside the float

The code for figure 9:

```
1 \hvFloat[%  
2 capWidth=0.25,%  
3 capPos=r,%  
4 capVPos=c,% the default  
5 ]{figure}{\includegraphics{rose}}{Caption centered right beside the  
float}{fig:6}
```

6 Horizontal Position of the Float

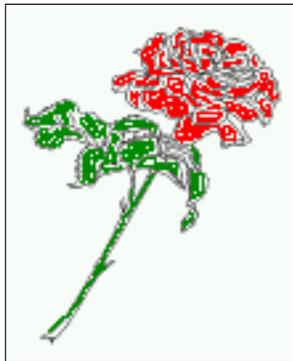


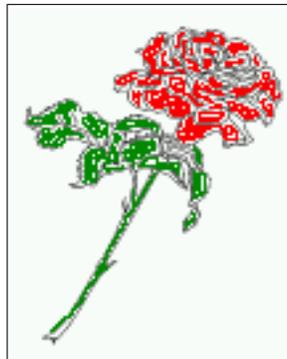
Figure 10: Caption at top right beside the float and object position left

The code for figure 10:

```
1 \hvFloat[%  
2 capWidth=0.25,%  
3 capPos=r,%  
4 capVPos=t,%  
5 objectPos=l,%  
6 ]{figure}{\includegraphics{rose}}{%  
7 Caption at top right beside the float and object position left}{fig:7}
```

The code for figure 11:

Figure 11: Caption at top left beside the float and object position right



```

1 \hvFloat[%
2   capWidth=0.25,%
3   capPos=l,%
4   capVPos=t,%
5   objectPos=r,%
6 ]{figure}{\includegraphics{rose}}{%
7   Caption at top leftt beside the float and object position right}{fig
8   :8}

```

7 Framed Caption and/or Object

It is possible to get caption and object both framed with the global package option `fbox`. This happens for all macros and can be disabled with the macro options `framedCaption` and `framedObject`. If `fbox` is not used then it is possible the other way round.

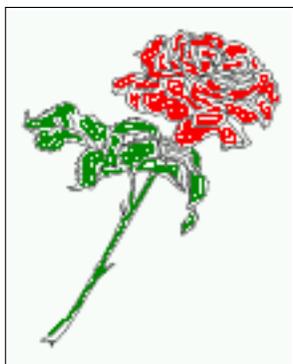


Figure 12: Disabled global package Option `fbox` for the caption

The code for figure 10:

```

1 \hvFloat[%
2   framedCaption=false,%
3   capWidth=0.25,%
4   capPos=r,%

```

```

5   capVPos=t,%
6   objectPos=l,%
7 ]{figure}{\includegraphics{rose}}{%
8   Disabled global package Option \texttt{fbox} for the caption}{fig:70}

```

Figure 13: Disabled global package Option `fbox` for caption and object



The code for figure 11:

```

1 \hvFloat[%
2   framedCaption=false,%
3   framedObject=false,%
4   capWidth=0.25,%
5   capPos=l,%
6   capVPos=t,%
7   objectPos=r,%
8 ]{figure}{\includegraphics{rose}}{%
9   Disabled global package Option \texttt{fbox} for caption and object}{
   fig:71}

```

8 Full Page Width in Landscape Mode

If you do not want to load the `lscap` package you can use the `floatPos=p` option to put the image on an own page and rotated by 90 degrees (figure 14).

Code for figure 14:

```

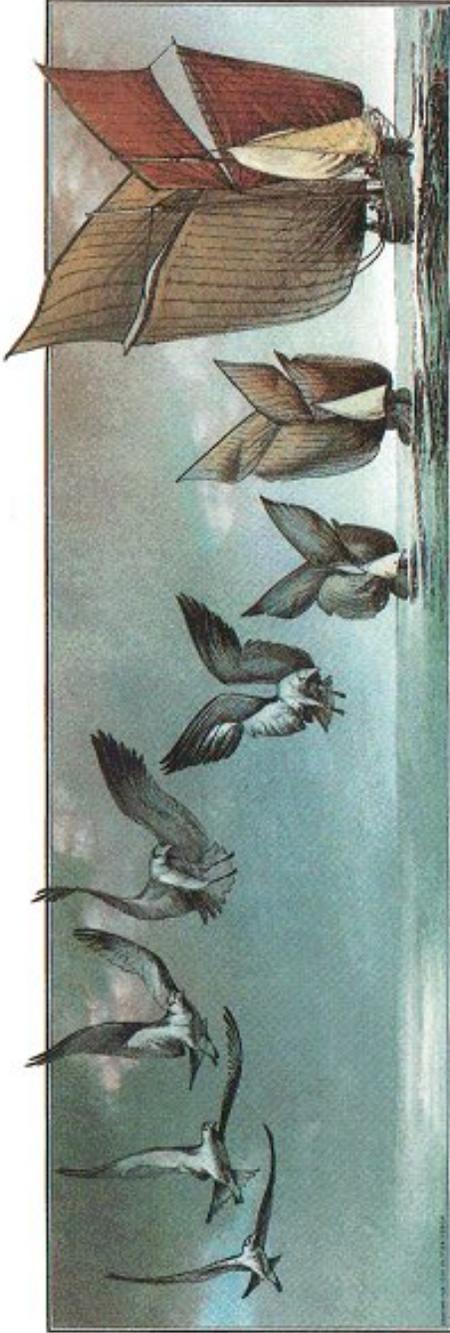
1 \hvFloat[%
2   floatPos=p,%
3   capWidth=1,%
4   capPos=b,%
5   rotAngle=90,%
6   objectPos=c%
7 ]{figure}{\includegraphics[width=0.9\textheight]{bateaux}}{%
8   Caption at top right beside the float and object position right}{fig
   :9}

```

The float can also be put to the left or to the right (above/below in landscape) with the `objectPos=l` parameter

The code for figure 15:

Figure 14: Caption at top and together with the object rotated



Comment naissent les bateaux

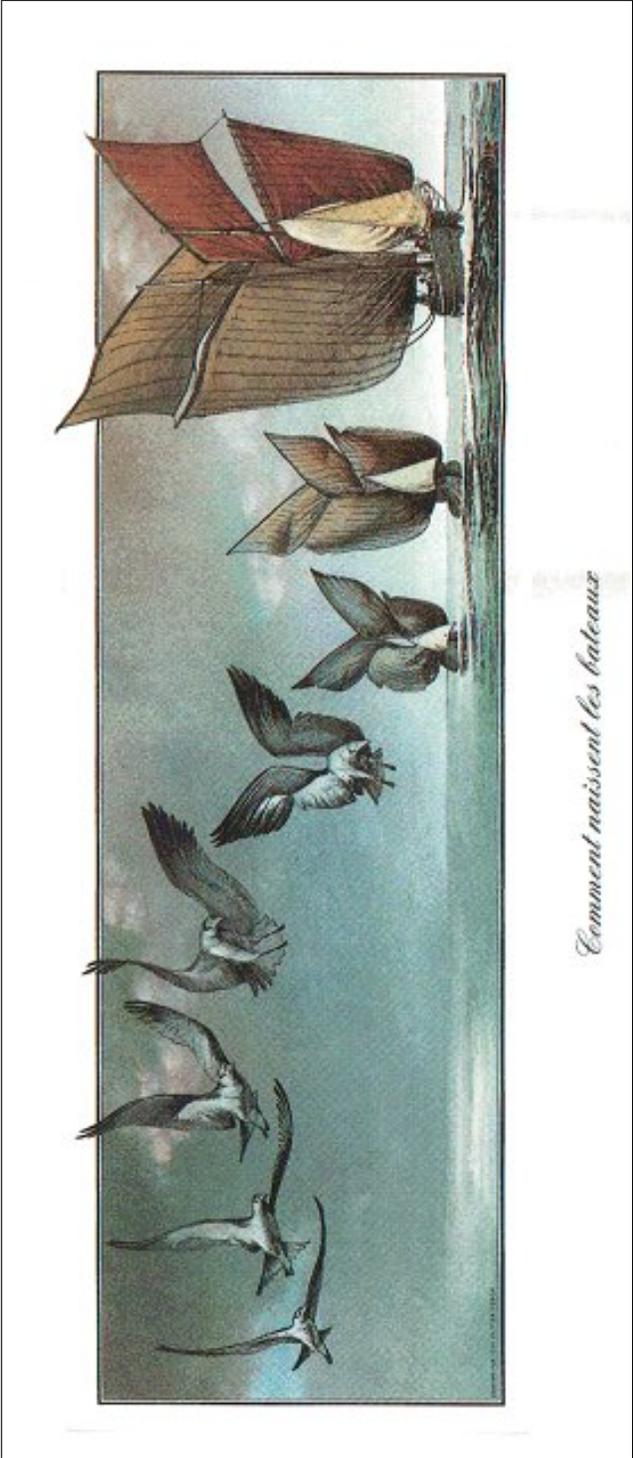


Figure 15: Caption right beside the float and object position left. The caption rotated by -90 degrees

```

1 \hvFloat[  

2   floatPos=p,  

3   capWidth=h,  

4   capPos=r,  

5   objectAngle=90,  

6   capAngle=-90,  

7   objectPos=l  

8 ]{figure}{\includegraphics[width=\textheight]{bateaux}}  

9 [Rotated Caption]{  

10  Caption right beside the float and object position left. The caption  

   rotated by  $-90$  degrees}{fig:10}

```

9 The nonfloat Option

Sometimes it is better to put a "float" in a specific position of the page. This is possible with the nonfloat package and the option nonFloat=true.

```

1 \hvFloat[  

2   nonFloat=true,  

3   capWidth=0.25,  

4   capPos=r,  

5   capVPos=b,  

6   objectPos=c,  

7 ]{figure}{\includegraphics{rose}}  

8 [Nonfloat Captions]{  

9  Caption of a "nonfloat" Object, using the \texttt{nonfloat} Package}  

   fig:11}

```

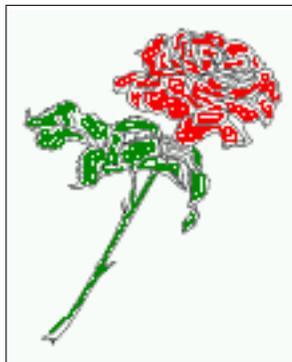


Figure 16: Caption of a "nonfloat" Object, using the nonfloat Package

The image 16 is exactly placed where the hvFloat command appears. There are only commands for figure and table environments:

```

1 \newcommand{\figcaption}{\def\@capttype{figure}\caption}  

2 \newcommand{\tabcaption}{\def\@capttype{table}\caption}

```

But it is no problem, to define more xxxcaption commands to support other with the float package defined new floats.

Name	Type	Description
hvFloat	command	places object and caption in different ways
figcaption	command	writes a figure caption in a non floating environment
tabcaption	command	writes a table caption in a non floating environment
setDefault	command	sets all options to the defaults

Table 3: Demonstration of the useOBox Parameter

10 Tables as Objects

The object has to be passed as an parameter to the hvFloat macro. This is no problem with images but maybe with tables, so it is easier to use the box \hvOBox to save the table in this box and pass it then to hvFloat with the useOBox option. For example see table 3 and 4:

```

1 \begin{tabular}{l|l|l}
2 Name & Type & Description\\\hline
3 \texttt{hvFloat} & command & places object and caption in different ways\\
4 \texttt{figcaption} & command & writes a figure caption in a non floating environment\\
5 \texttt{tabcaption} & command & writes a table caption in a non floating environment\\
6 \texttt{setDefault} & command & sets all options to the defaults
7 \end{tabular}
8 }
```

The code for table 3 and 4 is:

```

1 \hvFloat[  

2 floatPos=!hb,  

3 useOBox=true]{table}{{Demonstration of the \texttt{useOBox} Parameter}{table:1}  

4  

5 \hvFloat[  

6 floatPos=hb,  

7 useOBox=true,  

8 objectAngle=90,  

9 capPos=r,  

10 capVPos=t,  

11 capWidth=0.3]{table}{{Demonstration of the \texttt{useOBox} Parameter}{table:2}
```

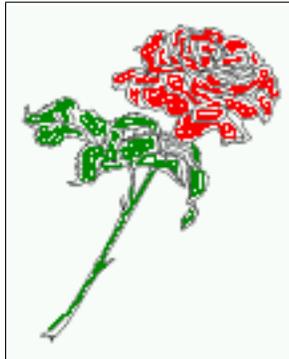
In this case leave the third parameter empty.

11 Text and Objects

With the onlyText option it is no problem to put some text beside an image without getting the caption titles figure/table. The object still can be a floating one or a nonfloating if the nonfloat is used.

Name	Type	Description
hvFloat	command	places object and caption in different ways
figcaption	command	writes a figure caption in a non floating environment
tabcaption	command	writes a table caption in a non floating environment
setDefaultts	command	sets all options to the defaults

Table 4: Demonstration of the `useOBox` Parameter



Demonstration of the `\texttt` Parameter, which makes it possible to put some text beside a floating object without getting a starting Figure: or Table:

The code for figure 11:

```

1 \hvFloat[%
2   onlyText=true,%
3   capAngle=90,%
4   capPos=r,%
5   capVPos=t,%
6   capWidth=h]{\includegraphics{rose}}%
7 ["\texttt{onlyText}" Caption]{%
8 Demonstration of the \texttt{onlyText} Parameter, which makes it
9 possible to put some text beside a floating object without getting
10 a starting \texttt{Figure:} or \texttt{Table:}}{fig:text}

```

A Problems

With the `nonfloat` option all objects are left aligned, `\centering` doesn't work here. Only God knows why ... **solved!**

Optional Arguments for a short caption doesn't work for the `nonfloat` option. **solved!**

B To Do

Using the `float` package to create by default a new `float` Environment, when the one which is passed to `\hvfloat` is not defined.

C The Package Source

```

1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{hvfloat}[2003/05/09 rotating of floating objects]
3 %%
4 %% IMPORTANT NOTICE:
5 %%
6 %% This is file 'hvfloat.sty',
7 %%
8 %% Herbert Voss <voss@perce.de>

```

```

9  %% May 09, 2003
10 %%
11 %% This program can be redistributed and/or modified under the terms
12 %% of the LaTeX Project Public License Distributed from CTAN archives
13 %% in directory macros/latex/base/lppl.txt.
14 %%
15 %% DESCRIPTION:
16 %% 'hvfloa' offers rotating of captions and objects for floats
17 %%
18 \def\fileversion{1.0}
19 \def\filedate{2003/05/09}
20 \message{'hvfloa' v\fileversion, \filedate\space (Herbert Voss)}
21 %
22 %
23 \RequirePackage{graphicx}
24 \RequirePackage{keyval}
25 \RequirePackage{ifthen}
26 %
27 \newif\ifhv@fbox \hv@fboxfalse
28 \DeclareOption{fbox}{%
29 \hv@fboxtrue%
30 \setlength{\fboxsep}{1pt}%
31 }
32 \ProcessOptions\relax
33 %
34 \newlength{\hvObjectWidth}
35 \newlength{\hvCapWidth}
36 \newlength{\hvMaxCapWidth}
37 \newsavebox{\hvObjectBox}
38 \newsavebox{\hvCaptionBox}
39 \newsavebox{\hvOBox}
40 %
41 \newif\ifhv@useOBox
42 \newif\ifhv@nonFloat
43 \newif\ifhv@onlyText
44 \newif\ifhv@framedCaption
45 \newif\ifhv@framedObject
46 %
47 \def\hvSet@boolkey#1#2{%
48 \csname hv@#2\ifx\relax#1\relax true\else#1\fi\endcsname}
49 %
50 \define@key{hvSet}{floatPos}[htbp]{ % LaTeX's position parameters htbp
51 \def\hvSet@floatPos{#1}%
52 }
53 \define@key{hvSet}{rotAngle}[0]{ % rotates caption AND image together
54 \def\hvSet@rotAngle{#1}%
55 }
56 \define@key{hvSet}{capWidth}[.8]{ % object (w)idth/object (h)eight/<
57 scale of \columnwidth>
58 \def\hvSet@capWidth{#1}%
59 }
60 \define@key{hvSet}{capAngle}[0]{ % -360..+360
61 \def\hvSet@capAngle{#1}%
62 }
63 \define@key{hvSet}{capPos}[b]{ % (l)eft/(b)ottom/(t)op/(r)ight
64 \def\hvSet@capPos{#1}% it is relativ to the object
65 }

```

```

65 \define@key{hvSet}{capVPos}[c]{ % (b)ottom/(c)enter/(t)op
66 \def\hvSet@capVPos{#1}% it is relativ to the object
67 }
68 \define@key{hvSet}{objectPos}[c]{ % (l)eft/(c)enter/(r)ight
69 \def\hvSet@objectPos{#1}% it is relativ to the document
70 }
71 \define@key{hvSet}{objectAngle}[0]{ % -360..+360
72 \def\hvSet@objectAngle{#1}%
73 }
74 \define@key{hvSet}{floatCapSep}[5]{ % a width with the unit pt
75 \def\hvSet@floatCapSep{#1}%
76 }
77 \define@key{hvSet}{useOBox}[false]{ % use of the hvOBox contents
78 \lowercase{\hvSet@boolkey{#1}}{useOBox}%
79 }
80 \define@key{hvSet}{nonFloat}[false]{% Do not use float environment
81 \lowercase{\hvSet@boolkey{#1}}{nonFloat}%
82 }
83 \define@key{hvSet}{onlyText}[false]{% Write the caption only as text
84 \lowercase{\hvSet@boolkey{#1}}{onlyText}%
85 }
86 \define@key{hvSet}{framedCaption}[false]{% boxed caption
87 \lowercase{\hvSet@boolkey{#1}}{framedCaption}%
88 }
89 \define@key{hvSet}{framedObject}[false]{% boxed object
90 \lowercase{\hvSet@boolkey{#1}}{framedObject}%
91 }
92 %
93 \def\setDefaults{%
94 \setkeys{hvSet}{%
95 floatPos=htbp, rotAngle=0, capWidth=0.8, capAngle=0,%
96 capPos=b, capVPos=c, objectPos=c, objectAngle=0,%
97 floatCapSep=5, useOBox=false, nonFloat=false,%
98 onlyText=false}%
99 }
100 \setDefaults%
101 \ifhv@fbox
102 \setkeys{hvSet}{framedCaption=true, framedObject=true}%
103 \fi
104 %
105 \def\hv@Top{t}
106 \def\hv@Bottom{b}
107 \def\hv@Right{r}
108 \def\hv@Left{l}
109 \def\hv@Center{c}
110 \def\hv@Width{w}
111 \def\hv@Height{h}
112 \def\hv@Zero{0}
113 %
114 \newlength{\hvAboveCaptionSkip}
115 \newlength{\hvBelowCaptionSkip}
116 \setlength{\belowcaptionskip}{\abovecaptionskip}% it is in latex.ltx
= 0pt
117 \newcommand{\saveCaptionSkip}{%
118 \setlength{\hvAboveCaptionSkip}{\abovecaptionskip}
119 \setlength{\hvBelowCaptionSkip}{\belowcaptionskip}
120 \setlength{\abovecaptionskip}{0pt}

```

```

121 \setlength{\belowcaptionskip}{0pt}
122 }
123 \newcommand{\restoreCaptionSkip}{%
124 \setlength{\abovecaptionskip}{\hvAboveCaptionSkip}
125 \setlength{\belowcaptionskip}{\hvBelowCaptionSkip}
126 }
127 %
128 %
129 \newcommand{\figcaption}[2][\def\capttype{figure}%
130 \ifthenelse{\equal{#1}{}}{\caption{#2}}{\caption[#1]{#2}}
131 \newcommand{\tabcaption}[2][\def\capttype{table}%
132 \ifthenelse{\equal{#1}{}}{\caption{#2}}{\caption[#1]{#2}}
133 %
134 %
135 %
136 \def\hvFloat{\ifnextchar[{\do@hvFloat}{\do@hvFloat[]}}
137 \def\do@hvFloat[#1]#2#3{%
138 \setDefaults%
139 \ifthenelse{\equal{#1}{}}{\setkeys{hvSet}{#1}}%
140 \gdef\hv@floatType{#2}%
141 \ifthenelse{\equal{#2}{}}{\setkeys{hvSet}{nonFloat=true}}}%
142 \gdef\hv@floatObject{#3}%
143 \@ifnextchar[{\do@@hvFloat}{\do@@hvFloat[]}%
144 }
145 \def\do@@hvFloat[#1]#2#3{%
146 \def\hv@shortCap{#1}
147 \def\hv@longCap{#2}
148 \def\hv@label{#3}
149 %\newcommand*{\hvFloat}[5][%
150 % #1: keyvalues
151 % #2: type figure | table | ...
152 % #3: float contents
153 % #4: short caption
154 % #5: caption
155 % #6: label
156 % \setDefaults%
157 % \def\@tempa{#1}%
158 % \ifx\@tempa\empty\else\setkeys{hvSet}{#1}\fi% set options, only when
159 % not empty
160 \def\@tempa{90}%
161 \ifx\hvSet@rotAngle\@tempa
162 \setlength{\hvMaxCapWidth}{\textheight}
163 \else
164 \setlength{\hvMaxCapWidth}{\linewidth}
165 \fi
166 %
167 % First we save the object in \hvObjectBox
168 %
169 \ifx\hvSet@objectAngle\hv@Zero % rotate the object?
170 \savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\
171 \hv@floatObject\fi}
172 \else
173 \savebox{\hvObjectBox}{%
174 \rotatebox{\hvSet@objectAngle}{%
175 \ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}}
176 \fi
177 \setlength{\hvObjectWidth}{\wd\hvObjectBox}

```

```

176 %
177 % Now we save the caption with its defined \hvCapWidth
178 %
179 \ifx\hvSet@capWidth\hv@Width
180 \setlength{\hvCapWidth}{\hvObjectWidth}
181 \else
182 \ifx\hvSet@capWidth\hv@Height
183 \setlength{\hvCapWidth}{\ht\hvObjectBox}
184 \else
185 \setlength{\hvCapWidth}{\hvObjectWidth}
186 \ifx\hvSet@capPos\hv@Left
187 \addtolength{\hvMaxCapWidth}{-\hvObjectWidth}
188 \fi
189 \ifx\hvSet@capPos\hv@Right
190 \addtolength{\hvMaxCapWidth}{-\hvObjectWidth}
191 \fi
192 \ifdim\hvSet@capWidth\columnwidth<\hvMaxCapWidth
193 \setlength{\hvCapWidth}{\hvSet@capWidth\columnwidth}
194 \else
195 \setlength{\hvCapWidth}{\hvMaxCapWidth}
196 \fi
197 \fi
198 \fi
199 %
200 % now we have the object and the caption with the right
201 % rotated angles saved in boxes
202 %
203 \def\fps@figure{\hvSet@floatPos}
204 \ifhv@nonFloat%
205 \beginingroup% Start the nonfloat part
206 \else%
207 \begin{\hv@floatType}% Start the floating environment
208 \fi%
209 \saveCaptionSkip% we put this space ourselves
210 \ifx\hvSet@capAngle\hv@Width % need rotation?
211 \sbox{\hvCaptionBox}{%
212 \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
213 \ifhv@nonFloat%
214 \ifhv@onlyText%
215 #2%
216 \else%
217 \ifthenelse{\equal{\hv@floatType}{figure}}{%
218 \ifthenelse{\equal{#1}{}}{\figcaption{#2}}{\figcaption[#1]{#2}}%
219 }{%
220 \ifthenelse{\equal{#1}{}}{\tabcaption{#2}}{\tabcaption[#1]{#2}}%
221 }%
222 \fi%
223 \else%
224 \ifx\hv@shortCap\empty\caption{#2}\else\caption[#1]{#2}\fi%
225 \fi%
226 \label{#3}%
227 \end{minipage}%
228 }%
229 \else%
230 \sbox{\hvCaptionBox}{%
231 \rotatebox{\hvSet@capAngle}{%
232 \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation

```

```

233     \ifhv@nonFloat%
234     \ifhv@onlyText%
235     #2%
236     \else%
237         \ifthenelse{\equal{\hv@floatType}{figure}}{%
238             \ifthenelse{\equal{#1}{}}{\figcaption{#2}}{\figcaption{#1}{#2}}
239             %
240             }{%
241                 \ifthenelse{\equal{#1}{}}{\tabcaption{#2}}{\tabcaption{#1}{#2}}
242                 %
243                 }%
244             \fi%
245         \else%
246             \ifx\hv@shortCap\empty\caption{#2}\else\caption{#1}{#2}\fi%
247             \fi%
248             \label{#3}%
249         \end{minipage}%
250     }%
251 \fi%
252 %%
253 \restoreCaptionSkip% save old values
254 \ifx\hvSet@objectPos\hv@Right%
255     \raggedleft%
256 \else%
257     \ifx\hvSet@objectPos\hv@Center%
258         \ifhv@nonFloat%
259             \hspace*{\fill}%
260         \else%
261             \centering
262         \fi%
263     \fi%
264 \fi%
265 %%
266 % to rotate object and caption together, we save all in another box
267 % the caption comes first, if its on the left or the top
268 %%
269 \savebox{\@tempboxa}{%
270     \ifx\hvSet@capPos\hv@Left % caption on left side
271     \ifx\hvSet@capVPos\hv@Center%
272         \ifhv@framedCaption%
273         \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
274     \else
275         \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}
276     \fi%
277     \hspace{\hvSet@floatCapSep pt}% capfloatsep
278     \ifhv@framedObject%
279     \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}%
280 \else
281     \parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}
282 \fi%
283 \else%
284     \ifx\hvSet@capVPos\hv@Top % caption at top
285     \ifhv@framedCaption%
286     \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
287 \else
288     \raisebox{-\height}{\usebox{\hvCaptionBox}}%

```

```

288     \fi
289     \hspace{\hvSet@floatCapSep pt}% capfloatsep
290     \ifhv@framedObject%
291     \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
292     \else
293     \raisebox{-\height}{\usebox{\hvObjectBox}}%
294     \fi%
295 \else% caption on bottom
296 \ifhv@framedCaption%
297 \fbox{\usebox{\hvCaptionBox}}
298 \else
299 \usebox{\hvCaptionBox}
300 \fi%
301 \hspace{\hvSet@floatCapSep pt}%
302 \ifhv@framedObject%
303 \fbox{\usebox{\hvObjectBox}}
304 \else
305 \usebox{\hvObjectBox}
306 \fi%
307 \fi%
308 \fi%
309 \else
310 \ifx\hvSet@capPos\hv@Top
311 \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
312 \begin{minipage}{\wd\hvCaptionBox}
313 \else
314 \begin{minipage}{\wd\hvObjectBox}
315 \fi
316 \centering
317 \ifhv@framedCaption%
318 \fbox{\usebox{\hvCaptionBox}}\[\hvBelowCaptionSkip]
319 \else
320 \usebox{\hvCaptionBox}\[\hvBelowCaptionSkip]%
321 \fi%
322 \ifhv@framedObject%
323 \fbox{\usebox{\hvObjectBox}}%
324 \else
325 \usebox{\hvObjectBox}%
326 \fi%
327 \end{minipage}
328 \else
329 \ifx\hvSet@capPos\hv@Bottom
330 \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
331 \begin{minipage}{\wd\hvCaptionBox}
332 \else
333 \begin{minipage}{\wd\hvObjectBox}
334 \fi
335 \centering
336 \ifhv@framedObject
337 \fbox{\usebox{\hvObjectBox}}\[\hvAboveCaptionSkip]
338 \else
339 \usebox{\hvObjectBox}\[\hvAboveCaptionSkip]
340 \fi%
341 \ifhv@framedCaption
342 \fbox{\usebox{\hvCaptionBox}}%
343 \else
344 \usebox{\hvCaptionBox}%

```

```

345     \fi%
346     \end{minipage}
347 \else% the last option: put the caption on the right
348 \ifx\hvSet@capVPos\hv@Center%
349     \ifhv@framedObject
350     \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}
351     \else
352     \parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}
353     \fi%
354     \hspace{\hvSet@floatCapSep pt}%
355     \ifhv@framedCaption
356     \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
357     \else
358     \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}
359     \fi%
360 \else%
361 \ifx\hvSet@capVPos\hv@Top
362     \ifhv@framedObject
363     \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
364     \else
365     \raisebox{-\height}{\usebox{\hvObjectBox}}%
366     \fi%
367     \hspace{\hvSet@floatCapSep pt}%
368     \ifhv@framedCaption
369     \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
370     \else
371     \raisebox{-\height}{\usebox{\hvCaptionBox}}%
372     \fi
373 \else
374     \ifhv@framedObject
375     \fbox{\usebox{\hvObjectBox}}%
376     \else
377     \usebox{\hvObjectBox}%
378     \fi
379     \hspace{\hvSet@floatCapSep pt}%
380     \ifhv@framedCaption
381     \fbox{\usebox{\hvCaptionBox}}%
382     \else
383     \usebox{\hvCaptionBox}%
384     \fi%
385     \fi%
386     \fi
387     \fi
388     \fi
389 \fi
390 }% End savebox Object and caption
391 %
392 % now we rotate the object and caption, if needed
393 %
394 \ifx\hvSet@rotAngle\hv@Zero
395     \usebox{\@tempboxa}
396 \else
397     \rotatebox{\hvSet@rotAngle}{\usebox{\@tempboxa}}
398 \fi
399 \ifhv@nonFloat
400 \ifx\hvSet@objectPos\hv@Center
401     \ifhv@nonFloat

```

```
402     \hspace{\fill}
403     \fi
404     \fi
405     \endgroup% End the nonfloat part
406     \else
407     \end{\hv@floatType}% End the floating environment
408     \fi
409     \ifhv@fbox % reset local settings
410     \setkeys{hvSet}{framedCaption=true, framedObject=true}
411     \fi
412   }
413 %
414 \endinput
```