

Package hvfloat

Rotating and scaling of objects and captions ver 2.28

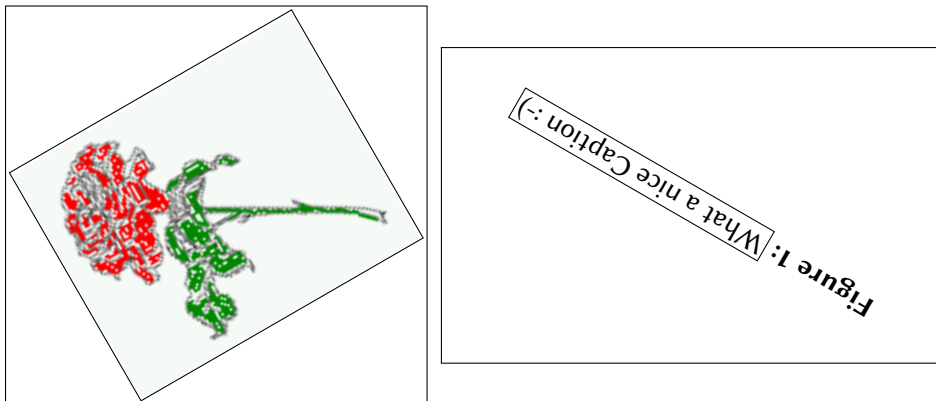
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The package hvfloat defines a macro to place objects and captions of floats in different positions with different rotating angles.

All objects and captions are framed on the first pages, which is only for some demonstration here and has no additional sense!

To compare the place of the definition of the floating objects in the source and the output a marginnote `\float` is set into the margin. This is done also only for demonstration!



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Thanks to Frank Mittelbach, Rolf Niepraschk

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1 The package options

fbox	The objects and captions are put into a <code>\fbox</code> command, like in this documentation. This doesn't make real sense and is only for some demonstration useful or for locating problems if images seems to have too much whitespace.
hyperref	Load package <code>hyperref</code> .
nostfloats	do not load package <code>stfloats</code> .

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

The following packages are loaded by `hvfloat` and the optional argument `hypcap` is passed to the packages `caption` and `subcaption`:

`caption`, `subcaption`, `atbegshi`, `stfloats`, `expl3`, `multido`, `graphicx`, `xkeyval`, `ifoddpage`, and `afterpage`.

2 The Macros and optional arguments

The syntax for the macros and `\hvFloatSetDefaults`, `\hvFloatSet`, and `\hvFloat` is

```
\hvFloatSet{key=value list}
\hvFloatSetDefaults
\hvFloat* [Options] + {float type}{floating object} [short caption] {long caption}{label}
```

The star version is explained in section 11 on page 24 and 19.2 on page 53 and the optional `+` is explained in section 17.3 on page 40.

`\hvFloatSet` allows the global setting of keywords and `\hvFloatSetDefaults` sets all keywords to its default value as shown in Table 2 on the next page.

If `\hvFloat` has an empty second parameter `<float type>`, then `\hvFloat` 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 `hvfloat`, but they can be used for own purposes.

```
\figcaption [short caption text] {caption text}
\tabcaption [short caption text] {caption text}
\tabcaptionbelow [short caption text] {caption text}
```

They are used for the `nonFloat` keyword, 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 2 is no problem.

2 The Macros and optional arguments

[...] 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.

With the macro `\hvDefFloatStyle` one can define a style which can be used instead of the individual setting:

`\hvDefFloatStyle{name}{setting}`

Internally the style is saved in a macro named `\hv@<name>`.

There are the following keywords:

Table 2: The optional keywords for the macro `\hvFloat`

Keyword	Default	Description
<code>floatPos</code>	<code>tpb</code>	This is the same default placement setting like the one from standard \LaTeX , but maybe not always the best setting.
<code>rotAngle</code>	<code>0</code>	The value for the angle if both, the object and the caption, should be rotated together.
<code>capWidth</code>	<code>n</code>	The width of the caption. Can be <code>»n«</code> like a natural width given by the current linewidth, <code>»w«</code> for the width of the object, <code>»h«</code> for the height of the object, or a scale for <code>\columnwidth</code> .
<code>capAngle</code>	<code>0</code>	The integer value for the angle if the caption should be rotated. Counted counter clockwise.
<code>capPos</code>	<code>bottom</code>	The position of the caption relative to the object. Possible values are before: <i>always</i> before (left) from the object. top: <i>always</i> on top of the object. left: <i>always</i> before (left) from the object, but on the <i>same page</i> in twocolumn mode. after: <i>always</i> after (right) from the object. bottom: <i>always</i> on the bottom of the object. right: <i>always</i> after (right) from the object, but on the <i>same page</i> in twocolumn mode. inner: in twoside mode always typeset at the inner margin. outer: in twoside mode always typeset at the outer margin. evenPage: in twoside mode with fullpage objects always on an even page.

Keyword	Default	Description
		oddPage: in twoside mode with fullpage objects always on an odd page.
capVPos	center	This is only important for capPos=left right. Only in this case the caption can vertically placed at the bottom, center and top.
objectPos	center	The horizontal placement of the object relative to the document. Possible values are (l) eft (c) enter (r) ight.
objectAngle	0	The integer value for the angle if the object should be rotated. Counted counter clockwise.
floatCapSep	5pt	The additional space between the object and a left or right placed caption.
use0Box	false	Instead of passing the object as parameter to the \hvFloat, the contents maybe saved in the box \hv0Box With use0Box=true the contents of this box will be used.
onlyText	false	The caption will be printed as normal text and there is no entry in the list of
nonFloat	false	The object isn't put in a floating environment. It is printed as standard text with an additional caption. The float counter is increased as usual and can be referenced.
wide	false	The float can use \textwidth+\marginparwidth as horizontal width.
objectFrame	false	put a frame with no separation around the float object.
style	-	Use a defined style
capFormat	-	Define formatting options for \caption (see documentation of package caption).
subcapFormat	-	Define formatting options for \subcaption.
fullpage	false	Use a complete column in twocolumn mode.
FULLPAGE	false	Use the complete paper width/height for the object.
FullPage	false	Use the complete text area for the object.
doublePage	false	Use the textarea on a doublepage with additional text.
doublePAGE	false	Use the textarea on a doublepage without additional text.
doubleFULLPAGE	false	Use the paperwidth on a doublepage without additional text.
vFill	false	Put a \vfill between every two objects in a multi- or subfloat.

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}
```

Code for figure 2:

Fig. 2

3 The default use of floating environments



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

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

Tab. 3

Table 3: With the only Option capPos=top 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
hvFloatEnv	environment	places object and caption exactly Here
\figcaption	command	writes a figure caption in a non floating environment
\tabcaption	command	writes a table caption in a non floating environment
\hvFloatSetDefaults	command	sets all options to the defaults
\hvDefFloatStyle	command	define a user style

Code for table 3:

```
\hvFloat[capPos=top]{table}{%
\begin{tabularx}{\textwidth}{>{\ttfamily}l|l|X}
\rmfamily Name & Type & Description\\ \hline
\CMD{\hvFloat} & command & places object and caption in different ways\\
hvFloatEnv & environment & places object and caption exactly Here\\
\CMD{\figcaption} & command & writes a figure caption in a non floating environment\\
\CMD{\tabcaption} & command & writes a table caption in a non floating environment\\
\CMD{\hvFloatSetDefaults} & command & sets all options to the defaults\\
\CMD{\hvDefFloatStyle} & command & define a user style
\end{tabularx}}%
{With the only Option \texttt{capPos=top} to place the caption on top of the table, which is often
the default.}%
{tab:0}}
```

See section 14 for some more informations about tabulars as objects.

4 Caption width

4.1 Default – natural width

The default setting is the natural width of a paragraph with respect to the current linewidth or columnwidth for a caption below or above an object. It behaves in the same way as a caption set by one of the default floating environments like figure or table:

```
\hvFloat[floatPos=!htb]{figure}{\includegraphics{images/rose}}%  
  {Default caption width setting, which is the natural width with respect to the current linewidth  
  .}{fig:width0}
```



Fig. 3

Figure 3: Default caption width setting, which is the natural width with respect to the current linewidth.

For the following examples the package option fbox is disabled. All frames are now set with the macro `\frame` or the optional keyword `objectFrame`. !!

For a caption beside an object, the *natural* caption width (without the optional argument `wide`) is given by the current linewidth minus the width of the object and the space between object and caption, which is set by `floatCapSep` (see Table 2 on page 8).

```
\hvFloat[floatPos=!htb,capPos=after,objectFrame]{figure}{\includegraphics[scale=1.5]{images/rose}}  
  %  
  {Caption right beside with a \emph{natural} width, which is given by the width of the object,  
  the separation between object and caption, and the current linewidth.}{fig:width1}
```

Fig. 4

4.2 Relative linewidth

With `capWidth=<number>` the caption width is set to `<number>\columnwidth`. For captions at the bottom or on top of objects the setting is not checked if `<number>` is greater than 1.

```
\hvFloat[floatPos=!htb,capWidth=0.9]{figure}{\includegraphics{images/rose}}%  
  {Caption below with a width of 0.9 of the current line width (column width), which is  
  in this special case \the\linewidth. Divide it by 28.82 to get cm.}{fig:width2}
```

Fig. 5

4 Caption width

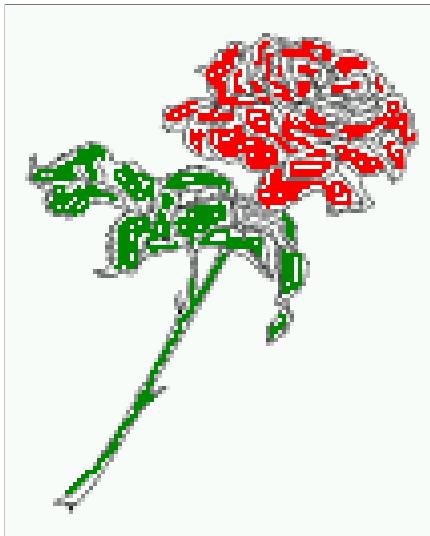


Figure 4: Caption right beside with a *natural* width, which is given by the width of the object, the separation between object and caption, and the current linewidth.



Figure 5: Caption below with a width of 0.9 of the current line width (column width), which is in this special case 376.4258pt. Divide it by 28.82 to get cm.

If such a value like `0.9\linewidth` is used for a caption beside an object, then the macro does a test if the space beside the object is less equal the defined caption width. If not then the width is set to the possible value between object and margin:

```
\hvFloat[floatPos=!htb,
      capPos=after,
      capWidth=0.9]{figure}{\includegraphics[scale=1.5]{images/rose}}%
{Caption right beside with a width setting of \texttt{0.9\textbackslash linewidth}
which is too big for this example and therefore corrected
by the macro to the maximal width.}{fig:width3}
```

Fig. 6

4.3 Identical object and caption width

With `capWidth=w` the caption width is like the object width which makes only real sense if you have a lot of identical images with respect to its widths.

4.4 caption width to height of the object



Figure 6: Caption right beside with a width setting of 0.9\linewidth which is too big for this example and therefore corrected by the macro to the maximal width.

```
\hvFloat[floatPos=!htb,capWidth=w]{figure}{\includegraphics[width=0.5\linewidth]{images/CTAN}}%  
  {Caption below with a width of the given object which may be a problem  
  if it is a very small object.}{fig:width4}
```

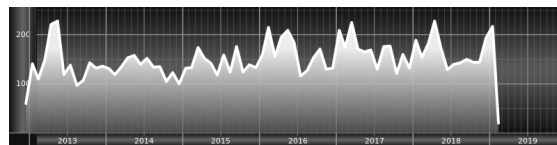


Figure 7: Caption below with a width of the given object which may be a problem if it is a very small object.

4.4 caption width to height of the object

With `capWidth=h` the caption width is like the object height which makes only real sense if you want to put a rotated caption beside the object.

```
\hvFloat[floatPos=!htb,capPos=after,capWidth=h,capAngle=90,objectFrame]{figure}{\includegraphics{  
  images/rose}}%  
  {Caption beside with a width of the given object height which may be a problem  
  if it is a very small object.}{fig:width5}
```

Fig. 8

5 Caption left or right of the object

By default the caption is set on the left side of the object. If the caption and the object are set side by side, then the keyvalue before is identical to the setting left.

5 Caption left or right of the object



Figure 8: Caption beside with a width of the given object height which may be a problem if it is a very small object.

5.1 Caption right with specific length

Code for figure 9:

```
\hvFloat%
[ floatPos=htb,
  capPos=right,
  objectFrame,
  objectPos=c]{figure}{\includegraphics[scale=0.9]{images/rose}}%
[Caption beside object and vertically centered]%
{Caption vertically centered right beside the float with a natural caption width
(the default). \blindtext}%
{fig:1}
```

floatFig. 9
capPos=right



Figure 9: Caption vertically centered right beside the float with a natural caption width (the default). Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

5.2 Caption left and rotated

Code for figure 10:

```
\hvFloat%
[ floatPos=htb,
  capPos=left,
  capWidth=h,% of \columnwidth
  capAngle=90,
```

```

objectFrame
]{figure}{\includegraphics{images/rose}}}%
[Centered Caption beside Object]%
{Caption vertically centered left beside the float with a caption width
of \texttt{capWidth=h}, which is the height of the object.}{fig:2}

```

Fig. 10



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 macro `\rotatebox`. Without any definition the caption will be placed vertically centered to the object. Important for the height of the object is the surrounding orthogonal rectangle.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Code for figure 11:

```

\hvFloat[%
  capWidth=h,
  capPos=after,
  capAngle=180,
  objectAngle=90,
  capVPos=center,
  objectPos=center]{figure}{\frame{\includegraphics{images/rose}}}%
[Centered Caption beside Object]{%
{Caption vertically centered right beside the float with a caption width of the height
of the image and a rotation of the caption and the object.}{fig:3}

```

Fig. 11

6 Caption inner or outer



Figure 11: Caption ver-
tically centered right be-
side the float with a cap-
tion width of the height
of the image and a rota-
tion of the caption and
the object.

6 Caption inner or outer

Setting the caption position to *inner* or *outer* makes only sense for a document in twoside mode. For a oneside document *inner* is the same as *left* and *outer* is the same as *right*. We show only the code for the first image with the setting `capPos=inner`, whereas the second one chooses only `capPos=outer`.

Code for figure 12:

```
\hvFloat[capPos=inner]{figure}{\includegraphics{images/rose}}%  
[Centered Caption on the inner side]{%  
Caption set with the parameter setting \texttt{capPos=inner}, which will be  
a caption on the right side for an even page and on the left side for  
an odd page.}{fig:20}
```

Fig. 12



Figure 12: Caption set with the parameter setting `capPos=inner`, which will be a caption on the right side for an even page and on the left side for an odd page.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Now the same Image with `capPos=outer`. The current `pagenumber` is 16, an even page. We now set a `pagebreak` at the end of the second image to see if it works with *inner/outer*.

```
\hvFloat[capPos=outer]{figure}{\includegraphics{images/rose}}%
```



```
[Centered Caption on the inner side]{%
Caption set with the parameter setting \texttt{capPos=outer}, which will be
a caption on the right side for an even page and on the left side for
an odd page.}{fig:20b}
```

Fig. 13



Figure 13: Caption set with the parameter setting `capPos=outer`, which will be a caption on the right side for an even page and on the left side for an odd page.

Fig. 14



Figure 14: Caption at the bottom right beside the float with a caption width of `0.5\columnwidth` and `capPos=outer`.

We have an odd page, the reason why figure 13 has the caption for *inner* on the left side and figure 14 for *outer* on the right side.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Code for figure 15:

```
\hvFloat[%
capWidth=0.5,% of \columnwidth
capPos=inner,% ==> INNER
capAngle=0,
capVPos=bottom,
objectPos=center]{figure}{\includegraphics{images/rose}}}%
[Centered Caption beside Object]{%
```

7 Vertical Position of the Caption

Caption vertically centered right beside the float with a caption width of `\texttt{0.5\textbackslash columnwidth}` and `\texttt{capPos=outer}` `{fig:22}`

Fig. 15



Figure 15: Caption vertically centered right beside the float with a caption width of `0.5\columnwidth` and `capPos=outer`

We have an even page, the reason why figure 12 has the caption for *inner* on the right side and figure 14 for *outer* on the left side.

7 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 16:

```
\hvFloat[%
  floatPos=htb,%
  capWidth=0.25,%
  capPos=right,%
  capVPos=bottom,%
]{figure}{\frame{\includegraphics{images/rose}}}{Caption at bottom right beside the float}{fig:4}
```

Fig. 16



Figure 16: Caption at bottom right beside the float

The code for figure 17:

```

\hvFloat[%
  floatPos=htb,
  capWidth=0.25,
  capPos=right,
  capVPos=top,
]{figure}{\frame{\includegraphics{images/rose}}}{Caption at top left beside the float}{fig:5}

```

Figure 17: Caption at top left beside the float



Fig. 17

The code for figure 18:

```

\hvFloat[%
  capWidth=0.25,
  capPos=right,
  capVPos=center,% the default
]{figure}{\frame{\includegraphics{images/rose}}}{Caption centered right beside the float}{fig:6}

```



Figure 18: Caption centered right beside the float

Fig. 18

8 Caption format

The `\caption` and `\subcaption` macros are fully under the control of the package `caption`. The formatting can be set with the macros `\captionsetup`, `\subcaptionsetup`, or via the optional argument setting of `\hvFloat` with the keywords `capFormat` and `subcapFormat`. The argument itself will then be used internally by `\captionsetup` and/or `\subcaptionsetup` in a minipage, the reason why it will be local to the current image..

9 Horizontal Position of the Float

```
\hvFloat[%
  capPos=right,
  capFormat={labelsep=newline,justification=RaggedRight,font={small,it},labelfont=bf}
]{figure}{\frame{\includegraphics{images/rose}}}{\blindtext}{fig:66}
```

Fig. 19



Figure 19

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

9 Horizontal Position of the Float

The caption is always near the object, only divided by the length `\floatCapSep` which can be set by the keyword of the same name `floatCapSep`. It accepts only a value with any allowed unit. The keyword `objectPos` refers always to the complete floating object: caption *and* object. The meaning of `objectPos=left` is: Put the object as far as possible to the left margin. If `capPos=left` is also used, then the caption is at the left margin followed by the object (see Figure 21 on the next page).

The code for figure 20:

```
\hvFloat[%
  capWidth=0.25,
  capPos=right,
  capVPos=top,
  objectPos=left,
  objectFrame,
]{figure}{\includegraphics{images/rose}}{%
  Caption at top right beside the float and object position left}{fig:7}
```

Fig. 20

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

The same with `capPos=left` :

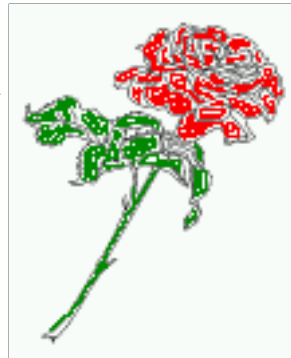
Fig. 21

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no



Figure 20: Caption at top right beside the float and object position left

Figure 21: Caption at top right beside the float and object position left



information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

The code for figure 22:

```
\hvFloat[%
  capWidth=0.25,
  capPos=before,
  capVPos=top,
  objectPos=right,
  objectFrame,
]{figure}{\includegraphics{images/rose}}{%
  Caption at top leftt beside the float and object position right}{fig:8}
```

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fig. 22

Figure 22: Caption at top left beside the float and object position right



10 Wide floats

With the optional argument `wide` the width of the defined `\marginparwidth` is added to the allowed horizontal width of the float.

The code for figure 23:

```
\hvFloat[wide,
  capPos=right,
  capVPos=top,
  objectPos=left,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
  Caption at top right beside the float and object position left and
  the option \texttt{wide}.}{fig:70}
```

Fig. 23



Figure 23: Caption at top right beside the float and object position left and the option `wide`.

The code for figure 24:

```
\hvFloat[wide,
  capPos=left,
  capVPos=top,
  objectPos=right,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}%
{Caption at top left beside the object and object position left and
the option \texttt{wide}.}{fig:80}
```

Fig. 24

For a twosided document it will place the object always in the margin.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how

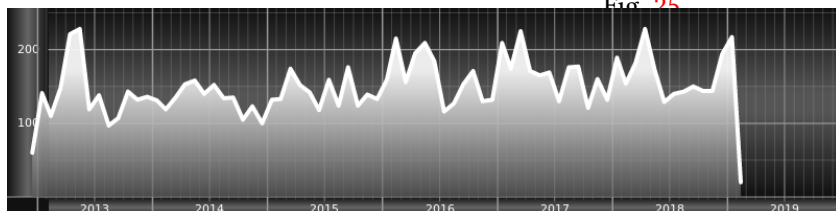
Figure 24: Caption at top left beside the object and object position left and the option wide.



the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
\hvFloat[wide,
    capPos=inner,
    capVPos=top,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
Caption at top and inner beside the float and object position right and
the option \texttt{wide}.}{fig:81}
```

Figure 25: Caption at top and inner beside the float and object position right and the option wide.



Now we set the same image with the same setting on the next page. The caption will change its side due to the setting `capPos=outer`.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
\hvFloat[wide,
    capPos=inner,
    capVPos=top,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
Caption at top inner beside the float and object position right and
the option \texttt{wide}.}{fig:81l}
```

The caption can be typeset completely into the margin with:

```
\captionsetup{justification=RaggedRight}
\hvFloat[wide,
    capPos=outer,
    capVPos=top,
```

Fig. 26

12 Full Page Width in Landscape Mode

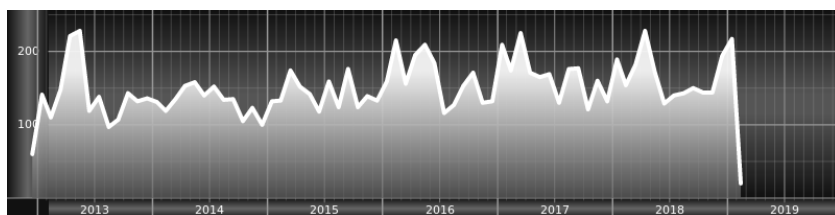
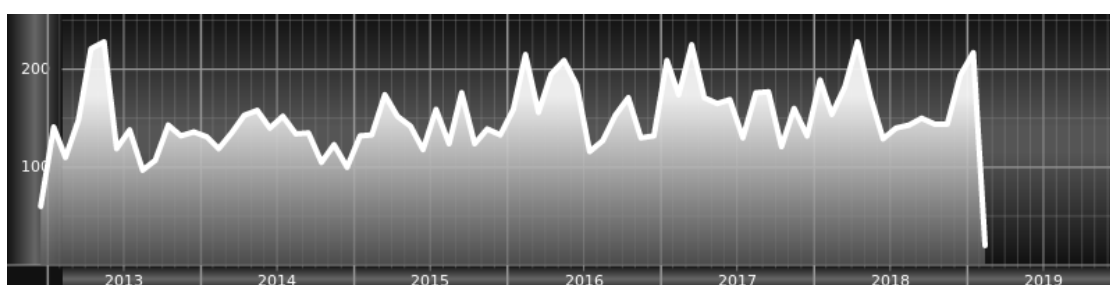


Figure 26: Caption at top inner beside the float and object position right and the option wide.

```
floatCapSep=\marginparsep,
]{figure}{\includegraphics[width=\linewidth]{images/CTAN}}{%
Caption at top inner beside the float and object position right and
the option \texttt{wide}.}{fig:812}
```

Figure 27: Caption at top inner beside the float and object position right and the option wide.



11 The star version \hvFloat*

In the twocolumn mode the floating environment can be set over both columns with the star version `\hvFloat*`. The floating environment will not be on the bottom of the page. The code for the following example (Figure 28 on the facing page) is:

```
\hvFloat*[capPos=right]{figure}%
{\includegraphics{images/frose}}%
[A float with the default caption setting]%
{A default caption of a '' object with the default setting, which
is a ''left'' caption which means that it always appears before the object.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{fig:0}
```

The example shows on page 3 the star version and on page 4 the same without using the star.

12 Full Page Width in Landscape Mode

If you do not want to load the package `lscape` (or `pdflscape`) you can use the `floatPos=p` option to put the image on an own page and rotated by 90 degrees (figure 29).

Code for figure 29:

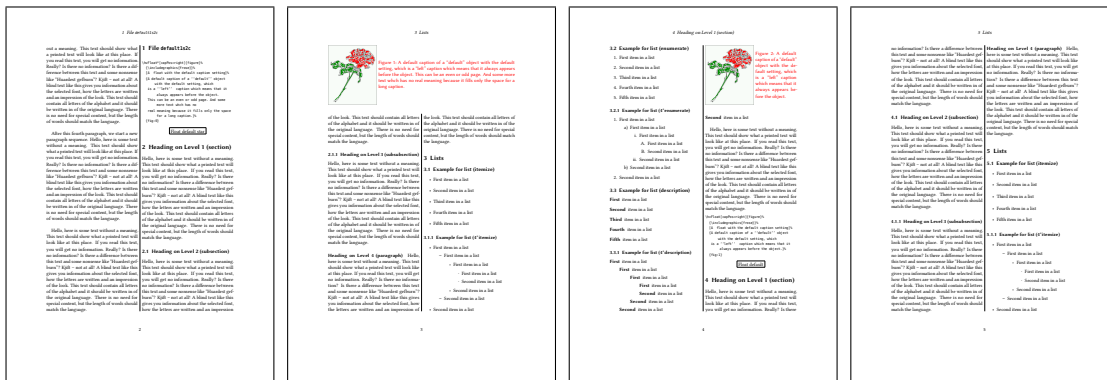


Figure 28: Output of default1s2c (pages 2 –5)

```
\hvFloat[%
    floatPos=p,
    capPos=bottom,
    rotAngle=90,
    objectPos=center,
]{figure}{\includegraphics[width=0.9\textheight]{images/CTAN}}%
[Object and Caption in landscape mode]{%
    Caption and object in landscape mode. \blindtext}{fig:9}
```

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

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

The code for figure 30:

```
\hvFloat[%
    floatPos=p,
    capWidth=h,
    capPos=right,
    objectAngle=90,
    capAngle=-90,
    objectPos=left,
]{figure}{\includegraphics[width=\textheight]{images/CTAN}}%
[Rotated Caption in Landscape]{%
    Caption right beside the float and object position left. The caption rotated by -90$
    degrees.\blindtext}{fig:10}
```

Fig. 29

Fig. 30

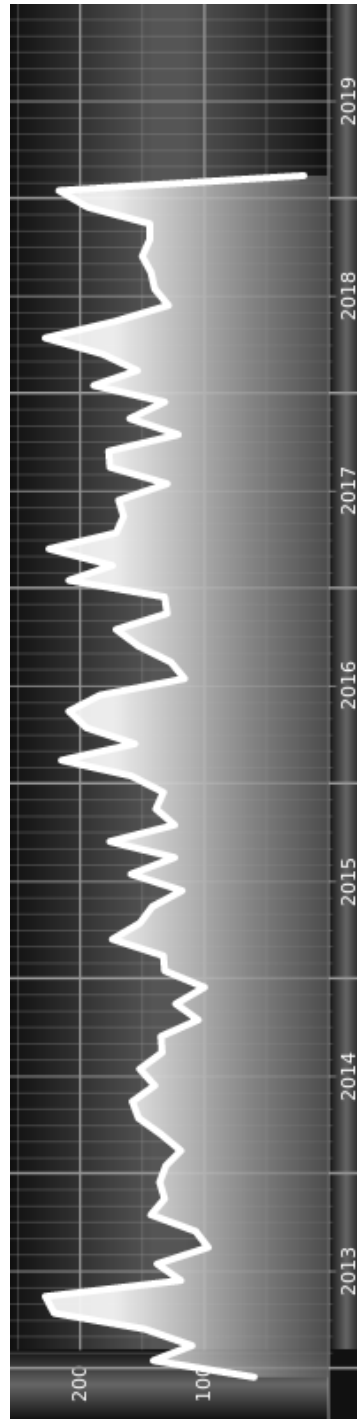
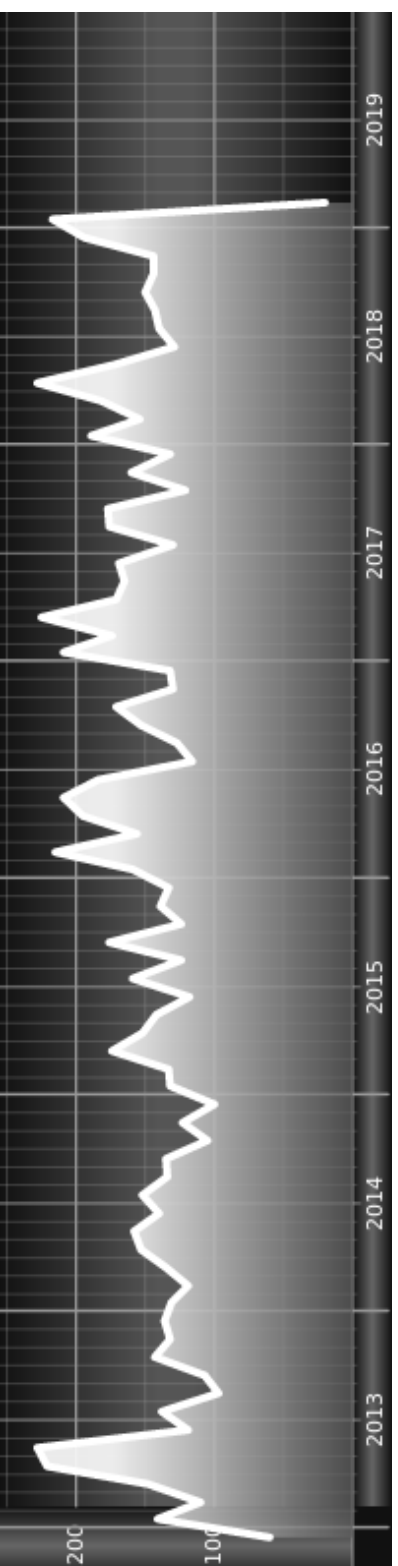


Figure 29: Caption and object in landscape mode. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Figure 30: Caption right beside the float and object position left. The caption rotated by -90 degrees. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



13 The nonFloat Option

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

13 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 keyword nonFloat.

Some nonsense text before the following `\emph{non floating}` object.

```
\hvFloat[%  
  nonFloat,  
  capWidth=0.25,  
  capPos=right,  
  capVPos=bottom,  
  objectPos=center,  
  objectFrame,  
{figure}{\includegraphics[scale=1.5]{images/rose}}%  
  [Nonfloat Captions]{%  
    Caption of a “nonfloat” Object, using the \texttt{nonfloat} Package}{fig:11}
```

Some nonsense text after the preceding `\emph{non floating}` object.

Some nonsense text before the following *non floating* object.

Fig. 31

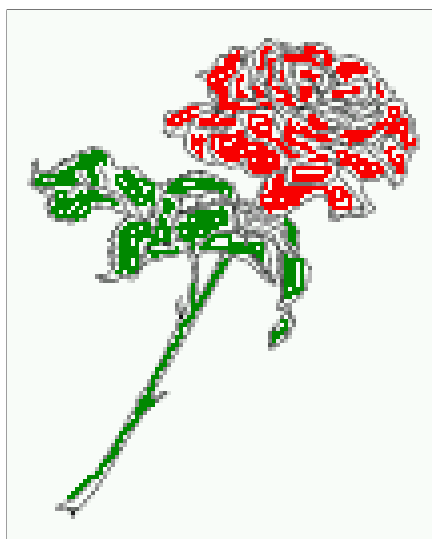


Figure 31: Caption of a “nonfloat” Object, using the nonfloat Package

Some nonsense text after the preceding *non floating* object.

The image 31 is exactly placed where the command `\hvFloat` appears. There are only commands for figure and table environments:

```
\newcommand{\figcaption}{\def\@capttype{figure}\caption}
\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.

14 Tabulars 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 `\hv0Box` to save the table in this box and pass it then to `\hvFloat` with the `use0Box` option. For example see table 4 and 5:

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
\savebox{\hv0Box}{%
\begin{tabular}{>{\small\ttfamily}l|l|l}\hline
\rmfamily Name      & Type      & Description\\\hline
\CMD{hvFloat}      & command  & places object and caption in different ways\\
hvFloatEnv         & environment & places object and caption exactly Here\\
\CMD{figcaption}    & command   & writes a figure caption in a non floating environment\\
```

15 Text and objects

```
\CMD{tabcaption} & command & writes a table caption in a non floating environment\\
\CMD{hvFloatSetDefaults} & command & sets all options to the defaults\\\hline
\end{tabular}%
}
```

The code for table 4 and 5 is:

```
\hvFloat[%
floatPos=!hb,
capPos=top,
use0Box=true]{table}{\texttt{use0Box} Parameter}{table:1}

\hvblindtext

\marginnote{Tab.~\ref{table:2}}
\hvFloat[%
floatPos=hb,
use0Box=true,
objectAngle=90,
capPos=right,
capVPos=top,
capWidth=0.3]{table}{\texttt{use0Box} Parameter}{table:2}
```

In this case leave the third parameter empty.

Tab. 4

Table 4: Demonstration of the use0Box Parameter

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

Tab. 5

15 Text and objects

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

The code for figure 15:

```
\hvFloat[%
onlyText=true,
capAngle=90,
capPos=right,
capVPos=top,
objectFrame,
capWidth=h]{\includegraphics{images/rose}}%
```

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

Table 5: Demonstration of the use0Box Parameter

```

[''\texttt{onlyText}'' Caption]{%
Demonstration of the \texttt{onlyText} Parameter, which makes it
possible to put some text beside a floating object without getting
a starting \texttt{Figure:} or \texttt{Table:}}{fig:text}

```

Fig. 15



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

16 Environment hvFloatEnv

With the environment hvFloatEnv one can place an object exactly on that position where the environment is defined. For captions the use of \captionof is recommended:

```
\begin{hvFloatEnv}
\captionof{table}{A caption for a nice table}
\begin{tabular}{@{} l c r @{}}\hline
left & center & right \\
L & C & R \\
\end{tabular}
\end{hvFloatEnv}
```

Table 6: A caption for a nice table

left	center	right
L	C	R

The environment has an optional argument for setting the line width which is preset to \textwidth. The object is always centered.

```
\begin{hvFloatEnv}[0.5\textwidth]
\captionof{table}{A caption for a nice table}
\begin{tabular}{@{} l c r @{}}\hline
left & center & right \\
L & C & R \\
\end{tabular}
\end{hvFloatEnv}
```

Table 7: A caption for a nice table

left	center	right
L	C	R

17 Full page objects in onecolumn mode

For an image or table which needs the whole space of a page the caption can be printed at the bottom of the preceding or following page. It is possible in oneside and twoside mode, but makes only real sense in the twoside mode. hvfloat defines three additional optional arguments for placing images in a complete column, page or paper:

```
\define@key{Gin}{fullpage}[true]{%
  \def\Gin@ewidth{\columnwidth}%
  \def\Gin@eheight{\textheight}%
  \Gin@boolkey{false}{iso}%
}

\define@key{Gin}{FULLPAGE}[true]{%
  \def\Gin@ewidth{\paperwidth}%
  \def\Gin@eheight{\paperheight}%
  \Gin@boolkey{false}{iso}%
}
```

Figure 32 shows the meaning of the optional arguments fullpage, FullPage, and FULLPAGE for `\includegraphics[...]{tiger}`.

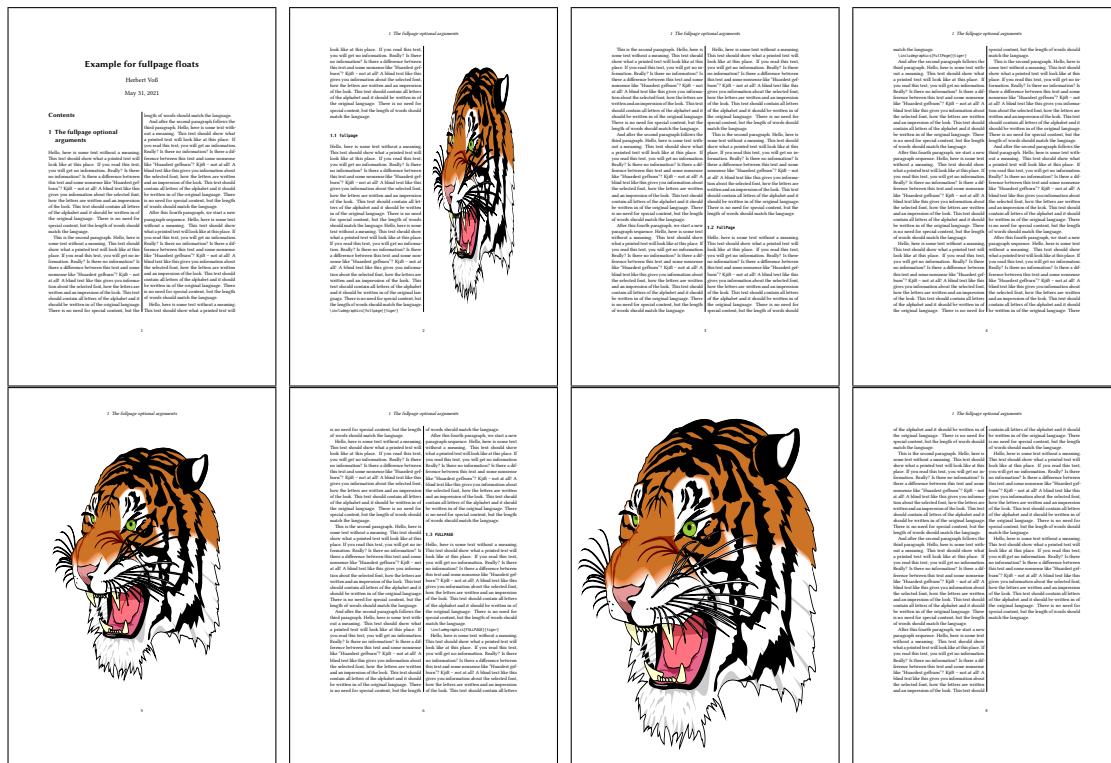


Figure 32: Output of fullpage1s2c (pages 1–8)

17.1 Using the textarea

The setting `capPos=evenPage` (even) or `capPos=oddPage` (odd) page for a document in twocolumn mode makes no real sense. For a twosided document a setting like `capPos=inner` for inner or `capPos=outer` for outer margin makes more sense. For an image or table which needs the whole space of a page the caption can be printed at the bottom of the preceeding or following page. It is possible in oneside and twoside mode, but makes only real sense in the twoside mode. Without any additional argument the caption is set first and the object on the following page:

17.1.1 Using the default or `capPos=before`

Without any additional argument the caption is set first (left) at the bottom of the current page and the object on the following page. This is the same setting like `capPos=left` for a onecolumn document. For the twocolumn option it makes more sense to use the setting `capPos=before` if the caption and object can appear on different pages.

```
\hvFloat[fullpage]%
{figure}%
{\includegraphics[fullpage]{images/frose}}%
[A fullpage float with the default caption setting]%
{A default caption of a "fullpage" object with the default setting, which
 is a "left" caption which means that it always appears "before" the object.
 This can be an even or odd page. And some more text which has no
 real meaning because it fills only the space for a long caption.}%
{fig:fullpage0}
```

Table 8: Valid optional arguments for a full page object.

Name	Type	Description
fullpage	true false	Put the caption on the bottom of the preceding or following page and the object alone a page.
FULLPAGE	true false	The same for full papersize objects over one or two columns. The <code>pagestyle</code> is set to empty
multiFloat	true false	For multiple objects with captions for every object. See section 17.3 on page 40 .
subFloat	true false	For multiple objects with one main and more subcaptions. See section 18 on page 42 .
separatorLine	true	Put a line with a predefined width of 0.4pt between the text and the caption. Only valid for the keyword <code>fullpage</code> .
capPos	value	caption before, after an object or on an evenPage or oddPage.

With this setting the caption is always placed *before* the following object. This maybe sufficient for a oneside document but not the best solution if this document is printed on a duplex machine. In such a case it may make sense to have the captions always on an even (left)

page, even though the document is typeset in a oneside mode. Figure 33 shows the output for a oneside document with a setting capPos=before .

Depending to the used documentclass it can be a problem, if the caption should be placed on the first page. In such a case use one of the other setting. Table 8 on the preceding page shows the valid optional arguments for a full page floating object.

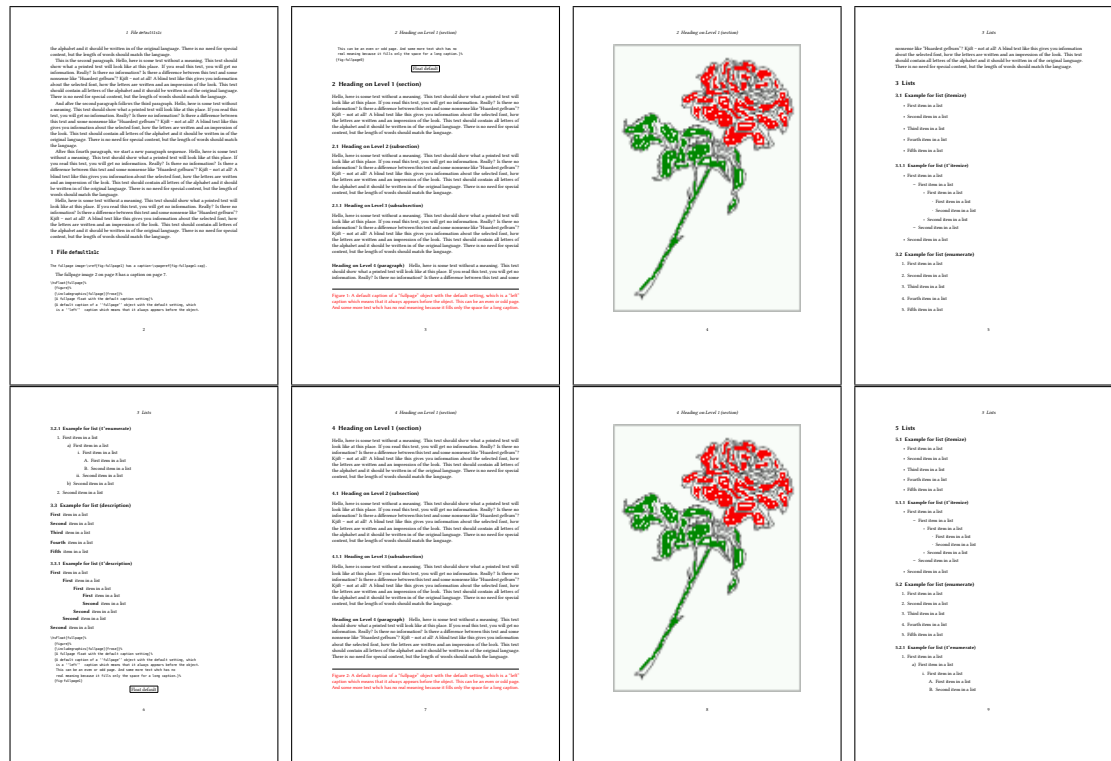


Figure 33: Output of default1s1c (pages 2–9)

17 Full page objects in onecolumn mode

17.1.2 Using capPos=after

The caption will be printed always on the right side which is the same as *after* the full page object. The object appears immediately on the next page and the caption of the next following page at the bottom. There is no check for an even or odd page. This behaviour makes only sense for a oneside document.

```
\hvfloate[fullpage, capPos=after]%  
{figure}%  
\includegraphics[fullpage]{images/frose}}%  
[A float which needs the complete page width and height.]%  
{A Caption of a "fullpage" object, which follows on the next page.  
This can be an even or odd page. And some more text which has no  
real meaning because it fills only the space for a long caption.}  
{fig:fullpage}
```

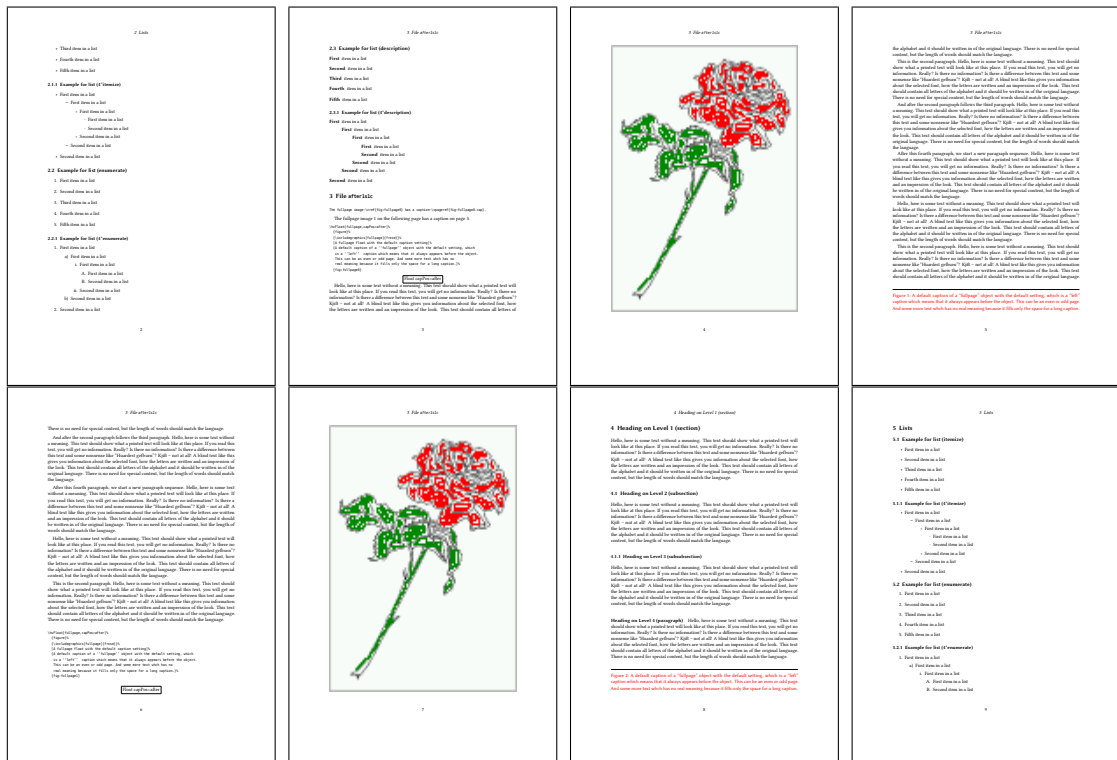


Figure 34: Output of after1s1c (pages 2–9)

17.1.3 Using capPos=evenPage — caption on an even page

With capPos=evenPage the caption will be printed on an even (left) page, the object will always be on an odd (right) page. This option makes only real sense for The twoside mode!

```
\hvFloat[fullpage, capPos=evenPage]%
{figure}%
{\includegraphics[fullpage]{images/frose}}%
[A float with a caption on an even page (left)]%
{A caption on an even (left) page of a “fullpage” object.. \blindtext}
{fig:fullpage3}
```

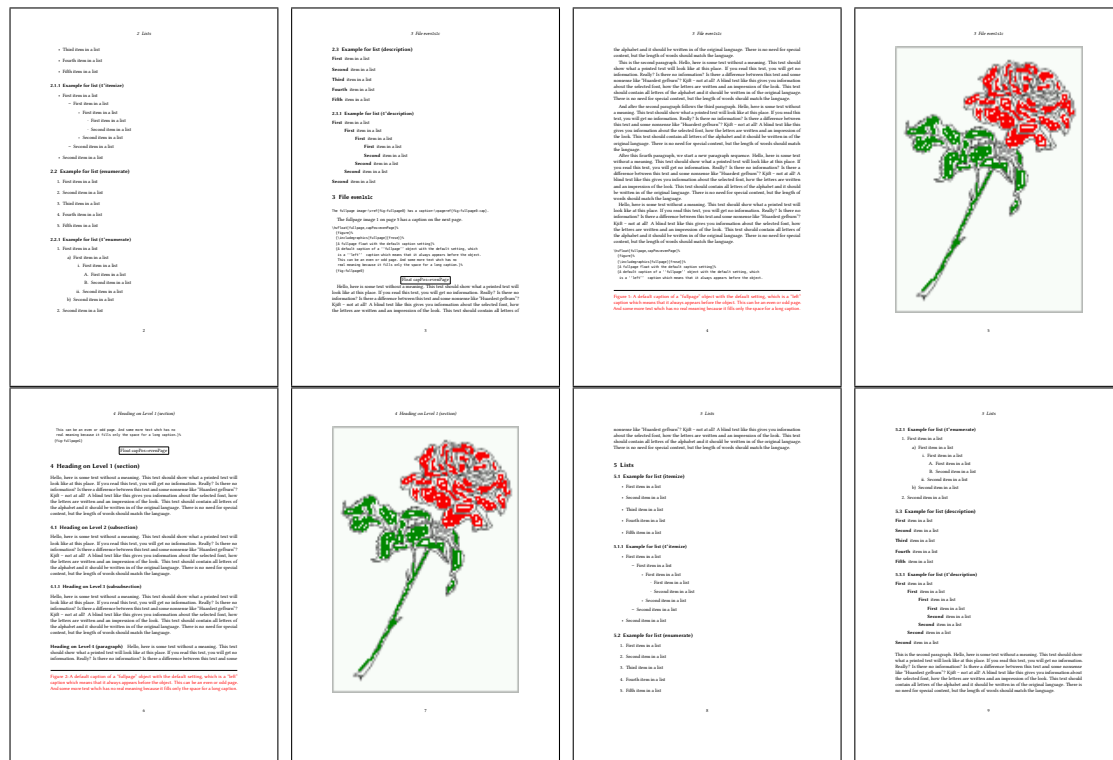


Figure 35: Output of even1s1c (pages 2–9)

17 Full page objects in onecolumn mode

17.1.4 Using capPos=oddPage — caption on an odd page

With capPos=oddPage the caption will be printed on an odd (right) page, the object will always be on an even (left) page, which is before the caption.

```
\hvFloat[fullpage, capPos=oddPage]%  
{figure}%  
{\includegraphics[fullpage]{images/frose}}%  
[A float which needs the complete page width and height.]%  
{A Caption on an odd page of a ‘‘fullpage’’ object, which follows on the next page.  
This can be an even or odd page. And some more text which has no  
real meaning because it fills only the space for a long caption.}  
{fig:fullpage2}
```

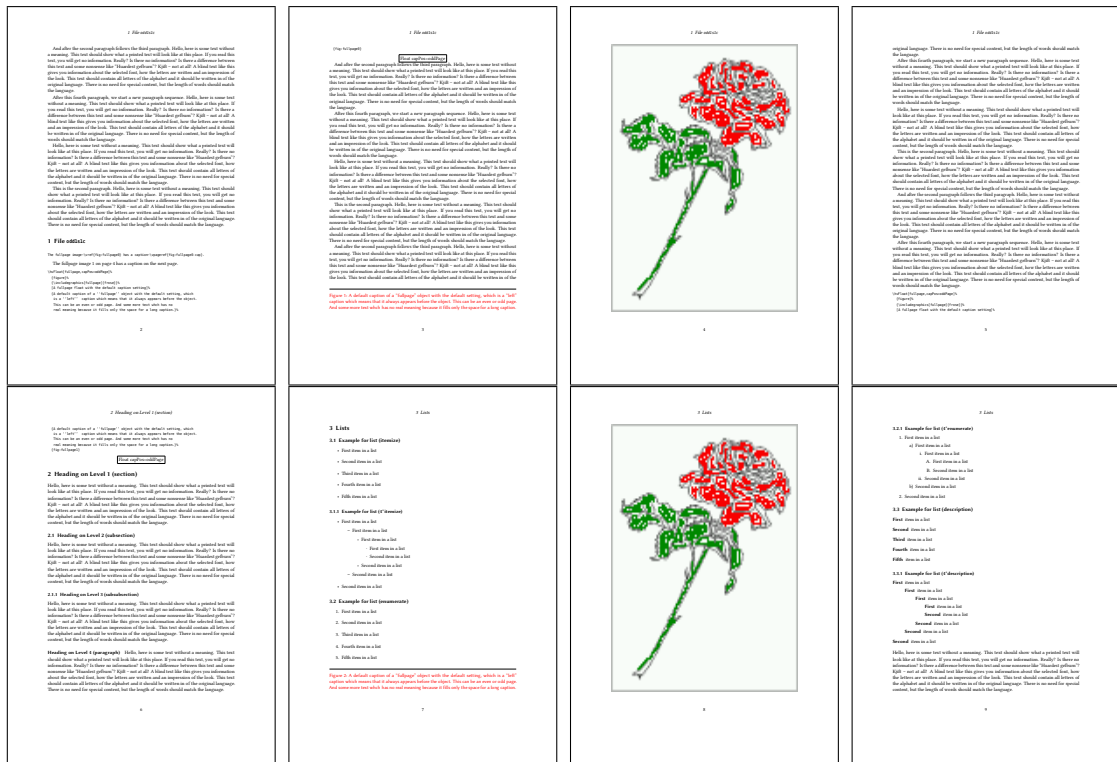


Figure 36: Output of odd1s1c (pages 2–9)

17.1.5 Using capPos=inner or capPos=outer — caption on the inner or outer side

These settings make no sense in onecolumn mode.

17.2 Using the paper size

It belongs to the user to create an object which fills the complete page. However, with the keyword `FULLPAGE` which is valid for `\hvfloat` and for the macro `\includegraphics` an image will be scaled to the paper dimensions `\paperwidth` and `\paperheight`. It can be used in one- and twocolumn mode!

```
\hvfloat[FULLPAGE]%
{figure}%
{\includegraphics[FULLPAGE]{froese.png}}%
[A fullpage float with the default caption setting]%
{A default caption of a "fullpage" object with the default setting, which
is a "left" caption which means that it always appears before the object.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{fig:fullpage0}
```

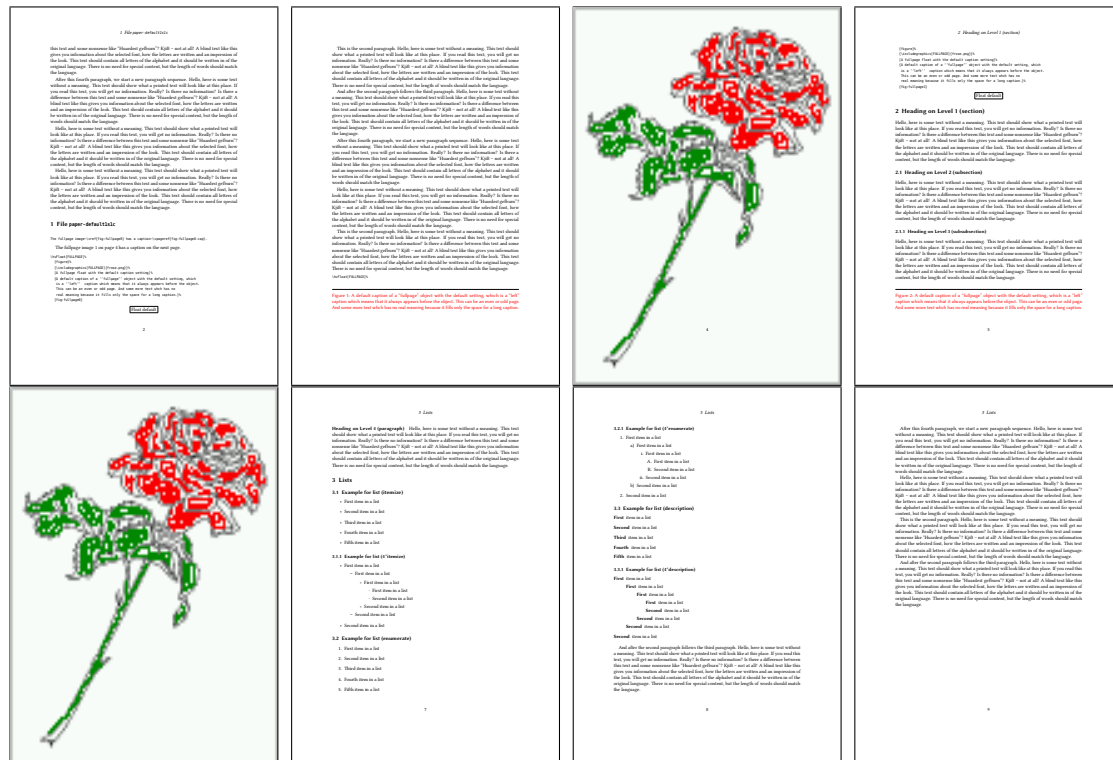


Figure 37: Output of paper-default1s1c (pages 2–9)

17 Full page objects in onecolumn mode

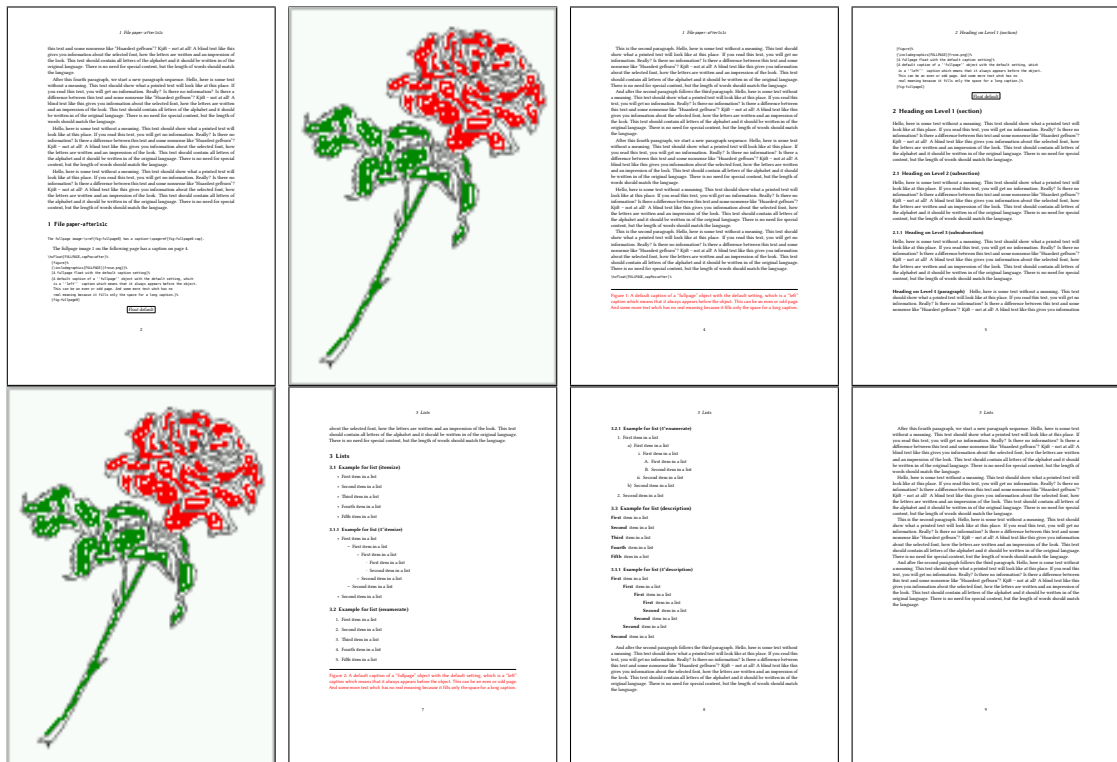


Figure 38: Output of paper-after1s1c (pages 2–9)

17.3 Multifloats

Multifloats is the name for more than one image and/or tabular in *one* floating environment. Every image and/or tabular has its own caption, which is different to a subcaption. The syntax for multiple floats is

```
\hvFloat [Options] +{float type}{floating object} [short caption] {long caption}{label}
+{float type}{floating object} [short caption] {long caption}{label}
+...
+{float type}{floating object} [short caption] {long caption}{label}
```

The + symbol defines an additional Object which will be part of the same floating environment. It's up too the user to be sure that one page or one column can hold all defined objects. Every object gets its own caption which is the reason why figures and tabulars and ... can be mixed:

```
\captionsetup{singlelinecheck=false}
\hvFloat[fullpage,capPos=before,multiFloat,vFill]%
+{figure}\includegraphics[width=\linewidth]{images/CTAN}}%% no 1
[Short caption A]%
{A Caption A of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page. And some more text which has no
```



```

real meaning because it fills only the space for a long caption.}%
%
+{table}{\begin{tabular}{lrcp{3cm}}\hline
                                % no 2
                                Linksbündig & Rechtsbündig & Zentriert & Parbox\\\hline
                                L          & R          & C          & P\\
                                left       & right      & center     & Text with possible linebreaks\\
                                \multicolumn{4}{c}{Multicolumn over all columns}\\\hline
                                \end{tabular}}%
[Short Caption B]%
{A Caption B of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page.}%%
+{figure}{\includegraphics[width=\linewidth]{images/CTAN}}}% no 3
{A Caption C of a "fullpage" object, which follows on the left or
right column.}%

+{figure}{\includegraphics[width=\linewidth]{images/CTAN}}}% no 4
{A Caption C of a "fullpage" object, which follows on the left or
right column.}%


```

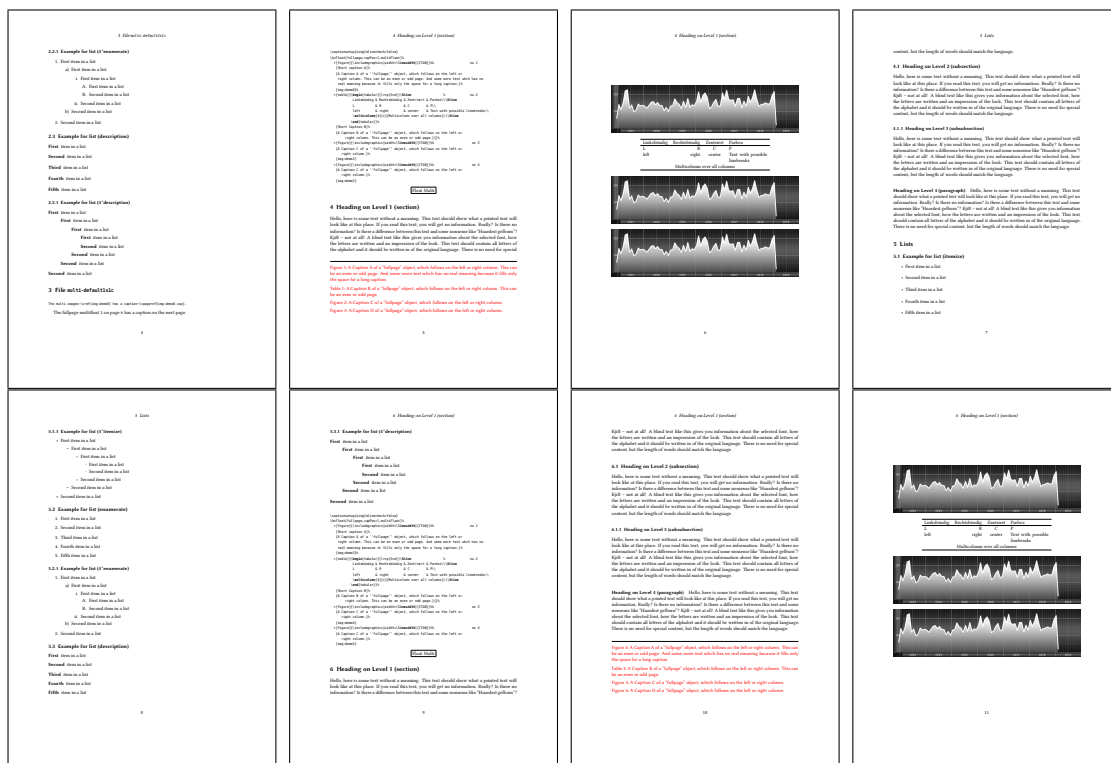


Figure 39: Output of multi-default1s1c (pages 4–11)

The page with the objects has no additional informations it holds only the figures and/or

18 Subfloat page

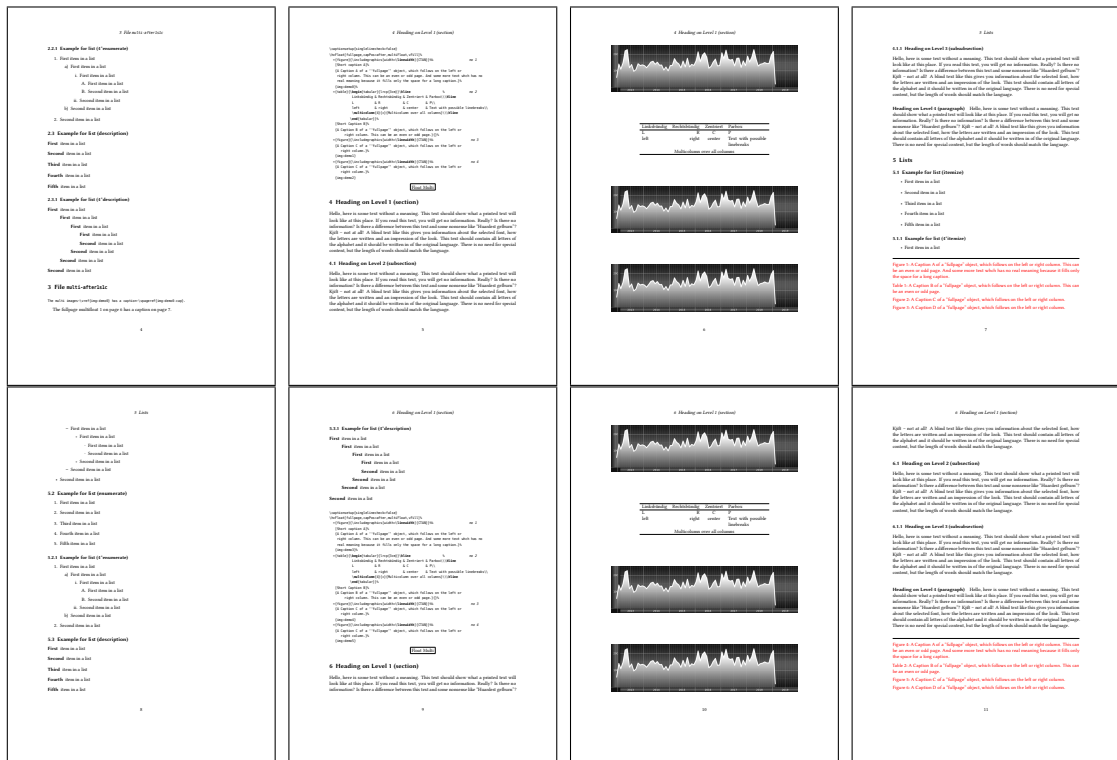


Figure 40: Output of multi-after1s1c (pages 4–11)

tabulars. If you want it like subfigures or subtabulars then go to section 18. The setting `\captionsetup{singlelinecheck=false}` is needed if you want the captions always left aligned.

18 Subfloat page

A subfloat page can have only one type of floats which will have one main caption and individual subcaptions. The syntax is similar to the one for a multifloat page:

```
\hvFloat[Options] +{float type}{<empty>} [short caption] {long caption}{label}
+{<empty>}{floating object} [short caption] {long caption}{label}
+...
+{<empty>}{floating object} [short caption] {long caption}{label}
```

Some arguments are ignored for a subfloat, one can leave them empty. The first line defines only the type and the main caption, the object entry is ignored! All additional lines will have the same float type, the reason why the float type entry is ignored.

```
\hvFloat[fullpage,capPos=before,objectFrame,subFloat,vFill]%
+{figure}{}[Short main caption of the objects]% main short lsi entry
{The main caption of a "fullpage" object, which follows on the left or
```

right column. This can be an even or odd page. And some more text which has no real meaning because it fills only the space for a long caption.}% *main caption*

```
{sub:demo0}%
+{{\includegraphics[width=\linewidth]{images/CTAN}}}%
[Short caption B]%
{A Caption B of a "fullpage" sub object.}% subcaption
}%
+{{\includegraphics[width=\linewidth]{images/CTAN}}}%
{A Caption C of a "fullpage" object, which follows on the left or right column.}%
{sub:demo1}
+{{\includegraphics[width=\linewidth]{images/CTAN}}}%
{A Caption D of a "fullpage" object}{sub:demo2}
+{{\includegraphics[width=\linewidth]{images/CTAN}}}%
{A Caption E of a "fullpage" object}{sub:demo3}
```

The keyword `subFloat` defines the images or tabulars as subfloats. The package `subcaption` is loaded by default and should be activated with `\captionsetup[sub][singlelinecheck]`.

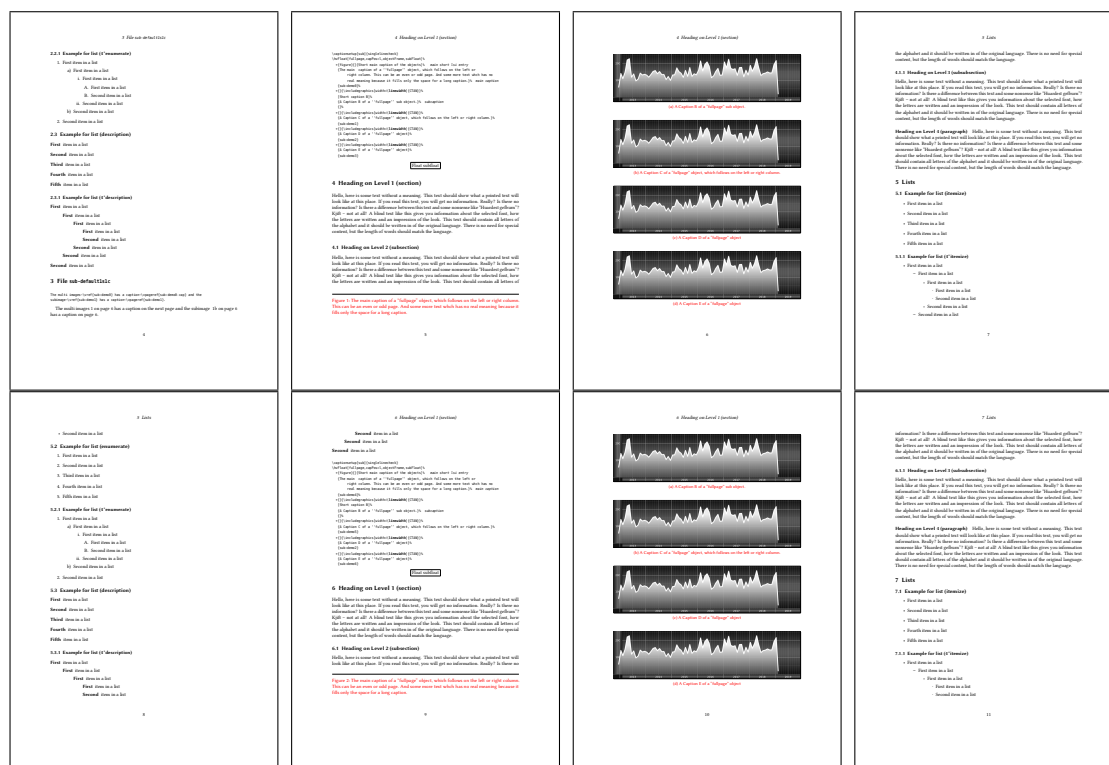


Figure 41: Output of `sub-default1s1c` (pages 4–11)

19 Full page objects in twocolumn mode

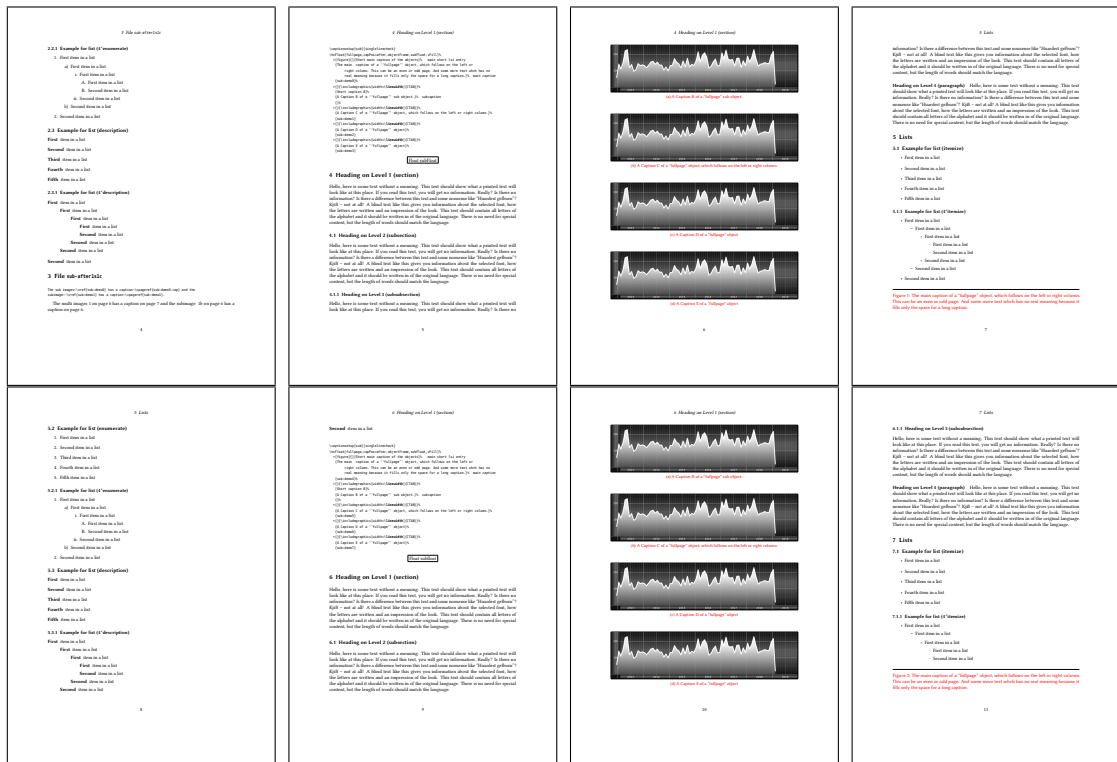


Figure 42: Output of sub-after1s1c (pages 4–11)

19 Full page objects in twocolumn mode

The filenames always have a “2c” for two columns in its names, e.g. left2s2c indicates capPos=before and the documentclass setting twoside and twocolumn. Depending to the used documentclass it can be a problem, if the caption should be placed on the first page of the whole document. In such a case use one of the other setting. Table 8 on page 34 shows the valid optional arguments for a full page floating object.

19.1 Default setting

For the twocolumn mode the caption can be in the left (first) or right (second) column. With the default setting (without using the keyword capPos) it is equivalent to the setting capPos=before, the caption is always placed *before* (left of) the object. This can be the first or the second column and both can be on different pages. With capPos=before (uppercase L) it is possible to get the caption and the object in the twocolumn mode always on one page. This is then the left (first) column for the caption (see figure 43 on the facing page).

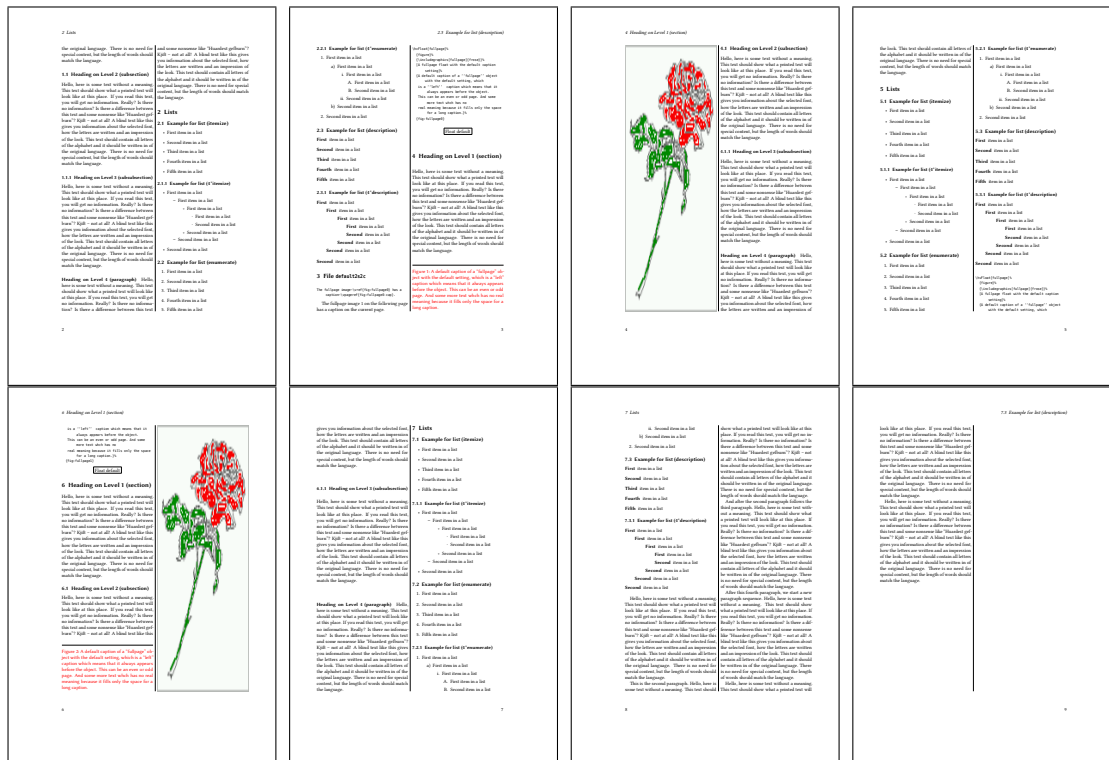


Figure 43: Output of default2s2c (pages 2–9)

```
\hvFloat[fullpage]{figure}%
{\includegraphics[width=\columnwidth,height=0.9\textheight]{images/rose}}%
[A float which needs the complete column width and height.]%
{A Caption of a “fullpage” object, which follows on the next column.
This is always the right column on an even or odd page. And some more
text which has no real meaning because it fills only the space for a long
caption.}%
{fig:fullpage0-2}
```

The example 43 shows that the caption and the object can be on different pages. If you do not like this behaviour, then use the setting `capPos=left`, which puts the caption before the object, but always on the *same page* (see Figure 44 on the following page).

19.1.1 Using `capPos=after`

The caption will be printed always right of the object which is the same as *after* the full page object. With `capPos=after` it is possible to get the caption in the twocolumn mode always in the right (second) column (see figure 46 on page 48)

```
\hvFloat[fullpage, capPos=after]{figure}%
{\includegraphics[fullpage]{images/rose}}%
```

19 Full page objects in twocolumn mode

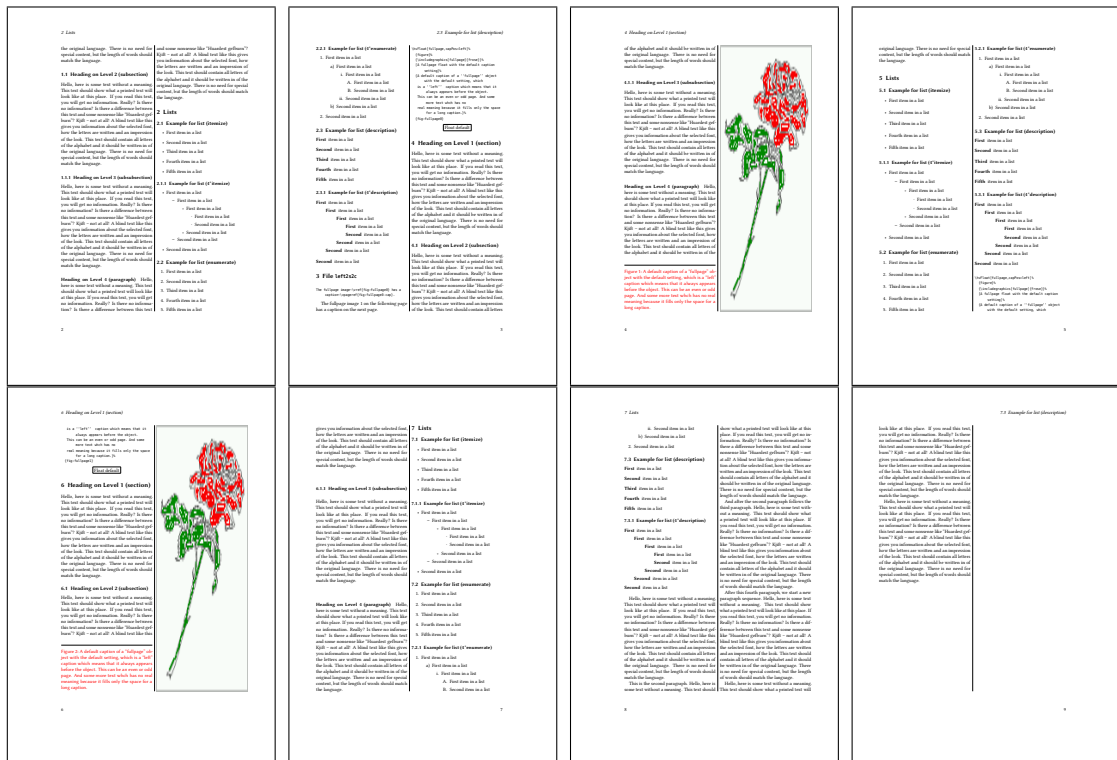


Figure 44: Output of left2s2c (pages 2–9)

[A float which needs the complete column width and height.]%
 {A Caption of a “fullpage” object, which is on the left column.
 This is always the right column on an even or odd page. And some more
 text which has no real meaning because it fills only the space for a long
 caption.}%
 {fig:fullpage1-2}

The caption and the object can be on different pages (Figure 45 on the facing page). If you do not like this behaviour, then use the setting capPos=right instead of capPos=after . Figure right2s2c shows that caption and object in this case are always on the same page.

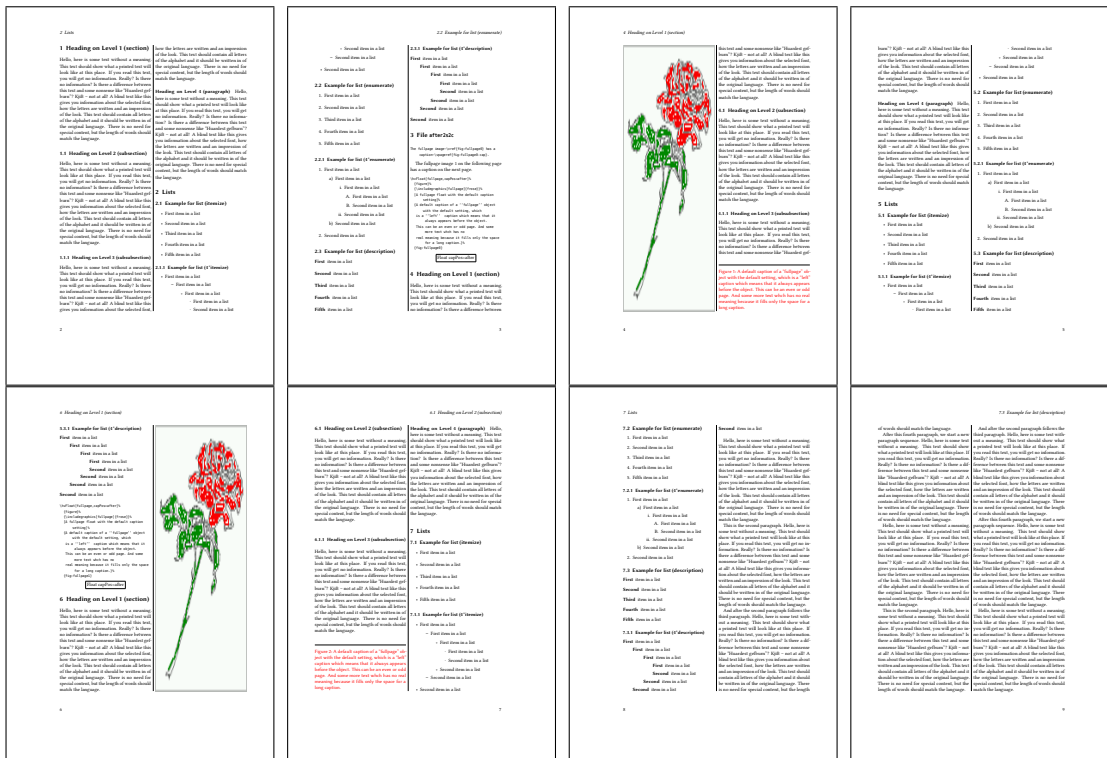


Figure 45: Output of after2s2c (pages 2–9)

19 Full page objects in twocolumn mode

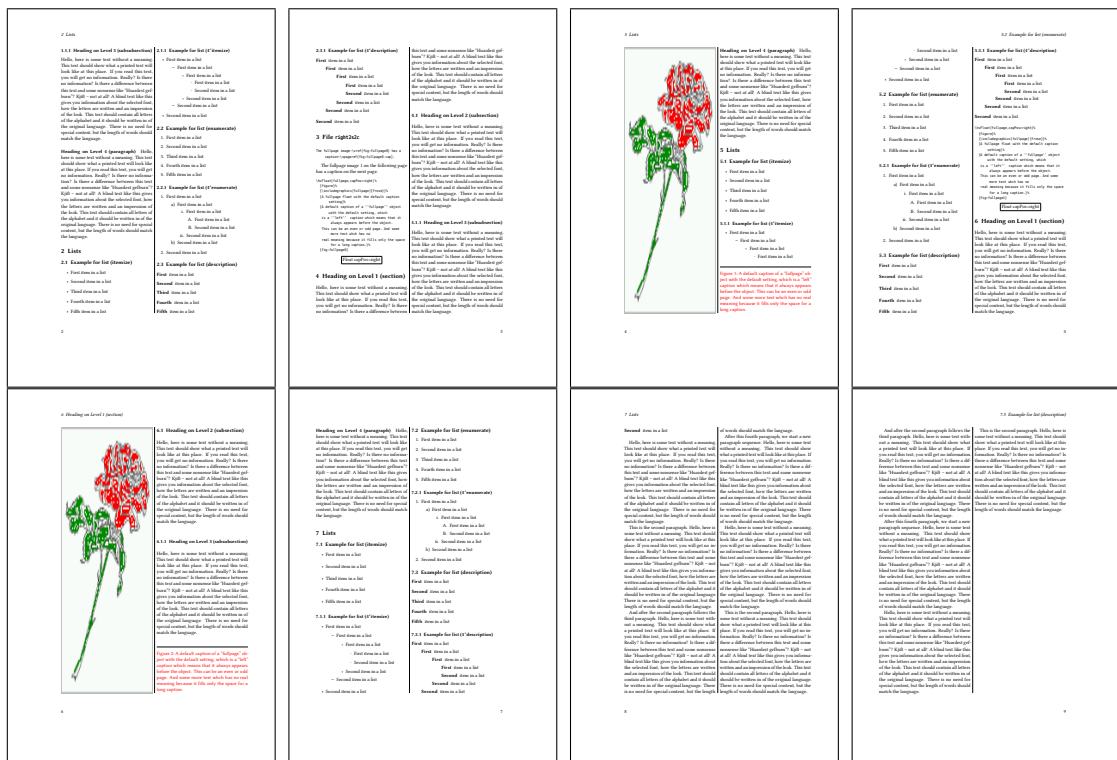


Figure 46: Output of right2s2c (pages 2–9)

19.1.2 Using capPos=evenPage — caption on an even page

There can be a problem if there is not enough space on the bottom of the even page. Then the caption will be on the next page which is an odd one. In such a case use a manually `\clearpage` or wait for an update of `hvfloat`.

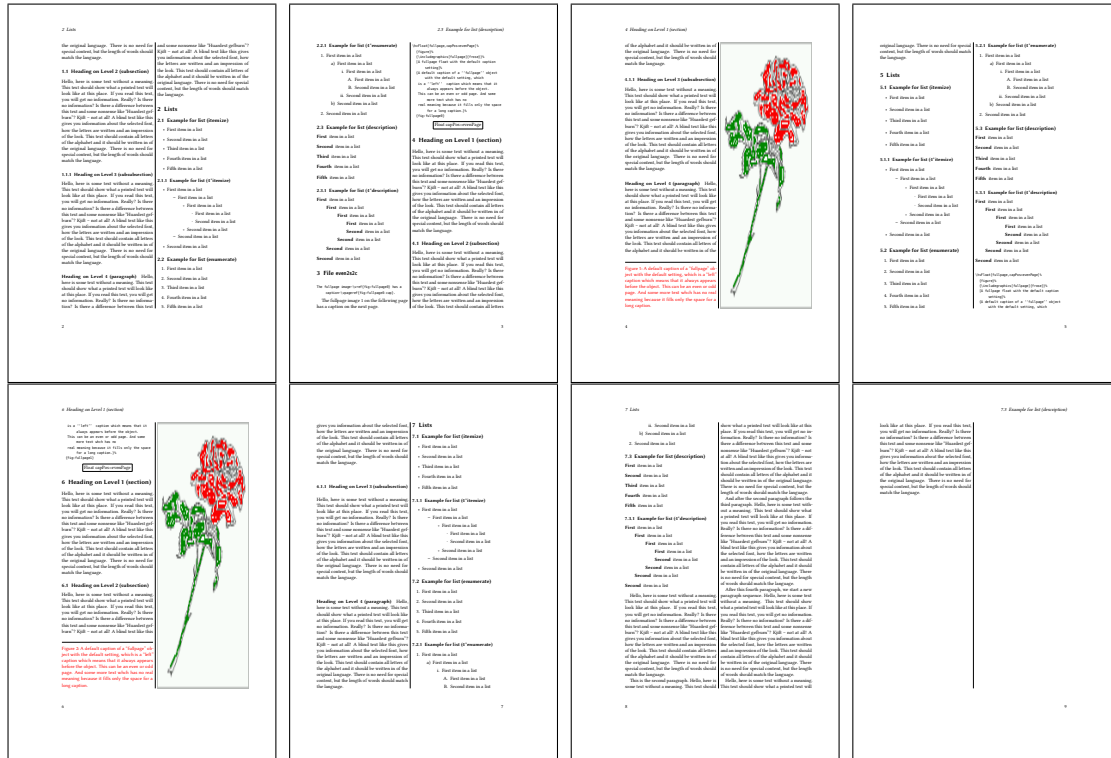


Figure 47: Output of even2s2c (pages 2–9)

19 Full page objects in twocolumn mode

19.1.3 Using capPos=oddPage — caption on an odd page

There can be a problem if there is not enough space on the bottom of the even page. Then the caption will be on the next page which is an odd one. In such a case use a manually `\clearpage` or wait for an update of `hvfloat`.

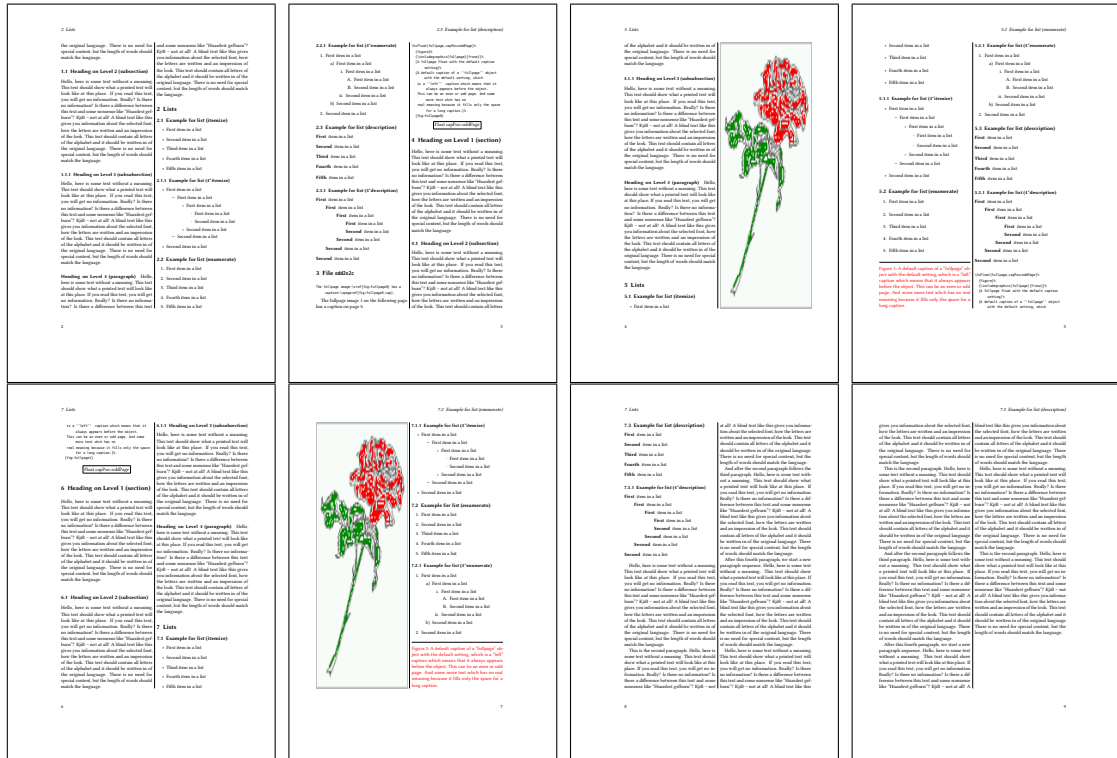


Figure 48: Output of odd2s2c (pages 2–9)

19.1.4 Using capPos=inner — caption in the inner column

The caption will be printed in the right column for an even page and in the left column for an odd page.

```
\hvFloat[fullpage,capPos=inner]{figure}{\includegraphics[fullpage]{images/rose}}%
[A float which needs the complete column width and height.]%
{A Caption of a "fullpage" object, which follows on the left or right column.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}{fig:fullpage3-2}
```

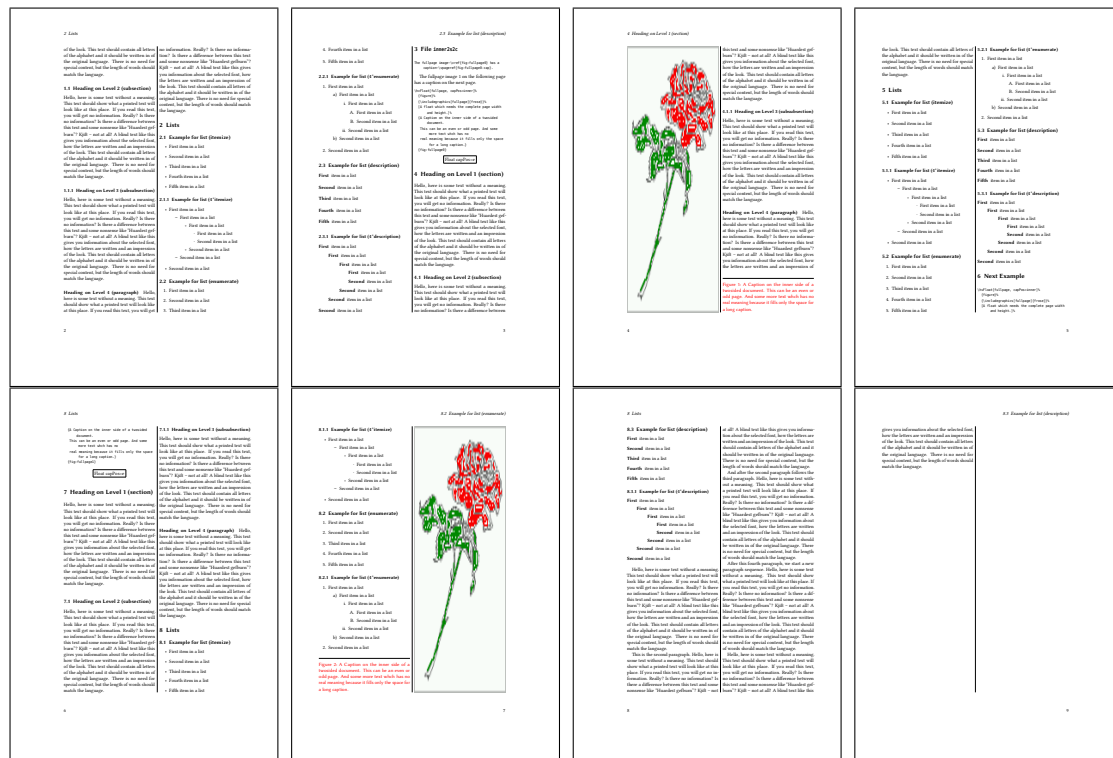


Figure 49: Output of inner2s2c (pages 2–9)

19 Full page objects in twocolumn mode

19.1.5 Using capPos=outer — caption on the outer column

The caption will be printed on the left column an odd page, the object can appear before or after this caption.

```
\hvFloat[fullpage, capPos=outer]{figure}%
{\includegraphics[fullpage]{images/rose}}%
[A float which needs the complete page width and height with \texttt{capPos=outer}.]%
{A Caption of a “fullpage” object, which has the caption position in the
outer page. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}{fig:fullpage2-2a}
```

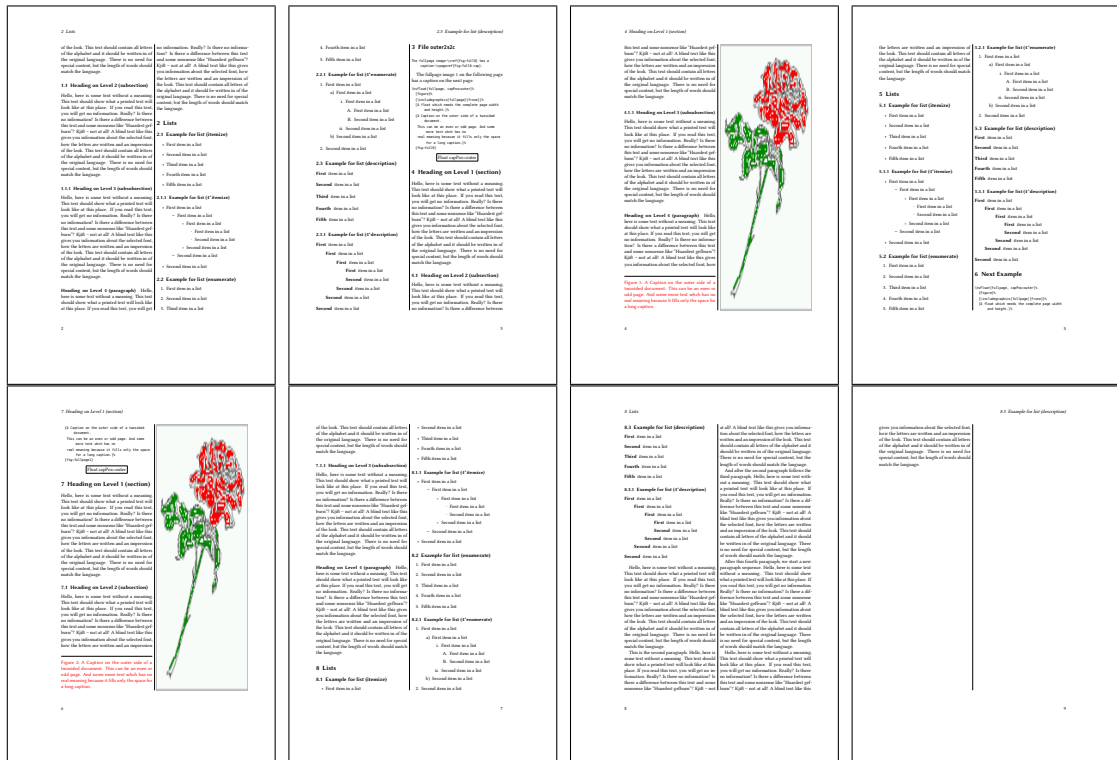


Figure 50: Output of outer2s2c (pages 2–9)

19.2 Using full page in twocolumn mode

With the star version of `\hvfloat` The object is placed over both columns, the whole page. In such a case the only useful caption position is `capPos=inner` for *inner*.

```
\hvfloat*[fullpage, capPos=inner]{figure}%
{\includegraphics[FullPage]{images/rose}}%
[A float which needs the complete page width and height with \texttt{capPos=outer}.]%
{A caption of a "fullpage" object in twocolumn mode: It uses the star version
of \textbackslash hvfloat. The object goes over both columns.}{fig:two}
```

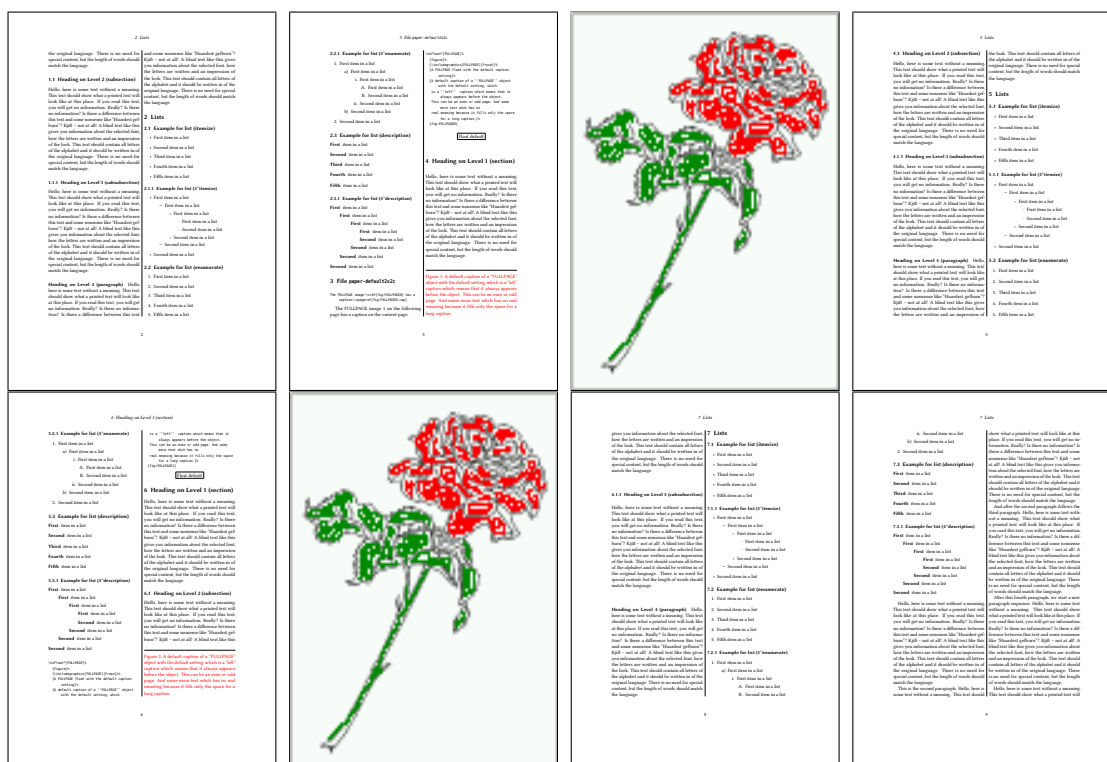


Figure 51: Output of paper-default2s2c (pages 2–9)

19 Full page objects in twocolumn mode

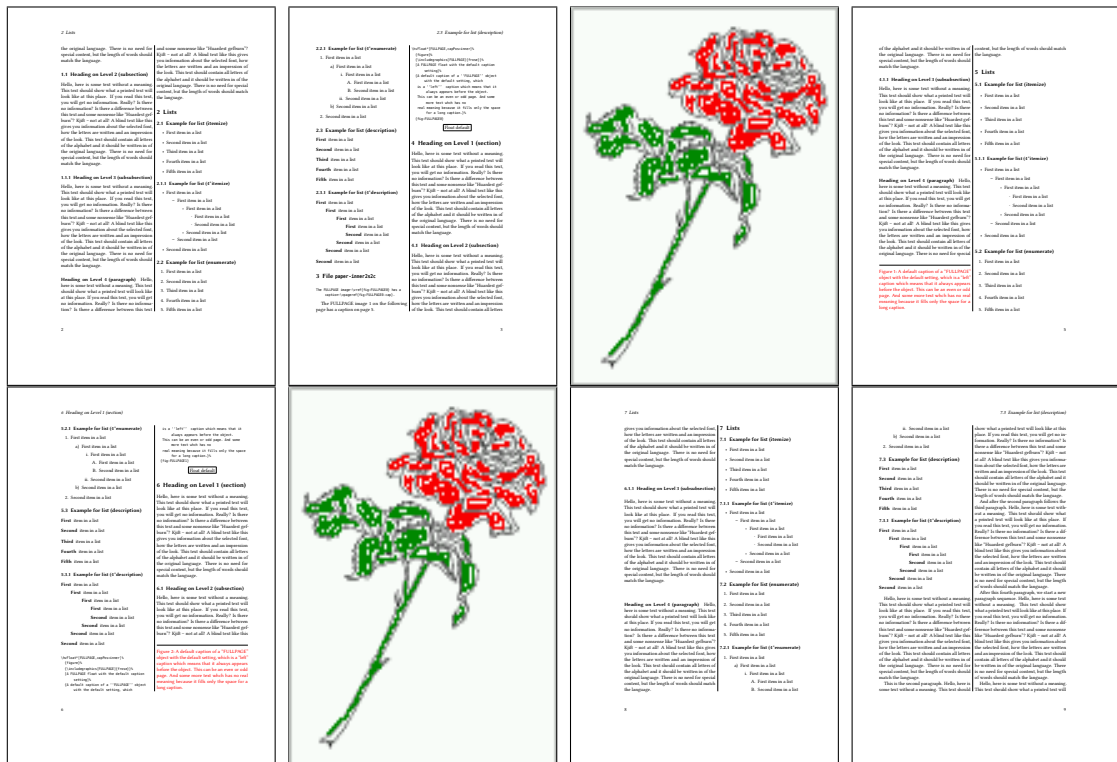


Figure 52: Output of paper-inner2s2c (pages 2–9)

19.3 Multifloats

Multifloats is the name for more than one image and/or tabular in *one* floating environment. Every image and/or tabular has its own caption, which is different to a subcaption. The + symbol defines an additional Object which will be part of the same floating environment. It's up too the user to be sure that one page or one column can hold all defined objects. Every object gets its own caption which is the reason why figures and tabulars and ... can be mixed:

```
\captionsetup{singlelinecheck=false}
\hvFloat[fullpage,multiFloat,capPos=inner,vFill]%
+{figure}{\includegraphics[height=0.4\textheight]{images/rose}}% no 1
[Short caption A]%
{A Caption A of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{multi:demo0}%
+{table}{\begin{tabular}{lr}\hline
Linksbündig & Rechtsbündig\\
L & R \\
left & right \\
\multicolumn{2}{c}{Multicolumn}\hline
\end{tabular}}
```

```

\end{tabular}}%
[Short Caption B]%
{A Caption B of a “fullpage” object, which follows on the left or
right column. This can be an even or odd page.}%
}%
+{figure}{\includegraphics[height=0.4\textheight]{images/rose}}%% no 3
{A Caption C of a “fullpage” object, which follows on the left or
right column.}%
{multi:demol}

```

The page with the objects has no additional informations it holds only the figures and/or tabulars. If you want it like subfigures or subtabulars then go to section 18 on page 42. The setting `\captionsetup{singlelinecheck=false}` is needed if you want the captions always left aligned.

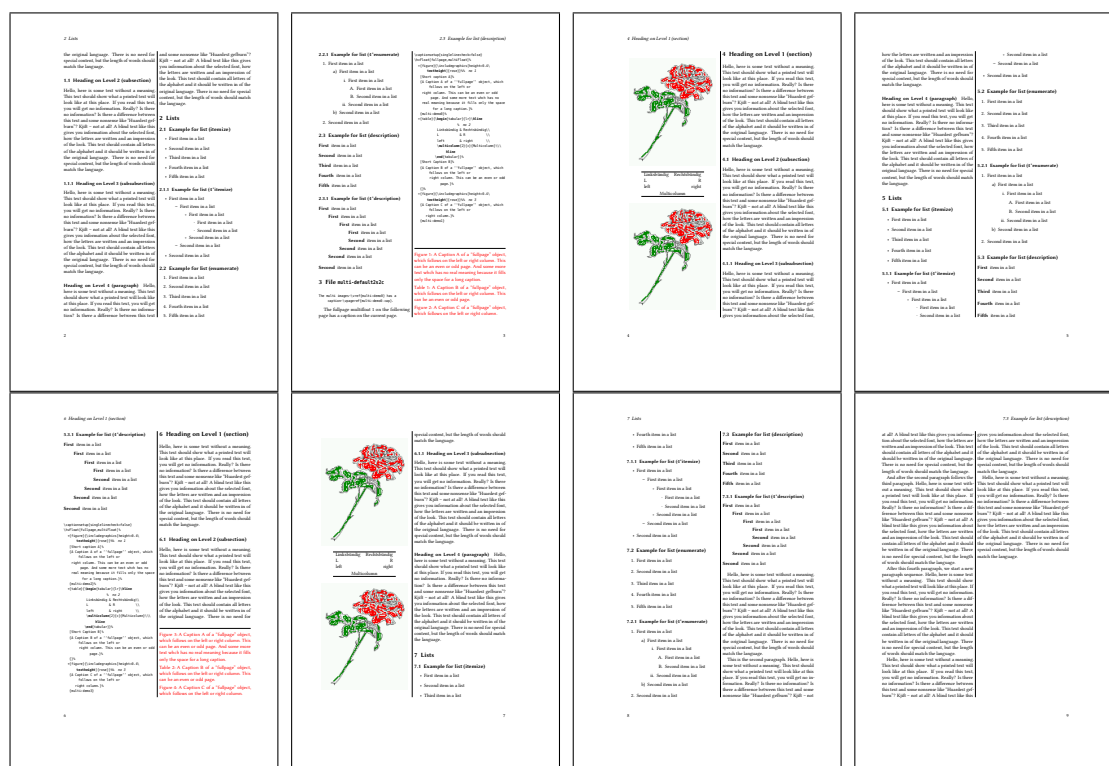


Figure 53: Output of multi-default2s2c (pages 2-9)

20 Subfloat page

A subfloat page can have only one type of floats which will have one main caption and individual subcaptions. Some arguments are ignored for a subfloat, one can leave them empty. The first line defines only the type and the main caption, the object entry is ignored! All additional lines will have the same float type, the reason why the float type entry is ignored.

20 Subfloat page

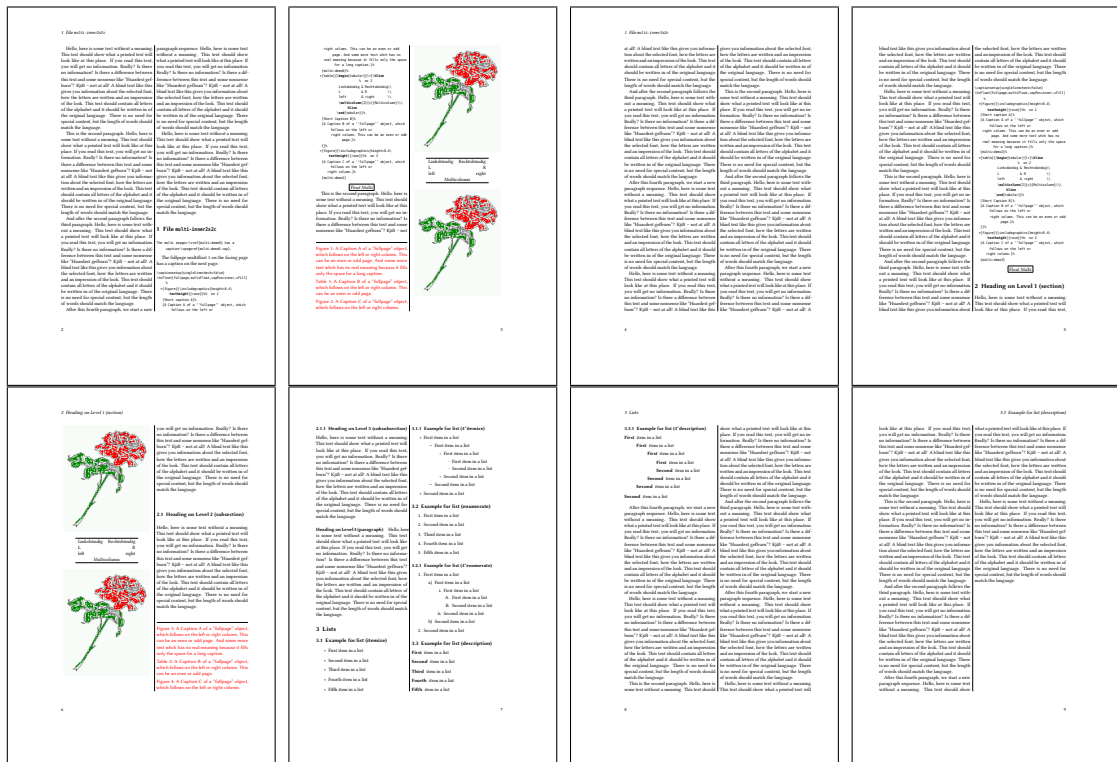


Figure 54: Output of multi-inner2s2c (pages 2-9)

```
\captionsetup[sub]{singlelinecheck}
\hvFloat[fullpage, capPos=before, objectFrame, subFloat, vFill]%
+{{figure}}[Short main caption of the objects]% main short lsi entry
{The main caption of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}% main caption
{sub:demo00}%
+{{\includegraphics[height=0.28\textheight]{images/rose}}}%
[Short caption B]%
{A Caption B of a "fullpage" sub object.}% subcaption
}%
+{{\includegraphics[height=0.28\textheight]{images/rose}}}%
{A Caption C of a "fullpage" object, which follows on the left or right column.}%
{sub:demo10}
+{{\includegraphics[height=0.28\textheight]{images/rose}}}%
{A Caption D of a "fullpage" object}%
{sub:demo20}
```

The keyword subFloat defines the images or tabulars as subfloats. The package subcaption is loaded by default. For the subcaptions the singlelinecheck should be true (see listing).

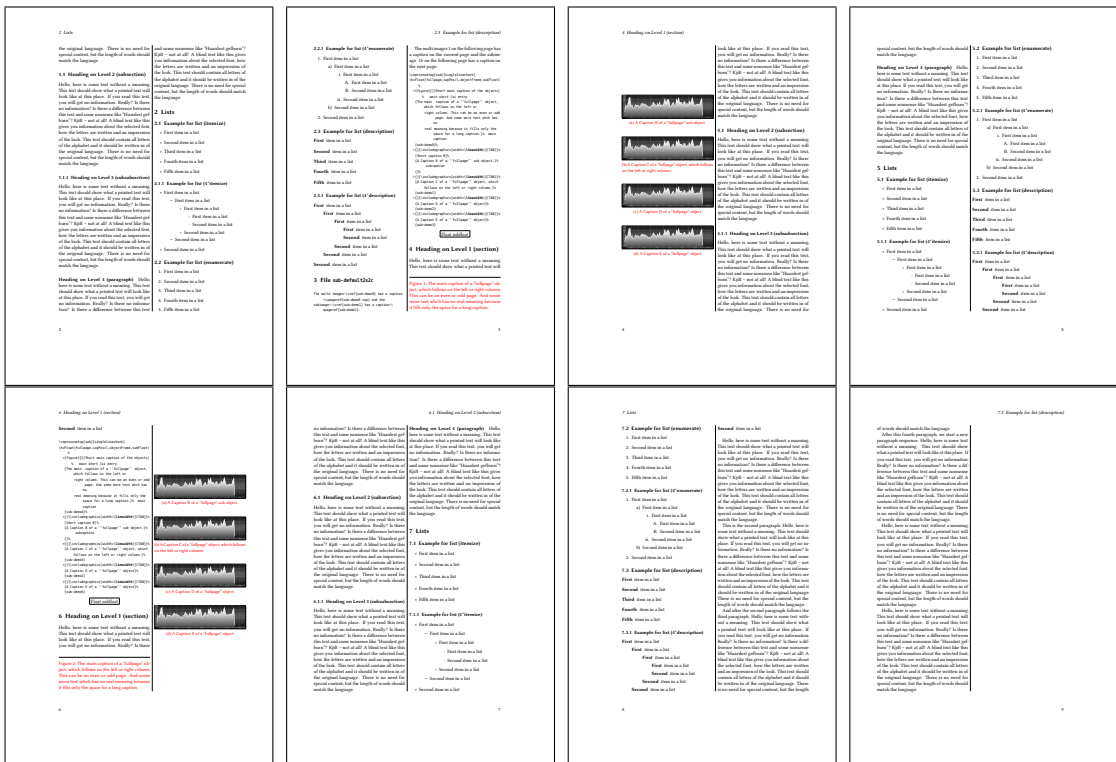


Figure 55: Output of sub-default2s2c (pages 2–9)

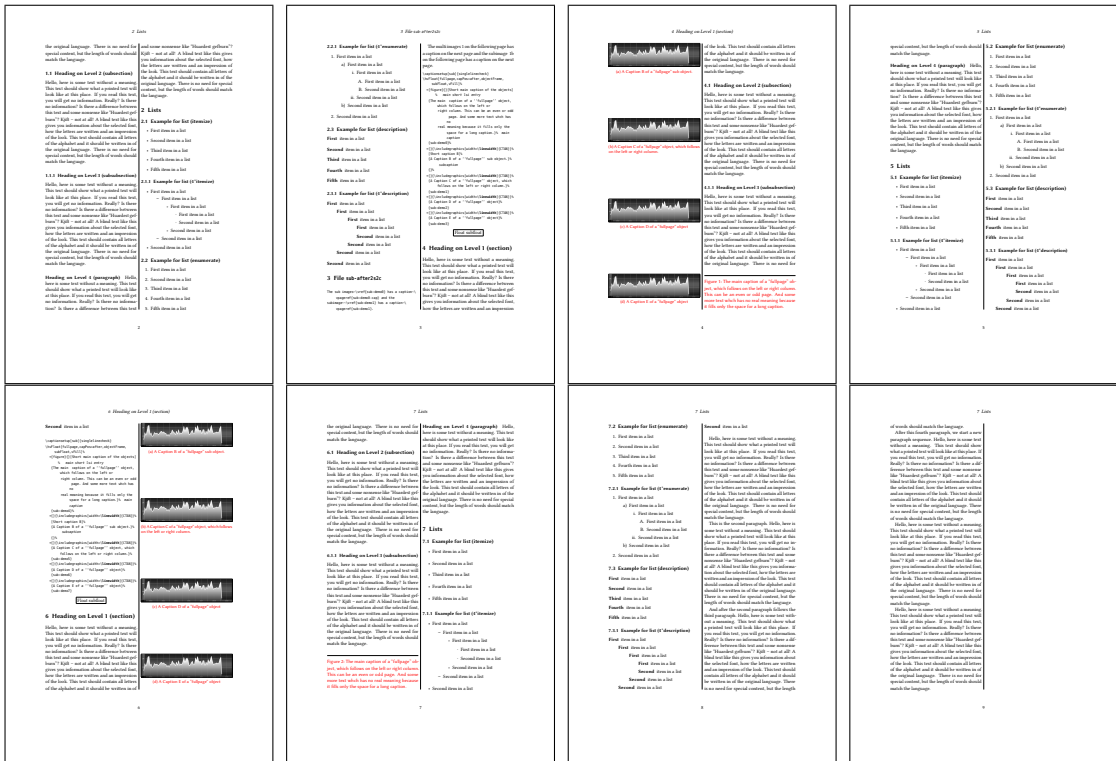


Figure 56: Output of sub-after2s2c (pages 2–9)

21 Doublepage objects – images and/or tabulars

If an image or a tabular or any other object is too big for one page, it can be split over two pages (left – right). It is obvious that this makes only sense for twoside documents. There are three optional arguments:

doublePage A splitted object with or without a caption on top of a double page, beginning in the left top text area. The user has to scale the image to be sure that the object will not be greater than $2\backslash\text{paperwidth}-4\backslash\text{margin}$. The caption can be rotated on the right side of the right object part or under the right part.

doublePAGE A splitted object with or without a caption on top of a double page, beginning at the left side of the paper area and top of the text area. The user has to scale the image to be sure that the object will not be greater than $2\backslash\text{paperwidth}$. The caption can only be under the right part of the object. The will be *no additional text* on the double page.

doubleFULLPAGE A splitted object with or without a caption on the right or below of a double page. The object can fill the complete double page. The user has to scale the image to be sure that the object will not be greater than $2\backslash\text{paperwidth}$. A caption will be rotated and written *over* the object, or if possible, at the right. The user has to take care for a correct text color.

21.1 doubleFULLPAGE

The scaling of the image is left to the user. If the proportion of the object doesn't fit $2*\text{paperwidth}/\text{paperheight}$, then there can be a white part on the top or bottom of the object. A pagenumber will not be printed. In this documentation you'll find a marginnote where the following full doublepage image is defined. It appears on the the next following even page and following text will be placed *before* the object.

```
\hvFloat[doubleFULLPAGE,capPos=right,capAngle=90]%
{figure}%
{\includegraphics[angle=90,width=2\paperwidth]{images/r+j}}%
[A doublepage image with a caption on the image.]%
{A caption for a double-sided image that will be placed below the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}%
{fig:doubleFULLPAGE0}
```

Fig. 57 Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the





Figure 57: A caption for a double-sided image that will be placed on the right-hand part of the illustration. The illustration begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE

21 Doublepage objects – images and/or tabulars

original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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It is also possible to take a bind correction into account with e.g. `binCorr=5mm`, which reserves whitespace of 5mm in the inner margin on both pages.

```
\hvFloat[doubleFULLPAGE,capPos=right,bindCorr=5mm]%
{figure}%
{\includegraphics[angle=90,width=2\paperwidth]{images/r+j}}%
[A doublepage image with a caption on the image.]%
{A caption for a double-sided image that will be placed below the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}%
{fig:doubleFULLPAGE0a}
```

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Fig. 58





Figure 58: A caption for a double-sided image that will be placed on the right-hand part of the illustration. The illustration begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE

21 Doublepage objects – images and/or tabulars

content, but the length of words should match the language.

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```
\hvFloat[doubleFULLPAGE,capPos=right]%
{figure}%
{\includegraphics[height=\paperheight]{images/rheinsberg}}%
{A caption for a double-sided image that will be placed on the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}%
{fig:doubleFULLPAGE1}
```

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fig. 59

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Figure 59: A caption for a double-sided image that will be placed on the right-hand part of the illustration. The illustration begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE

21 Doublepage objects – images and/or tabulars

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Placing the caption on the image itself is not the best solution. With the optional arguments before and after for capPos, the caption can be placed on the bottom of the preceding or following page of the doublepage object. A givel label, e.g. foo will always point to the page with the left part of the object. Internally are two additional labels defined: foo-cap points to the caption and foo-2 points to the right part of the doublepage object.

In the follwoing example 60 the caption is on page 74, the left image part on page 72 and the right part on page 73. In the follwoing example 61 the caption is on page 75, the left image part on page 76 and the right part on page 77. All three labels points to the same figure or table number:

```
\ref{foo} | \ref{foo-cap} | \ref{foo-2} → 60 | 60 | 60
\pageref{foo} | \pageref{foo-cap} | \pageref{foo-2} → 72 | 74 | 73

\hvFloat[doubleFULLPAGE,capPos=after]%
{figure}%
{\includegraphics[doubleFULLPAGE,
  keepaspectratio=false]{images/rheinsberg}}%
{A caption for a double-sided image that will be placed before
the image. The image begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}%
{foo}
```

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Fig. 60





information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no

Figure 60: A caption for a double-sided image that will be placed before the image. The image begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE

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```
\hvFloat[doubleFULLPAGE,capPos=before]%
{figure}%
{\includegraphics[height=\paperheight,width=2\paperwidth,
  keepaspectratio=false]{images/rheinsberg}}%
{A caption for a double-sided image that will be placed after
  the image. The image begins on the left edge of the paper.
  No further text is placed on the pages. A short form is used for the LOF.
  The parameter is \texttt{doubleFULLPAGE}}%
{bar}
```

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Fig. 61

Figure 61: A caption for a double-sided image that will be placed after the image. The image begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE





21 Doublepage objects – images and/or tabulars

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21.2 doublePAGE

With this option the object also starts at the left paper margin but on the top of the text area. There will be pagenumbers and a caption can be rotated on the right of the object or under it.

```
\hvFloat[doublePAGE]%
{figure}%
{\includegraphics[width=\dimexpr2\textwidth+2in]{images/seiser}}%
[A doublepage image with a caption below the right part.]%
[A caption for a double-sided image that will be placed below the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doublePAGE}}%
{fig:doublePAGE0}
```

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fig. 62





Figure 62: A caption for a double-sided image that will be placed below the right-hand part of the illustration. The illustration begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doublePAGE

21 Doublepage objects – images and/or tabulars

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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21.3 doublePage

With this option the object also starts at the left top of the text area. There will be pagenumbers and a caption can be rotated on the right of the object or under it and the rest of the text area is filled with text.

```
\hvFloat[doublePage,capWidth=n,capPos=right]%
{figure}%
{\includegraphics[width=2\textwidth]{images/sonne-meer}}%
[A doublepage image with a caption on the right side of the right part.]%
{A caption for a double-sided image that will be placed on the right side of the
right-hand part of the illustration. The illustration begins on the left edge of
the paper. A short form is used for the LOF.
The parameter is \texttt{doublePage}}%
{fig:doublePage0}
```

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how

Fig. xyz



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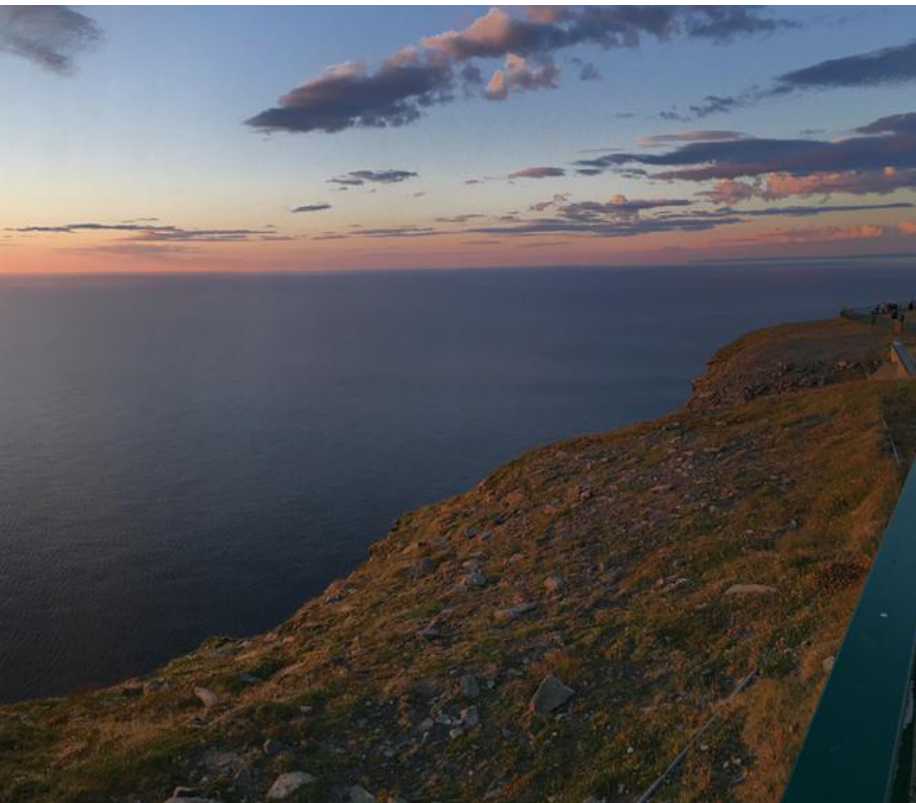


Figure 63: A caption for a double-sided image that will be placed on the right side of the right-hand part of the illustration. The illustration begins on the left edge of the paper. A short form is used for the LOF. The parameter is doublePage

you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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21 Doublepage objects – images and/or tabulars

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21.4 Tabulars

In General there is no difference in an image or tabular or simple text. The object will be saved in a box and then clipped. If the object is a tabular one might modify the tabular if it will be split in the middle of a column. In such a case one can insert some additional horizontal space for this column.

The tabular itself can be saved into the internal box \hv0Box or put directly as parameter into the macro.

```
\global\savebox\hv0Box{%
\begin{tabular}{l*{18}r} \toprule
& \textbf{1972} & \textbf{1973} & \textbf{1974} & \textbf{1975} & \textbf{1976}
& \textbf{1977} & \textbf{1978} & \textbf{1979} & \textbf{1980} & \textbf{1981} & \textbf{1982} & \textbf{1983} & \textbf{1984} & \textbf{1985}
& \textbf{1986} & \textbf{1987} & \textbf{1988} & \textbf{1989}
\\ \midrule
\addlinespace[3pt]
Zeile 1 & 1 & 1 & 3 & 1 & 1 & 1 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 20 & 0 & 2 & 2 & 2 & 1 \\ \addlinespace[3pt]
Zeile 2 & 1 & 1 & 3 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 2 & 1 & 3 & 4 & 4 & 6 & 4 & 2 \\ \addlinespace[3pt]
Zeile 3 & 2 & 1 & 2 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 5 & 3 & 1 & 7 & 7 & 3 \\ \addlinespace[3pt]
Zeile 4 & 1 & 0 & 5 & 1 & 2 & 0 & 0 & 0 & 0 & 0 & 2 & 1 & 0 & 1 & 0 & 3 & 7 & 2 & 1 \\ \addlinespace[3pt]
Zeile 6 & 2 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 2 & 0 & 5 & 2 & 2 & 5 & 4 & 2 \\ \addlinespace[3pt]
Zeile 5 & 0 & 0 & 4 & 2 & 1 & 2 & 2 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 2 & 5 & 4 & 3 \\ \addlinespace[3pt]
Zeile 8 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 3 & 2 & 1 & 2 & 1 & 3 & 5 & 3 & 4 \\ \addlinespace[3pt]
Zeile 9 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 2 & 1 & 0 & 0 & 0 & 0 & 4 & 2 & 1 & 4 & 5 & 2 \\ \addlinespace[3pt]
Zeile10 & 0 & 1 & 3 & 0 & 1 & 0 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 1 & 1 & 1 & 4 & 4 & 1 \\ \addlinespace[3pt]
Zeile11 & 0 & 2 & 2 & 1 & 1 & 0 & 1 & 0 & 0 & 0 & 0 & 2 & 6 & 1 & 0 & 2 & 1 & 1 \\ \addlinespace[3pt]
Zeile12 & 2 & 0 & 2 & 4 & 1 & 0 & 4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 3 \\ \addlinespace[3pt]
Lärm & 2 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 2 & 0 & 0 & 2 & 2 & 2 \\ \addlinespace[3pt]
Zeile13 & 0 & 1 & 0 & 0 & 1 & 0 & 3 & 0 & 0 & 0 & 0 & 2 & 0 & 1 & 3 & 0 & 2 \\ \addlinespace[3pt]
Zeile14 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 2 & 1 & 1 & 0 \\ \addlinespace[3pt]
Zeile15 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 4 & 0 & 0 & 3 & 1 & 1 \\ \addlinespace[3pt]
Zeile16 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 5 & 0 & 1 \\ \addlinespace[3pt] \midrule
Artikel gesamt & 2 & 6 & 13 & 8 & 4 & 3 & 5 & 4 & 0 & 6 & 3 & 5 & 23 & 10 & 8 & 15 & 13 & 1 \\
\\ \bottomrule
\end{tabular}}
```

\Blindtext

```
\hvFloat[doublePage,capWidth=n,capPos=right,capVPos=top]%
{table}%
{\usebox\hv0Box}%%%%%%%%%%
[A doublepage tabular with a caption on the right side of the right part.]%
[A caption for a double-sided tabular that will be placed on the right side of the
right-hand part of the illustration. The illustration begins on the left edge of
the paper. A short form is used for the LOF.
The parameter is \texttt{doublePage}]%
{tab:doublePage3}
```

Tab. 9

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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21 Doublepage objects – images and/or tabulars

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Zeile 1	1	3	1	1	1	0	1	1	0	0	0	0
Zeile 2	1	1	3	1	0	0	0	0	0	0	2	1
Zeile 3	2	1	2	1	0	0	0	0	0	0	0	1
Zeile 4	1	0	5	1	2	0	0	0	0	2	1	0
Zeile 6	2	1	1	0	0	0	0	0	0	1	2	0
Zeile 5	0	0	4	2	1	2	2	1	0	0	0	1
Zeile 8	0	1	1	0	0	0	1	1	0	3	2	1
Zeile 9	0	0	0	0	0	1	2	1	0	0	0	0
Zeile10	0	1	3	0	1	0	1	0	0	1	1	0
Zeile11	0	2	2	1	1	0	1	0	0	0	0	2
Zeile12	2	0	2	4	1	0	4	0	0	0	0	0
Lärm	2	3	0	0	0	0	0	0	0	0	1	0
Zeile13	0	1	0	0	1	0	3	0	0	0	0	0
Zeile14	0	1	0	0	0	0	0	0	0	0	0	0
Zeile15	0	0	0	0	0	0	0	0	0	1	0	0
Zeile16	0	0	0	0	0	1	0	0	0	0	0	0
Artikel gesamt	2	6	13	8	4	3	5	4	0	6	3	5

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1984	1985	1986	1987	1988	1989
20	0	2	2	2	1
3	4	4	6	4	2
5	3	1	7	7	3
1	0	3	7	2	1
5	2	2	5	4	2
1	0	2	5	4	3
2	1	3	5	3	4
4	2	1	4	5	2
1	1	1	4	4	1
6	1	0	2	1	1
0	0	0	1	0	3
2	0	0	2	2	2
2	0	1	3	0	2
3	3	2	1	1	0
4	0	0	3	1	1
0	0	3	5	0	1
23	10	8	15	13	1

Table 9: A caption for a double-sided tabular that will be placed on the right side of the right-hand part of the illustration. The illustration begins on the left edge of the paper. A short form is used for the LOF. The parameter is doublePage

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22 References to the page

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22 References to the page

With the command `\pageref` one can have a reference to the page number of a caption. For the `fullpage` option this can be the wrong page if someone wants a refence to the page where the object is set. Let’s assume that we use something like

```
\hvFloatSetDefaults
\hvFloat[fullpage,capPos=evenPage]{figure}%
  {\IncludeGraphics{images/frose}}%
  [A float which needs the complete paper width and height.]%
  {A Caption of a ‘‘fullpage’’ object, which follows on the next page.
   This can be an even or odd page. The object uses the complete paper dimensions}%
  {demo:fullpage}
```

The label `demo:fullpage` is used for the *image* and not for the caption! Internally another label called `demo:fullpage-cap` is set on the caption page which can be before or behind the object (depending to the optional argument of `capPos`). For example:

The caption of figure~\ref{demo:fullpage-cap} is on page~\pageref{demo:fullpage-cap}, but the image itself is on page~\pageref{demo:fullpage}.

The caption of figure 65 is on page 95, but the image itself is on page 96. With package `varioref` it is:

With the package `\pack{varioref}` ([\url{https://ctan.org/pkg/varioref}](https://ctan.org/pkg/varioref)) one can get something like: see figure~\vref{demo:fullpage}, which uses a ^correct page number of the float object and not the caption page number which is~\vpageref{demo:fullpage-cap}. The figure~\ref{demo:fullpage} is on page~\pageref{demo:fullpage} and the caption on page~\pageref{demo:fullpage-cap}

With the package `varioref` (<https://ctan.org/pkg/varioref>) one can get something like: see figure 65 on page 96, which uses a correct page number of the floating object and not the caption pagenummer which is on page 95. The figure 65 is on page 96 and the caption on page 95

23 Defining a style

With `\hvDefFloatStyle` one can define a special style to get rid of the individual setting:

```
\hvDefFloatStyle{name}{setting}
```

For example:

```
\hvDefFloatStyle{RightCaption}{floatPos=htb, capWidth=0.5, capPos=after, capVPos=bottom, objectPos=center}
```

```
\hvFloat[style=RightCaption]{figure}{\includegraphics{images/rose}}%
{Caption vertically centered right beside the float with a caption width of
\texttt{0.5\textbackslash columnwidth}.}{fig:style}
```

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Figure 64: Caption at bottom right beside the float with a caption width of `0.5\columnwidth`.

about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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24 Global float setting

Instead of writing the following sequence into the preamble:

```
\makeatletter
\renewcommand\fps@figure{tb}
\renewcommand\fps@table{t}
\makeatother
```

you can change the global setting of floats by loading the package `hvfloa-fps`. It allows optional package options to set the global placement:

```
\usepackage[figure=tb,table=t]{hvfloat-fps}
```

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Figure 65: A Caption of a “fullpage” object, which follows on the next page. This can be an even or odd page. The object uses the complete paper dimensions



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24 *Global float setting*

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25 The Package Source

```

1  %% $Id: hvfloat.sty 105 2021-06-07 07:30:15Z herbert $
2  %%
3  %%
4  %% IMPORTANT NOTICE:
5  %%
6  %% This is file 'hvfloat.sty',
7  %%
8  %% Herbert Voss <hvoss@tug.org>
9  %%
10 %% This program can be redistributed and/or modified under the terms
11 %% of the LaTeX Project Public License Distributed from CTAN archives
12 %% in directory macros/latex/base/lppl.txt.
13 %%
14 %% DESCRIPTION:
15 %% 'hvfloat' offers rotating of captions and objects for floats
16 %%
17 \NeedsTeXFormat{LaTeX2e}
18 \def\fileversion{2.28}
19 \def\filedate{2021/06/08}
20 \message{'hvfloat' v\fileversion, \filedate\space (Herbert Voss)}
21 \ProvidesPackage{hvfloat}[\filedate\ rotating of floating objects]
22 \let\hvFloatFileVersion\fileversion
23 %
24 \newif\ifhv@fbox \hv@fboxfalse
25 \newif\ifhv@hyperref \hv@hyperreffalse
26 \newif\ifhv@nostfloats \hv@nostfloatsfalse
27 \newif\ifhv@tugboat \hv@tugboatfalse
28
29 \DeclareOption{fbox}{\hv@fboxtrue\setlength{\fboxsep}{1pt}}
30 \DeclareOption{hyperref}{\hv@hyperreftrue}
31 \DeclareOption{nostfloats}{\hv@nostfloatstrue}
32 \DeclareOption{no-stfloats}{\hv@nostfloatstrue}
33
34 \ProcessOptions
35
36 \providecommand\@tugclass{\@empty}
37 \ifx\@tugclass\@empty
38 \else
39 \hv@tugboattrue % special page handling
40 \typeout{>>> we are using a TUGboat class}%
41 \fi
42
43 \PassOptionsToPackage{hypcap}{caption}
44 \RequirePackage{caption}
45 \RequirePackage{varwidth}
46 \DeclareCaptionBox{varwidth}{\varwidth[b]{#1}#2\endvarwidth}
47
48 \PassOptionsToPackage{hypcap}{subcaption}
49 \RequirePackage{subcaption}
50 \RequirePackage{atbegshi}
51 \RequirePackage{picture,trimclip}

```

```

52
53 \RequirePackage{expl3,multido}
54 \RequirePackage{graphicx}
55 \RequirePackage{varwidth}
56
57 \RequirePackage{xkeyval}
58 \RequirePackage{ifoddpage}
59 \RequirePackage{afterpage}
60
61 \ifhv@hyperref
62 \RequirePackage{hyperref}
63 \fi
64 \ifhv@nostffloats\else
65 \RequirePackage{stfloats}% for bottom floats in a twocolumn mode
66 \fi
67 %
68 \providecommand*\LenToUnit[1]{\strip@pt\dimexpr#1*\p@/\unitlength}
69
70 \newlength\hvObjectWidth
71 \newlength\hvCapWidth
72 \newlength\hvWideWidth
73 \newlength\hvMultiFloatSkip
74 \newlength\hvMaxCapWidth
75 %\newlength\hv@BottomSpace
76 %\AtBeginDocument{%
77 % \setlength\hv@BottomSpace{\dimexpr\paperheight-1in-\topmargin-\headheight-\headsep-\textheight}}
78
79 \newsavebox\hvObjectBox
80 \newsavebox\hvCaptionBox
81 \newsavebox\hvOBox
82 \newsavebox\@tempbox
83 \newsavebox\hv@caption@box
84 \newsavebox\hv@leftBox
85 \newsavebox\hv@rightBox
86
87 \newif\ifhv@capbeside \hv@capbesidefalse
88
89 \def\hv@Top{top}
90 \def\hv@Bottom{bottom}
91 \def\hv@After{after}
92 \def\hv@Before{before}
93 \def\hv@Right{right}
94 \def\hv@Left{left}
95 \def\hv@Center{center}
96 \def\hv@Outer{outer}
97 \def\hv@Inner{inner}
98 \def\hv@Even{evenPage}
99 \def\hv@Odd{oddPage}
100 \def\hv@Natural{n}
101 \def\hv@Width{w}
102 \def\hv@Height{h}
103 \def\hv@Zero{0}
104 %

```

25 The Package Source

```

105 \def\hv@figure{figure}
106 %
107 \define@key{hvSet}{floatPos}[tbp]{%    LaTeX's position parameters htbp
108   \def\hvSet@floatPos{#1}%
109 }
110 \define@key{hvSet}{rotAngle}[0]{%    rotates caption AND image together
111   \def\hvSet@rotAngle{#1}%
112 }
113 \define@key{hvSet}{capWidth}[n]{%    (n)atural width|object (w)idth|object (h)eight|<scale of \columnwidth
114   >
115   \def\hvSet@capWidth{#1}%
116 }
117 \define@key{hvSet}{capAngle}[0]{%    -360..+360, only integers
118   \def\hvSet@capAngle{#1}%
119 }
120
121 \define@choicekey*+{hvSet}{capPos}[\val\nr]{bottom,top,left,before,right,after,inner,outer,evenPage,oddPage}[
122   bottom]{%
123   \def\hvSet@capPos{#1}%    it is relativ to the object, (e),(d) only valid for fullpage float
124   \ifcase\nr\relax
125     \hv@capbesidefalse
126   \or
127     \hv@capbesidefalse
128   \else
129     \hv@capbesidetrue
130   \fi
131 }{\PackageWarning{hvfloating}{erroneous input (#1) for capPos ignored. Using bottom.}}
132 \def\hvSet@capPos{bottom}%    it is relativ to the object, (e),(d) only valid for fullpage float
133 \hv@capbesidefalse
134 }
135
136 \define@choicekey*+{hvSet}{capVPos}[\val\nr]{bottom,center,top}[center]{%
137   \def\hvSet@capVPos{#1}%    it is relativ to the object
138   \ifcase\nr\relax
139     \gdef\hv@@capVPos{b}%
140   \or
141     \gdef\hv@@capVPos{c}%
142   \else
143     \gdef\hv@@capVPos{t}%
144   \fi
145 }{\PackageWarning{hvfloating}{erroneous input (#1) for capVPos ignored. Using center.}}
146 \def\hvSet@capVPos{center}%    it is relativ to the object
147 }
148
149 \define@choicekey*+{hvSet}{allHPos}[\val\nr]{left,center,right}[center]{%
150   \def\hvSet@allHPos{#1}%
151   \ifcase\nr\relax
152     \gdef\hv@@allHPos{l}%
153   \or
154     \gdef\hv@@allHPos{c}%
155   \else
156     \gdef\hv@@allHPos{r}%

```

```

156 \fi
157 }{\PackageWarning{hvfloat}{erroneous input (#1) for allHPos ignored. Using center.}%
158 \def\hvSet@capVPos{center}% it is relativ to the object
159 }
160
161 \define@choicekey*+{hvSet}{objectPos}{\val\nr}{left,center,right,inner,outer}[center]{%
162 \def\hvSet@objectPos{#1}% it is relativ to the object
163 }{\PackageWarning{hvfloat}{erroneous input (#1) for objectPos ignored. Using center.}%
164 \def\hvSet@capVPos{center}% it is relativ to the object
165 }
166
167 %\newif\ifhv@floatRefToObject
168 %\define@choicekey*+{hvSet}{floatRef}{\val\nr}{caption,object}[object]{% where the LOF entry should point
169 % to (inactive)
170 % \ifcase\nr\relax
171 % \hv@floatRefToObjectfalse
172 % \else
173 % \hv@floatRefToObjecttrue
174 % \fi
175 %}{\PackageWarning{hvfloat}{erroneous input (#1) for floatRef ignored. Using option object.}%
176 % \hv@floatRefToObjecttrue
177 % }
178
179 \define@key{hvSet}{objectAngle}[0]{% -360..+360
180 \def\hvSet@objectAngle{#1}%
181 }
182
183 \define@key{hvSet}{floatCapSep}[5pt]{% a width with the unit pt
184 \def\hvSet@floatCapSep{#1}%
185 }
186
187 \define@key{hvSet}{multiFloatSkip}{\normalbaselineskip}{% a width with the unit pt
188 \setlength\hvMultiFloatSkip{#1}%
189 }
190
191 \define@boolkey{hvSet}{hv@}{useOBox}[true]{}% use of the hvOBox contents
192 \define@boolkey{hvSet}{hv@}{nonFloat}[true]{}% Do not use float environment
193 \define@boolkey{hvSet}{hv@}{onlyText}[true]{}% Write the caption only as text
194 \define@boolkey{hvSet}{hv@}{wide}[true]{}% Write the caption only as text
195 \define@boolkey{hvSet}{hv@}{twoColumnCaption}[true]{% Write the caption only as text
196 % \ifhv@stfloats
197 % \global\@nameuse{hv@twoColumnCaption#1}%
198 % \else
199 % \PackageWarning{hvfloat}{Please use the package option stfloats!}%
200 % \global\hv@twoColumnCaptionfalse
201 % \fi
202 }
203
204 \define@boolkey{hvSet}{hv@}{Debug}[true]{}% give more infos in the terminal
205
206 \newcommand\hv@typeout[1]{\ifhv@Debug\typeout{>>> #1}\fi}
207
208
209 \newif\ifhv@fullpage
210 \newif\ifhv@FULLPAGE
211 \newif\ifhv@doubleFULLPAGE
212 \newif\ifhv@doublePAGE
213 \newif\ifhv@doublePage

```


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```

208 \newif\ifhv@setObjectLabel
209
210 \newlength\hvSet@bindCorrection
211 \newlength\hvSet@sepLineskip
212 \newlength\hv@leftPageObjectWidth% for doublepage images
213 \newlength\hv@tempWidthA
214 \newlength\hv@tempWidthB
215
216 \define@key{hvSet}{fullpage}[true]{\global\@nameuse{hv@fullpage#1}}%
217 \define@key{hvSet}{FULLPAGE}[true]{\global\@nameuse{hv@FULLPAGE#1}}
218 \define@key{hvSet}{doubleFULLPAGE}[true]{\global\@nameuse{hv@doubleFULLPAGE#1}\hv@doublePagefalse\
    hv@doublePAGEfalse}
219 \define@key{hvSet}{doublePAGE}[true]{\global\@nameuse{hv@doublePAGE#1}\hv@doublePagefalse\
    hv@doubleFULLPAGEfalse}
220 \define@key{hvSet}{doublePage}[true]{\global\@nameuse{hv@doublePage#1}\hv@doublePAGEfalse\
    hv@doubleFULLPAGEfalse}
221 \define@key{hvSet}{bindCorr}[z@]{\setlength\hvSet@bindCorrection{#1}}% for doublepage objects
222
223 \define@boolkey{hvSet}[hv@]{subFloat}[true]{% typeset values as subfloats
224 \ifhv@subFloat\setkeys{hvSet}{multiFloat=false}\fi
225 }%
226 \define@boolkey{hvSet}[hv@]{multiFloat}[true]{% typeset values as continous floats
227 \ifhv@multiFloat\setkeys{hvSet}{subFloat=false}\fi
228 }%
229 \define@boolkey{hvSet}[hv@]{vFill}[true]{}% vfill between multifloat objects
230
231 \define@boolkey{hvSet}[hv@]{separatorLine}[true]{}% separator line for caption of a full page float
232 \define@key{hvSet}{sepLineskip}{\def\hv@sepLineskip{#1}}%
233 \define@boolkey{hvSet}[hv@]{objectFrame}[true]{}% a frame around the object with no separation
234 \define@key{hvSet}{style}{%
235 \ifundefined{hv@#1}%
236 {\errmessage{Custom style '#1' undefined}}%
237 {\begingroup
238 \edef\x{\endgroup\noexpand\setkeys{hvSet}{\@nameuse{hv@#1}}\x}% use a defined style
239 }
240 \define@key{hvSet}{capFormat}{\def\hv@caption@format{#1}}%
241 \define@key{hvSet}{subcapFormat}{\def\hv@subcaption@format{#1}}%
242
243 \def\hv@set#1{\begingroup\edef\x{\endgroup\noexpand\setkeys{hvSet}{#1}}\x}
244 \let\hvFloatSet\hv@set
245 %
246 \def\defhvstyle#1#2{\@namedef{hv@#1}{#2}}
247 \let\hvDefFloatStyle\defhvstyle % better name
248 %
249 \newcommand\setDefaults{%
250 \hv@set{%
251 floatPos=, rotAngle=0, capWidth=n, capAngle=0, objectAngle=0,
252 capPos=bottom, capVPos=center, objectPos=center, allHPos=center,
253 floatCapSep=5pt, useOBox=false, nonFloat=false,
254 onlyText=false, wide=false, fullpage=false, FULLPAGE=false,
255 doubleFULLPAGE=false, doublePage=false, doublePAGE=false,
256 multiFloat=false,subFloat=false,
257 separatorLine,objectFrame=false,multiFloatSkip=\normalbaselineskip,

```

```

258     capFormat={}, subcapFormat={}, twoColumnCaption=false,
259 %   floatRef=object,
260     bindCorr=\z@, sepLineskip=0pt,
261     vFill=false,
262 }%
263 }
264
265 \let\hvFloatSetDefaults\setDefaults
266
267 \newcommand\reset@special@float{%
268   \hv@set{subFloat=false,%fullpage=false,
269     multiFloat=false,%FULLPAGE=false
270 }}
271
272 \def\hv@vskip{\vspace{\hvMultiFloatSkip}}
273
274 %
275 \newlength\hvAboveCaptionSkip
276 \newlength\hvBelowCaptionSkip
277 \newcount\hv@@capPos
278
279 \newlength\fbboxlinewidth
280 \AtBeginDocument{%
281   \setlength\fbboxlinewidth{\dimexpr\linewidth-2\fbboxrule-2\fbboxsep}%
282 }
283 \setlength\belowcaptionskip{\abovecaptionskip}% it is in latex.ltx = 0pt
284 \newcommand\saveCaptionSkip{%
285   \setlength{\hvAboveCaptionSkip}{\abovecaptionskip}%
286   \setlength{\hvBelowCaptionSkip}{\belowcaptionskip}%
287   \setlength{\abovecaptionskip}{0pt}%
288   \setlength{\belowcaptionskip}{0pt}%
289 }
290 \newcommand\restoreCaptionSkip{%
291   \setlength\abovecaptionskip{\hvAboveCaptionSkip}%
292   \setlength\belowcaptionskip{\hvBelowCaptionSkip}%
293 }
294
295 \providecommand\figcaption[2][{}]{%
296 \providecommand\tabcaption[2][{}]{%
297 \providecommand\tabcaptionbelow[2][{}]{%
298 %
299 \renewcommand\figcaption[2][{}]{%
300   \begingroup
301   \def\@capttype{figure}%
302   \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
303   \if$#1$ \caption{#2}\else\caption[#1]{#2}\fi
304   \endgroup}
305 \renewcommand\tabcaption[2][{}]{%
306   \begingroup
307   \def\@capttype{table}%
308   \edef\hv@caption@format{position=top,\hv@caption@format}%
309   \expandafter\captionsetup\expandafter{\hv@caption@format}%
310   \ifx\relax#1\relax \caption{#2}\else\caption[#1]{#2}\fi

```

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```

311 \endgroup}
312 \renewcommand\tabcaptionbelow[2][]{%
313 \begingroup
314 \def\@capttype{table}%
315 \edef\hv@caption@format{position=below,\hv@caption@format}%
316 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
317 \ifx\relax#1\relax \caption{#2}\else\caption[#1]{#2}\fi
318 \endgroup}
319 %
320 \newlength\hv@maxImageWidth
321 \AtBeginDocument{\hv@maxImageWidth=\columnwidth}
322
323 \define@key{Gin}{columnwidth}[true]{%
324 \def\Gin@ewidth{\columnwidth}%
325 % \def\Gin@eheight{lex}%
326 \Gin@boolkey{true}{iso}%
327 }
328 \define@key{Gin}{fullpage}[true]{%
329 \def\Gin@ewidth{\columnwidth}%
330 \def\Gin@eheight{\textheight}%
331 \Gin@boolkey{false}{iso}%
332 }
333 \define@key{Gin}{FullPage}[true]{%
334 \def\Gin@ewidth{\textwidth}%
335 \def\Gin@eheight{\textheight}%
336 \Gin@boolkey{false}{iso}%
337 }
338 \define@key{Gin}{FULLPAGE}[true]{%
339 \def\Gin@ewidth{\paperwidth}%
340 \def\Gin@eheight{\paperheight}%
341 \Gin@boolkey{false}{iso}%
342 }
343 \define@key{Gin}{doubleFULLPAGE}[true]{%
344 \def\Gin@ewidth{2\paperwidth}%
345 \def\Gin@eheight{\paperheight}%
346 \Gin@boolkey{false}{iso}%
347 }
348 \define@key{Gin}{doubleFULLPAGEbindCorr}[true]{%
349 \def\Gin@ewidth{\the\dimexpr2\paperwidth-2\hvSet@bindCorrection\relax}%
350 \def\Gin@eheight{\paperheight}%
351 \Gin@boolkey{false}{iso}%
352 }
353
354 \newcommand\IncludeGraphics[2][]{%
355 \vspace*{\the\dimexpr-1in-\voffset+\topskip-\headheight-0.5\baselineskip}%
356 \leavevmode\checkoddpag
357 \ifoddpage
358 \hspace*{\dimexpr-\oddsidemargin-\parindent-1in}%
359 \else
360 \hspace*{\dimexpr-\evensidemargin-\parindent-1in}%
361 \fi\noindent
362 \includegraphics[#1,width=\paperwidth,height=\paperheight,keepaspectratio=false]{#2}%
363 }

```

```

364
365 \newcommand\put@CaptionBox[1][0]{%
366   \ifcase#1
367     \ifhv@fbox
368       \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
369     \else
370       \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}%
371     \fi
372   \or
373     \ifhv@fbox
374       \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
375     \else
376       \raisebox{-\height}{\usebox{\hvCaptionBox}}%
377     \fi
378   \or
379     \ifhv@fbox\fbox{\usebox{\hvCaptionBox}}\else\usebox{\hvCaptionBox}\fi
380   \fi
381 }
382
383 \newcommand\put@ObjectBox[1][0]{%
384   \ifcase#1
385     \ifhv@fbox
386       \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}%
387     \else
388       \parbox{\wd\hvObjectBox}{\ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi}%
389     \fi
390   \or
391     \ifhv@fbox
392       \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
393     \else
394       \raisebox{-\height}{\ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi}%
395     \fi
396   \or
397     \ifhv@fbox
398       \fbox{\usebox{\hvObjectBox}}%
399     \else
400       % rotated object with a depth need to raise up the \depth
401       \ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\raisebox{\depth}{\usebox{\hvObjectBox}}\fi%
402     \fi
403   \fi
404 }
405
406
407 \def\drawSepline{%
408   \par\noindent
409   \if@twocolumn
410     \ifhv@twoColumnCaption
411       \rule{\linewidth}{0.4pt}\l[-2.5ex]
412     \else
413       \rule{\columnwidth}{0.4pt}\l[-2.5ex]
414     \fi
415   \else
416     \rule{\linewidth}{0.4pt}\l[-2.5ex]

```

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```

417 \fi
418 \vspace{\hv@sepLineskip}%
419 }
420
421 \newcounter{hv@tempCNTfigA}%
422 \newcounter{hv@tempCNTfigB}%
423 \newcounter{hv@tempCNTtabA}%
424 \newcounter{hv@tempCNTtabB}%
425 \newcounter{hv@pfigure}%
426 \newcounter{hv@ptable}%
427 \newcounter{subhv@pfigure}%
428 \newcounter{subhv@ptable}%
429
430 \newif\ifhv@star
431 \newif\ifhv@substar
432 \setDefaults
433
434 \def\hvFloat{\@ifnextchar*%      Main macro
435   {\global\hv@startrue\hv@maxImageWidth=\textwidth\hvFloat@i}%
436   {\global\hv@starfalse\hv@maxImageWidth=\columnwidth\hvFloat@i*}%
437 }
438
439 %\newcommand*{\hvFloat}[5][\]+{%
440 % #1: keyvalues
441 % #2: type figure | table | ...
442 % #3: float contents
443 % #4: short caption
444 % #5: caption
445 % #6: label
446 %
447 \def\hvFloat@i*{\@ifnextchar[\do@hvFloat]{\do@hvFloat[]}}
448 \def\do@hvFloat[#1]{%
449   \begingroup
450   \setlength\hvWideWidth{\dimexpr\columnwidth+\marginparwidth+\marginparsep}%
451   % \setlength\hvWideWidth{\dimexpr\textwidth+\marginparwidth+\marginparsep}%
452   % \setlength\hvWideWidth{\dimexpr\linewidth+\marginparwidth}%
453   \hv@maxImageWidth=\textwidth
454   \reset@special@float
455   \setcounter{hv@pfigure}{\value{figure}}%
456   \setcounter{hv@ptable}{\value{table}}%
457   \setcounter{hv@tempCNTfigA}{\value{figure}}%
458   \setcounter{hv@tempCNTfigB}{\value{figure}}%
459   \setcounter{hv@tempCNTtabA}{\value{table}}%
460   \setcounter{hv@tempCNTtabB}{\value{table}}%
461   \renewcommand\thehv@pfigure{\thefigure}%
462   \renewcommand\thehv@ptable{\thetable}%
463   \renewcommand\thehv@tempCNTfigA{\thefigure}%
464   \renewcommand\thehv@tempCNTfigB{\thefigure}%
465   \renewcommand\thehv@tempCNTtabA{\thetable}%
466   \renewcommand\thehv@tempCNTtabB{\thetable}%
467   \gdef\hv@save@setting{#1}%
468   \ifx\relax#1\relax\else\setkeys{hvSet}{#1}\fi
469   \ifx\hv@caption@format\empty\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi

```



```

470 \ifx\hv@subcaption@format\@empty\else
471 \expandafter
472 \captionsetup\expandafter[\expandafter s\expandafter u\expandafter b\expandafter]\expandafter
473 {\hv@subcaption@format}%
474 \fi
475 \gdef\hv@floatType{figure}% presetting
476 \@ifnextchar+{\do@multiFloat}{\hvFloat@ii[#1]}%
477 }
478
479 \ExplSyntaxOn
480
481 \def\do@multiFloat+#1#2{%
482 \clist_set:Nn\l_clist_Type{#1}%
483 \clist_set:Nn\l_clist_Object{#2}%
484 \@ifnextchar[\do@multiFloat@i{\do@multiFloat@i[]}%
485 }
486 \def\do@multiFloat@i[#1]#2#3{% lof-caption, caption, label
487 \ifx\relax#1\relax
488 \clist_set:Nn\l_clist_LofCaption{}}%
489 \else
490 \clist_set:Nn\l_clist_LofCaption{#1}%
491 \fi
492 \clist_set:Nn\l_clist_Caption{#2}%
493 \ifx\relax#3\relax
494 \clist_set:Nn\l_clist_Label{}}%
495 \else
496 \clist_set:Nn\l_clist_Label{#3}%
497 \fi
498 \@ifnextchar+{\do@multiFloat@ii}{}}%
499 }
500 \def\do@multiFloat@ii+#1#2{%
501 \clist_put_right:Nn\l_clist_Type{#1}%
502 \clist_put_right:Nn\l_clist_Object{#2}%
503 \@ifnextchar[\do@multiFloat@iii{\do@multiFloat@iii[]}%
504 }
505
506 \def\do@multiFloat@iii[#1]#2#3{% lof-caption, caption, label
507 \ifx\relax#1\relax
508 \clist_put_right:Nn\l_clist_LofCaption{}}%
509 \else
510 \clist_put_right:Nn\l_clist_LofCaption{#1}%
511 \fi
512 \clist_put_right:Nn\l_clist_Caption{#2}%
513 \ifx\relax#3\relax
514 \clist_put_right:Nn\l_clist_Label{}}%
515 \else
516 \clist_put_right:Nn\l_clist_Label{#3}%
517 \fi
518 \@ifnextchar+\do@multiFloat@ii%
519 {\def\hvSet@CapWidth{n}%
520 \do@@@hvFloat}%
521 }
522 \ExplSyntaxOff

```

25 The Package Source

```

523
524
525
526 \newcount\hv@cmta
527 \newcount\hv@cmtb
528
529 \def\hvFloat@ii[#1]#2#3{%      #1: key/value, #2: floattype, #3: object
530 \hv@maxImageWidth=\textwidth
531 \ifx\relax#1\relax\else\setkeys{hvSet}{#1}\fi
532 \gdef\hv@floatType{#2}%
533 \ifx\relax#2\relax
534 \setkeys{hvSet}{nonFloat,onlyText}
535 \fi
536 \xdef\hv@floatListOfExt{\@nameuse{ext@\hv@floatType}}%
537 \gdef\hv@floatObject{#3}%
538 \@ifnextchar[{\do@hvFloat}{\do@hvFloat[]}%
539 }
540
541 \def\do@hvFloat[#1]#2#3{%      #1: listof caption, #2. long caption #3: label
542 \gdef\hv@shortCap{#1}%
543 \gdef\hv@longCap{#2}%
544 \gdef\hv@label{#3}%
545 \ifhv@capbeside\def\@temp{1}\else\def\@temp{0}\fi
546 \ifhv@fullpage
547 \def\hvSet@CapWidth{n}% relative value
548 \do@@@hvFloat% fullpage with caption on other page
549 \else
550 \ifhv@FULLPAGE
551 \def\hvSet@CapWidth{n}% relative value
552 \do@@@hvFloat% fullpage with caption on other page
553 \else
554 \ifhv@doubleFULLPAGE
555 \setlength\hvCapWidth{\textheight}%
556 \expandafter\do@hvFloat@doubleFULLPAGE\@temp% fullpage with caption rotated or under on an odd page
557 \else
558 \ifhv@doublePAGE
559 \expandafter\do@hvFloat@doublePAGE\@temp% fullpage with caption rotated or under on an odd page
560 \else
561 \ifhv@doublePage
562 \expandafter\do@hvFloat@doublePage\@temp% fullpage with caption rotated or under on an odd page
563 \else
564 \do@@@hvFloat
565 \fi
566 \fi
567 \fi
568 \fi
569 \fi
570 % \global\hv@capbesidefalse
571 }
572 %
573 \def\do@@@hvFloat{% no special float page, caption and image on top of each other or side by side
574 \def\@tempa{90}%
575 \ifx\hvSet@rotAngle\@tempa

```

```

576 \setlength\hvMaxCapWidth{\textheight}%
577 \else
578 \setlength\hvMaxCapWidth{\hvWideWidth}%
579 \fi
580 %
581 % First we save the object in \hvObjectBox
582 %
583 \ifnum\hvSet@objectAngle=0 % rotate the object?
584 \ifhv@useOBox
585 \let\hvObjectBox\hvOBox
586 \else
587 \savebox\hvObjectBox{\hv@floatObject}%
588 \fi
589 \else
590 \savebox\hvObjectBox{%
591 \rotatebox{\hvSet@objectAngle}{%
592 \ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi
593 }%
594 }%
595 \fi
596 \setlength\hvObjectWidth{\wd\hvObjectBox}%
597 %
598 % Now we save the caption with its defined \hvCapWidth
599 %
600 \ifx\hvSet@capWidth\hv@Width% captionwidth=objectwidth
601 \setlength\hvCapWidth{\hvObjectWidth}%
602 \else
603 \ifx\hvSet@capWidth\hv@Height% captionwidth=objectheight
604 \setlength\hvCapWidth{\ht\hvObjectBox}%
605 \else
606 \ifx\hvSet@capWidth\hv@Natural% captionwidth=\linewidth-\objectwidth-separation
607 \ifhv@capbeside
608 \ifhv@wide
609 \setlength\hvCapWidth{\the\dimexpr\hvWideWidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
610 \else
611 \ifhv@star
612 \setlength\hvCapWidth{\the\dimexpr\textwidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
613 \else
614 \setlength\hvCapWidth{\the\dimexpr\linewidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
615 \fi
616 \fi
617 \else
618 \setlength\hvCapWidth{\columnwidth}%
619 \fi
620 \else
621 \ifhv@capbeside
622 \ifhv@wide
623 \setlength\hvCapWidth{\hvSet@capWidth\hvWideWidth}%
624 \setlength\@tempdima{\the\dimexpr\hvWideWidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
625 \else
626 \setlength\hvCapWidth{\hvSet@capWidth\columnwidth}%
627 \setlength\@tempdima{\the\dimexpr\columnwidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
628 \fi

```

25 The Package Source

```

629         \ifdim\hvCapWidth>\@tempdima
630         \setlength\hvCapWidth{\@tempdima}%
631         \fi
632     \else
633         \ifhv@wide
634         \setlength\hvCapWidth{\hvSet@capWidth\hvWideWidth}%
635         \else
636         \setlength\hvCapWidth{\hvSet@capWidth\columnwidth}%
637         \fi
638     \fi
639 \fi
640 \fi
641 \fi
642 \saveCaptionSkip% we put this space ourselve
643 \ifnum\hvSet@capAngle=0 % need rotation?
644     \savebox\hvCaptionBox{% NO rotation
645         \minipage[b]{\hvCapWidth}%% minipage, to get hyphenation
646         \ifhv@nonFloat
647         \ifhv@onlyText
648         \hv@longCap
649         \else
650         \ifx\hv@floatType\hv@figure
651         \ifx\relax\hv@shortCap\relax
652             \figcaption{\hv@longCap\ifx\hv@label\@empty\else\label{\hv@label}\fi}%
653         \else
654             \figcaption[\hv@shortCap]{\hv@longCap\ifx\hv@label\@empty\else\label{\hv@label}\fi}%
655         \fi
656         \else
657         \ifx\relax\hv@shortCap\relax
658             \tabcaption{\hv@longCap\ifx\hv@label\@empty\else\label{\hv@label}\fi}%
659         \else
660             \tabcaption[\hv@shortCap]{\hv@longCap\ifx\hv@label\@empty\else\label{\hv@label}\fi}%
661         \fi
662         \fi
663     \fi
664 \else
665     \ifhv@onlyText
666     \hv@longCap
667     \else
668         \let\@capttype\hv@floatType
669         \ifx\hv@shortCap\@empty\caption{\hv@longCap}\else\caption[\hv@shortCap]{\hv@longCap}\fi
670         \ifx\hv@label\@empty\else\label{\hv@label}\fi
671     \fi
672 \fi
673 \endminipage
674 }%
675 \else
676     \savebox\hvCaptionBox{% Rotation
677         \rotatebox{\hvSet@capAngle}{%
678             \minipage[b]{\hvCapWidth}%% minipage, to get hyphenation
679 % \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
680         \ifhv@nonFloat
681         \ifhv@onlyText

```

```

682         \hv@longCap
683         \else
684         \ifx\hv@floatType\hv@figure
685             \ifx\hv@shortCap\@empty \figcaption{\hv@longCap}\else\figcaption[\hv@shortCap]{\hv@longCap}\fi
686         \else
687             \ifx\hv@shortCap\@empty \tabcaption{\hv@longCap}\else\tabcaption[\hv@shortCap]{\hv@longCap}\fi
688         \fi
689     \fi
690 \else
691     \ifhv@onlyText
692         \hv@longCap
693         \else
694             \let\@capttype\hv@floatType
695             \ifx\hv@shortCap\@empty \caption{\hv@longCap}\else\caption[\hv@shortCap]{\hv@longCap}%
696             \fi
697         \fi
698     \fi
699     \ifx\hv@label\@empty\else\label{\hv@label}\fi
700 \endminipage
701 }% rotatebox
702 }% lsbbox
703 \fi
704 %
705 % now we have the object and the caption with the right
706 % rotated angles saved in different boxes
707 %%
708 \restoreCaptionSkip% save old values
709 % \def\fps@figure{\hvSet@floatPos}%
710 \ifx\hvSet@floatPos\@empty % use type default
711 \else
712     \@namedef{fps@\hv@floatType}{\hvSet@floatPos}%
713 \fi
714 \ifhv@nonFloat
715     \noindent
716     \beginngroup% Start the nonfloat part
717 \else
718     \ifhv@star
719         \ifx\hvSet@floatPos\hv@floatBottom
720             \@nameuse{\hv@floatType*}[b]% Start the floating environment *****
721         \else
722             \@nameuse{\hv@floatType*}%
723         \fi
724     \else
725         \begin{\hv@floatType}% Start the floating environment
726     \fi
727 \fi
728 \checkoddpage
729 \ifx\hvSet@objectPos\hv@Right\raggedleft\fi
730 \ifx\hvSet@objectPos\hv@Center
731     \ifhv@nonFloat\hspace*{\fill}\else\centering\fi
732 \fi
733 \ifx\hvSet@objectPos\hv@Outer
734     \ifoddpage\raggedleft\fi

```

25 The Package Source

```

735 \fi
736 \ifx\hvSet@objectPos\hv@Inner
737   \ifoddpage\else\raggedleft\fi
738 \fi
739 %
740 % to rotate object and caption together, we save all in another box
741 % the caption comes first, if its on the left or the top
742 % 0 caption left, inner and odd page, oneside inner
743 % 1 caption top
744 % 2 caption right, inner and even page, oneside outer
745 % 3 caption bottom
746 %
747 \ifx\hvSet@capPos\hv@Left
748   \hv@@capPos=0
749 \else
750   \ifx\hvSet@capPos\hv@Top
751     \hv@@capPos=1
752   \else
753     \ifx\hvSet@capPos\hv@Right
754       \hv@@capPos=2
755     \else
756       \ifx\hvSet@capPos\hv@Bottom
757         \hv@@capPos=3
758       \else
759         \ifx\hvSet@capPos\hv@Inner
760           \ifoddpageoroneside\hv@@capPos=0\else\hv@@capPos=2\fi
761         \else
762           \ifx\hvSet@capPos\hv@Outer
763             \ifoddpageoroneside\hv@@capPos=2\else\hv@@capPos=0\fi
764           \else
765             \ifx\hvSet@capPos\hv@Before
766               \hv@@capPos=0% same as cappos=right
767             \else
768               \ifx\hvSet@capPos\hv@After
769                 \hv@@capPos=2% same as cappos=right
770               \fi
771             \fi
772           \fi
773         \fi
774       \fi
775     \fi
776   \fi
777 \fi
778 %%%
779 \savebox{\@tempboxa}{%
780   \expandafter\ifcase\the\hv@@capPos% 0 is LEFT   START \ifcase
781   \ifx\hvSet@capVPos\hv@Center
782     \put@CaptionBox
783     \hspace{\hvSet@floatCapSep}% capfloatsep
784     \put@ObjectBox
785   \else
786     \ifx\hvSet@capVPos\hv@Top% caption and object at top aligned
787       \put@CaptionBox[1]%

```



```

788     \hspace{\hvSet@floatCapSep}% capfloatsep
789     \put@ObjectBox[1]%
790 \else% caption on bottom
791     \put@CaptionBox[2]%
792     \hspace{\hvSet@floatCapSep}% capfloatsep
793     \put@ObjectBox[2]%
794 \fi
795 \fi% end caption left
796 \or%1 is top
797 \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
798 \begin{minipage}{\wd\hvCaptionBox}%
799 \else
800 \begin{minipage}{\wd\hvObjectBox}%
801 \fi
802 \centering
803 \ifhv@fbox
804 \fbox{\usebox{\hvCaptionBox}}\[\[0.5\hvBelowCaptionSkip]%
805 \fbox{\usebox{\hvObjectBox}}%
806 \else
807 \usebox{\hvCaptionBox}\[\[0.5\hvBelowCaptionSkip]%
808 \usebox{\hvObjectBox}%
809 \fi
810 \end{minipage}%
811 \or%2 is right
812 \ifx\hvSet@capVPos\hv@Center
813 \put@ObjectBox
814 \hspace{\hvSet@floatCapSep}%
815 \put@CaptionBox
816 \else
817 \ifx\hvSet@capVPos\hv@Top
818 \put@ObjectBox[1]%
819 \hspace{\hvSet@floatCapSep}% capfloatsep
820 \put@CaptionBox[1]%
821 \else
822 \put@ObjectBox[2]%
823 \hspace{\hvSet@floatCapSep}% capfloatsep
824 \put@CaptionBox[2]%
825 \fi
826 \fi
827 \or%3 bottom
828 \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
829 \begin{minipage}{\wd\hvCaptionBox}%
830 \else
831 \begin{minipage}{\wd\hvObjectBox}%
832 \fi
833 \centering
834 \ifhv@fbox
835 \fbox{\usebox{\hvObjectBox}}\[\[0.5\hvAboveCaptionSkip]%
836 \fbox{\usebox{\hvCaptionBox}}%
837 \else
838 \ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi\[\[0.5\hvAboveCaptionSkip]%
839 \usebox{\hvCaptionBox}%

```

25 The Package Source

```

840     \fi
841     \end{minipage}%
842     \fi% \ifcase\the\hv@capPos
843 }% End savebox Object and caption          %%%%%%%%% @tempboxa
844 %
845 % now we rotate the object and caption, if needed
846 %
847 \ifhv@wide
848     \ifoddpageoroneside
849         \if@twocolumn
850             \if@firstcolumn
851                 \noindent
852                 \hspace*{\dimexpr-\marginparwidth-\marginparsep}% oddpage first column
853             \fi
854         \fi
855     \else
856         \ifoddpage
857             \if@twocolumn
858                 \if@firstcolumn
859                     \noindent
860                     \hspace*{\dimexpr-\marginparwidth-\marginparsep}% oddpage first column
861                 \fi
862             \fi
863         \else% evenpage
864             \if@firstcolumn
865                 \noindent
866                 \hspace*{\dimexpr-\marginparwidth-\marginparsep}% <- for wide and left page
867             \fi
868         \fi
869     \fi
870 \fi
871 \ifx\hvSet@rotAngle\hv@Zero
872     \usebox{\@tempboxa}%
873 \else
874     \rotatebox{\hvSet@rotAngle}{\usebox{\@tempboxa}}%
875 \fi
876 \ifhv@nonFloat
877     \ifx\hvSet@objectPos\hv@Center
878 %         \ifhv@nonFloat
879         \hspace{\fill}%
880 %         \fi
881     \fi
882     \endgroup% End the nonfloat part
883 \else
884     \ifhv@star
885         \@nameuse{end\hv@floatType}% End the floating environment
886     \else
887         \end{\hv@floatType}% End the floating environment
888     \fi
889 \fi
890 \endgroup% startet at main \hvFloat
891 }
892 %

```

```

893 \newenvironment{hvFloatEnv}[1][\textwidth]
894 {\minipage{#1}}
895 {\endminipage}
896 %
897
898 \ExplSyntaxOn
899 \let\clist@item@Nn\clist_item:Nn
900 \let\l@clist@Type\l_clist_Type
901 \let\l@clist@LofCaption\l_clist_LofCaption
902 \let\l@clist@Label\l_clist_Label
903 \let\clist@count@N\clist_count:N
904 \ExplSyntaxOff
905
906 \def\do@@@hvFloat{% special float page: caption <-> fullpage image
907 \ifx\hvSet@capPos\hv@After \hv@capPos=1
908 \else
909 \ifx\hvSet@capPos\hv@Even \hv@capPos=2
910 \else
911 \ifx\hvSet@capPos\hv@Odd \hv@capPos=3
912 \else
913 \ifx\hvSet@capPos\hv@Inner \hv@capPos=4
914 \else
915 \ifx\hvSet@capPos\hv@Outer \hv@capPos=5
916 \else
917 \ifx\hvSet@capPos\hv@Right \hv@capPos=6% only for twocolumn mode
918 \else
919 \ifx\hvSet@capPos\hv@Left \hv@capPos=7% only for twocolumn mode
920 \else
921 \hv@capPos=0
922 \fi
923 \fi
924 \fi
925 \fi
926 \fi
927 \fi
928 \fi
929 \checkoddpage
930 \set@caption@object{\hv@floatType}% set caption and object into a box
931 \ifcase\hv@capPos% caption before object 0-> _always_ left
932 \setBottomCaption\setPageObject
933 \or% caption after object 1-> _always_ right
934 \setPageObject\setBottomCaption
935 \or% caption on even page 2-> left page
936 \ifoddpage
937 \afterpage{\setBottomCaption\setPageObject}%
938 \else% we are on an even page
939 \setBottomCaption\setPageObject
940 \fi
941 \or% caption on odd page 3->right page
942 \if@twoside
943 \if@twocolumn
944 \ifoddpage
945 \if@firstcolumn% on right side

```

25 The Package Source

```

946         \setBottomCaption\setPageObject
947     \else
948         \afterpage{\setPageObject\setBottomCaption}% start next column
949     \fi
950 \else% left (even) page
951     \if@firstcolumn
952         \afterpage{\setPageObject\setBottomCaption}% start next column
953     \else
954         \setPageObject\setBottomCaption
955     \fi
956 \fi
957 \else% onecolumn
958     \ifoddpage
959         \setPageObject\setBottomCaption
960     \else% even page
961         \afterpage{\setPageObject\setBottomCaption}%
962     \fi
963 \fi
964 \else% oneside
965     \if@twocolumn
966         \ifoddpage
967             \if@firstcolumn% on right side
968                 \setBottomCaption\setPageObject
969             \else
970                 \setPageObject\setBottomCaption
971             \fi
972         \else
973             \if@firstcolumn% on left side
974                 \afterpage{\setPageObject\setBottomCaption}%
975             \else
976                 \setPageObject\setBottomCaption
977             \fi
978         \fi
979     \else % onecolumn
980         \ifoddpage
981             \setBottomCaption\setPageObject
982         \else
983             \afterpage{\setBottomCaption\setPageObject}%
984         \fi
985     \fi
986 \fi
987 \or% caption on the inner column 4->inner
988 % \set@caption@object
989 \if@twocolumn
990     \ifoddpage
991         \if@firstcolumn% on right side
992             \setBottomCaption\setPageObject
993         \else % right column on right side
994             \setPageObject\setBottomCaption% start next firstcolumn next page
995         \fi
996     \else
997         \if@firstcolumn% on left side
998             \afterpage{\afterpage{\setBottomCaption\setPageObject}}% start next page/first column

```

```

999      \else% left page/column
1000      \setBottomCaption\setPageObject% start on same page/column
1001      \fi
1002      \fi
1003      \else% onecolumn
1004      \setBottomCaption\setPageObject
1005      \fi
1006      \or%          caption on the outer column 5->outer
1007      %   \set@caption@object
1008      \if@twocolumn
1009      \ifoddpage
1010      \if@firstcolumn
1011      \afterpage{\afterpage{\setBottomCaption\setPageObject}}%
1012      \else
1013      \afterpage{\setBottomCaption\setPageObject}%
1014      \fi
1015      \else% even page (left)
1016      \if@firstcolumn
1017      \setBottomCaption\setPageObject
1018      \else
1019      %%%          !!!! to-do: !!!!
1020      \fi
1021      \fi
1022      \else% onecolumn
1023      \setBottomCaption\setPageObject
1024      \fi
1025      \or%          caption after object on same page 6->right for twocolumn
1026      \if@twocolumn
1027      \if@firstcolumn
1028      \afterpage{\setPageObject\setBottomCaption}%
1029      \else
1030      \setPageObject\setBottomCaption
1031      \fi
1032      \else% always caption _after_ object for onecolumn
1033      \setPageObject\setBottomCaption
1034      \fi
1035      \or%          caption before object on same page 7->left for twocolumn
1036      \if@twocolumn
1037      \if@firstcolumn
1038      \setBottomCaption\setPageObject
1039      \else
1040      \afterpage{\setBottomCaption\setPageObject}%
1041      \fi
1042      \else%          onecolumn -> same as before
1043      \setBottomCaption\setPageObject
1044      \fi
1045      \fi
1046      \endgroup% startet at main \hvFloat
1047  }
1048  %
1049  %% ----- the doublepage obejcts -----
1050  %% ||lin+evenside --- |lin+oddside ---||
1051  %

```

25 The Package Source

```

1052 \def\do@hvFloat@doublePage#1{% image on left and right page with caption on the right page
1053 % #1-> 0/1 caption under/right
1054 \global\setlength\hv@leftPageObjectWidth{\dimexpr\paperwidth-lin-\evensidemargin-\hvSet@bindCorrection}%
1055 \global\setlength\hv@tempWidthA{\the\dimexpr-lin-\oddsidemargin+\hvSet@bindCorrection}%
1056 \xdef\hv@capAngle{\hvSet@capAngle}%
1057 \xdef\hv@caption@format@temp{\hv@caption@format}% it gets lost otherwise for next afterpage
1058 \checkoddpages
1059 \ifoddpage
1060   \if@twocolumn
1061     \if@firstcolumn
1062       \afterpage{\afterpage{\do@hvFloat@doublePageCaptionRight{#1}}}%
1063     \else
1064       \ifhv@tugboat
1065         \do@hvFloat@doublePageCaptionRight{#1}%
1066       \else
1067         \afterpage{\do@hvFloat@doublePageCaptionRight{#1}}%
1068       \fi
1069     \fi
1070   \else
1071     \afterpage{\do@hvFloat@doublePageCaptionRight{#1}}%
1072   \fi
1073 \else
1074   \if@twocolumn
1075     \if@firstcolumn
1076       \afterpage{\afterpage{\afterpage{\do@hvFloat@doublePageCaptionRight{#1}}}}%
1077     \else
1078       \afterpage{\afterpage{\do@hvFloat@doublePageCaptionRight{#1}}}%
1079     \fi
1080   \else
1081     \afterpage{\afterpage{\do@hvFloat@doublePageCaptionRight{#1}}}%
1082   \fi
1083 \fi
1084 \endgroup% started at main macro \hvFloat
1085 }
1086 %
1087 \def\do@hvFloat@doublePageCaptionRight#1{% image on left and right page with caption on the right page
-----
1088 \let\hv@fptop\c@fptop
1089 \global\setlength{\fptop}{0pt}%
1090 \let\hv@c@dbltopnumber\c@dbltopnumber
1091 \setcounter{totalnumber}{0}%
1092 \setcounter{dbltopnumber}{0}%
1093 \def\dblfloatpagefraction{0.5}%
1094 \global\renewcommand\thehv@tempCNTfigA{xyz}%
1095 \global\renewcommand\thehv@tempCNTfigB{xyz}%
1096 \begin{\hv@floatType*}[!t]
1097   \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1098   \clipbox*{0 -\depth}{\hv@leftPageObjectWidth}{\height}{\usebox{\hvObjectBox}}%
1099   \ifx\hv@label\@empty
1100     \else
1101     \ifx\hv@floatType\hv@figure
1102       \global\refstepcounter{hv@tempCNTfigA}%
1103     \else

```



```

1104     \global\refstepcounter{hv@tempCNTtabA}%   before caption
1105     \fi
1106     \label{\hv@label}%
1107     \fi
1108 \end{\hv@floatType*}%
1109 \afterpage{%
1110   \begin{\hv@floatType*}[t]
1111     \global\savebox{\hv0objectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1112     \hspace*{\hv@tempWidthA}%
1113     \noindent
1114     \savebox{\hv@rightBox}{\clipbox*{\hv@leftPageObjectWidth{} -\depth{} \width{} \height{} }\usebox\hv0objectBox}}%
1115     \global\setlength{\hv@tempWidthB}{\the\dimexpr\textwidth-\wd\hv@rightBox-\hv@tempWidthA-\marginparsep}%
1116     \parbox[\hv@capVPos]{\the\wd\hv@rightBox}{%
1117       \vspace{0pt}%
1118       \raisebox{\depth}{\usebox\hv@rightBox}%
1119     }%
1120     \ifx\hv@label\@empty\else
1121       \ifx\hv@floatType\hv@figure
1122         \global\refstepcounter{hv@tempCNTfigB}%
1123       \else
1124         \global\refstepcounter{hv@tempCNTtabB}%   before caption
1125       \fi
1126       \label{\hv@label-2}%
1127     \fi
1128     \ifx\hv@caption@format@temp\@empty\else
1129       \expandafter\captionsetup\expandafter{\hv@caption@format@temp}%
1130     \fi
1131     \ifnum#1>\z@   % caption on the right
1132     \ifnum\hv@capAngle > \z@
1133       \rotatebox[origin=c]{\hv@capAngle}{\parbox{\the\dimexpr\ht\hv0objectBox+\dp\hv0objectBox}{%
1134         \ifx\relax\hv@shortCap\relax
1135           \caption{\hv@longCap}%
1136         \else
1137           \caption[\hv@shortCap]{\hv@longCap}%
1138         \fi
1139       }}%
1140     \ifx\relax\hv@label\relax\else\label{\hv@label-cap}\fi
1141   \else
1142     \hspace{\marginparsep}%
1143     \parbox[\hv@capVPos]{\hv@tempWidthB}{%
1144       \abovcaptionskip=0pt% local inside parbox
1145       \vspace{0pt}%
1146       \ifx\hv@shortCap\@empty
1147         \caption{\hv@longCap}%
1148       \else
1149         \caption[\hv@shortCap]{\hv@longCap}%
1150       \fi
1151     }%
1152     \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1153   \fi
1154 \else % #1 = 0 caption below
1155   \ifx\relax\hv@shortCap\relax

```

25 The Package Source

```

1156         \caption{\hv@longCap}%
1157     \else
1158         \caption[\hv@shortCap]{\hv@longCap}%
1159     \fi
1160     \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1161 \fi
1162 \end{\hv@floatType*}%
1163 }%
1164 \let\c@topnumber\hv@c@topnumber
1165 \let\c@fptop\hv@fptop
1166 }
1167 %
1168 \newsavebox\hv@boxLeftPage
1169 \newsavebox\hv@boxRightPage
1170 %
1171 %% ||lin+evenside --- |lin+oddside ---||
1172 %
1173 \newif\ifhv@save@twocolumn
1174
1175 \def\do@hvFloat@doublePAGE#1{% image on left and right page with caption on the right
-----
1176 % #1-> 0/1 caption under/right
1177 \global\setlength\hv@tempWidthA{\the\dimexprlin+\oddsidemargin-\hv@Set@bindCorrection+\parindent}%
1178 \global\setlength\hv@leftPageObjectWidth{\the\dimexpr\paperwidth-lin-\evensidemargin-\hv@Set@bindCorrection}
%
1179 \expandafter\global\expandafter\savebox\expandafter\hvObjectBox\expandafter{\ifhv@use0Box\usebox{\hv0Box}\
else\hv@floatObject\fi}%
1180 \expandafter\global\expandafter\savebox\expandafter\hv@boxLeftPage\expandafter{\clipbox*{0 -\depth}{ \
hv@leftPageObjectWidth{ } \height}{\usebox\hvObjectBox}}%
1181 \expandafter\global\expandafter\savebox\expandafter\hv@boxRightPage\expandafter{\clipbox*{\
hv@leftPageObjectWidth{ } -\depth{ } \width{ } \height}{\usebox\hvObjectBox}}%
1182 \checkoddpage
1183 \ifoddpage
1184     \if@twocolumn
1185         \if@firstcolumn
1186             \afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}%
1187         \else
1188             \do@hvFloat@doublePAGECaptionRight{#1}%
1189         \fi
1190     \else
1191         \do@hvFloat@doublePAGECaptionRight{#1}%
1192     \fi
1193 \else
1194     \if@twocolumn
1195         \if@firstcolumn
1196             \afterpage{\afterpage{\afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}}}%
1197         \else
1198             \afterpage{\afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}}%
1199         \fi
1200     \else
1201         \afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}%
1202     \fi
1203 \fi

```

```

1204 \endgroup% startet at main macro
1205 }
1206 %
1207 \def\do@hvFloat@doublePAGECaptionRight#1{% image on left and right page with caption on the right
-----
1208 % #1-> 0/1 caption under/right
1209 \afterpage{%
1210 \noindent
1211 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1212 \clipbox*{0 -\depth}{\hv@leftPageObjectWidth}{\height}{\usebox{\hvObjectBox}%
1213 \newpage\if@twocolumn\null\newpage\fi
1214 \expandafter\global\expandafter\savebox\expandafter\hvObjectBox\expandafter{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1215 \hspace*{-\dimexpr\hv@tempWidthA}%
1216 \noindent
1217 \clipbox*{\the\hv@leftPageObjectWidth}{-\depth}{\width}{\height}}{\usebox{\hvObjectBox}%
1218 \ifnum#1>0
1219 \medskip
1220 \ifdim\dp\hvObjectBox > \z@
1221 \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
1222 \ifx\relax\hv@shortCap\relax
1223 \captionof{\hv@floatType}{\hv@longCap}%
1224 \else
1225 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1226 \fi
1227 }}%
1228 \ifx\hv@label\@empty\else\label{\hv@label}\fi
1229 \else
1230 \rotatebox{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
1231 \ifx\relax\hv@shortCap\relax
1232 \captionof{\hv@floatType}{\hv@longCap}%
1233 \else
1234 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1235 \fi
1236 }}%
1237 \ifx\hv@label\@empty\else\label{\hv@label}\fi
1238 \fi
1239 \else
1240 \ifx\relax\hv@shortCap\relax
1241 \captionof{\hv@floatType}{\hv@longCap}%
1242 \else
1243 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1244 \fi
1245 \ifx\hv@label\@empty\else\label{\hv@label}\fi
1246 \fi
1247 \newpage\if@twocolumn\null\newpage\fi
1248 }%
1249 }
1250 %
1251 %% ||lin+evenside --- |lin+oddside ---||
1252 %
1253 \def\do@hvFloat@doubleFULLPAGE#1{% image on left and right page with caption before/below/right/after
1254 % #1-> 0/1 caption under/right

```

25 The Package Source

```

1255 \ifx\hvSet@capPos\hv@After \hv@capPos=1
1256 \else
1257   \ifx\hvSet@capPos\hv@Before \hv@capPos=0
1258   \else
1259     \hv@capPos=2 % other caption type
1260   \fi\fi
1261   \checkoddpaper
1262   \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1263   \global\setlength\hv@tempWidthA{\dimexpr-\oddsidemargin-\lin-\parindent+\hvSet@bindCorrection}% the width
1264     of the right side offset
1265   \global\setlength\hv@tempWidthB{\dimexpr\ht\hvCaptionBox+\wd\hvObjectBox+2\hvSet@bindCorrection}%
1266   \global\setlength\hv@leftPageObjectWidth{\dimexpr\paperwidth-\hvSet@bindCorrection}%
1267   % \savebox\hv@leftBox{\clipbox*{0 0 \the\hv@leftPageObjectWidth\} \height}{\usebox\hvObjectBox}}%
1268   % \savebox\hv@rightBox{\clipbox*{\the\hv@leftPageObjectWidth\} \depth\} \width\} \height}{\usebox\
1269     hvObjectBox}}%
1270   % \expandafter\captionsetup\expandafter{\hv@caption@format}%
1271   \ifoddpaper
1272     \ifcase\hv@capPos % =0 Caption before
1273     \if@twocolumn
1274       \if@firstcolumn
1275         \ifhv@twoColumnCaption
1276         \set@Normal@Bottom@Caption*
1277         \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionBefore}%
1278       \else
1279         \afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore}%
1280       \fi
1281     \else% \if@firstcolumn
1282     \set@Normal@Bottom@Caption
1283     \do@hvFloat@doubleFULLPAGE@CaptionBefore
1284     \fi
1285     \else% \if@twocolumn
1286     \set@Normal@Bottom@Caption
1287     \do@hvFloat@doubleFULLPAGE@CaptionBefore
1288     \fi
1289   \or % =1 Caption after
1290   \ifhv@twoColumnCaption
1291     \if@firstcolumn
1292       \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol}%
1293     \else
1294       \do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol
1295     \fi
1296   \else
1297     \if@twocolumn
1298       \if@firstcolumn
1299         \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter}%
1300       \else
1301         \do@hvFloat@doubleFULLPAGE@CaptionAfter
1302       \fi
1303     \else
1304       \do@hvFloat@doubleFULLPAGE@CaptionAfter
1305     \fi
1306   \else% \ifcase >1 all other Captions

```

```

1306 \if@twocolumn
1307 \if@firstcolumn
1308 \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}%
1309 \else
1310 \do@hvFloat@doubleFULLPAGE@CaptionOther{#1}%
1311 \fi
1312 \else % \if@twocolumn
1313 \do@hvFloat@doubleFULLPAGE@CaptionOther{#1}%
1314 \fi
1315 \fi% \ifcase
1316 \else% we have an even page
1317 \ifcase\hv@capPos% Before
1318 \if@twocolumn
1319 \if@firstcolumn
1320 \ifhv@twoColumnCaption
1321 \afterpage{\afterpage{\set@Normal@Bottom@Caption*\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionBefore{#1}}}}%
1322 \else
1323 \afterpage{\afterpage{\afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore{#1}}}}%
1324 \fi
1325 \else
1326 \afterpage{\afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore{#1}}}%
1327 \fi
1328 \else% \if@twocolumn
1329 \afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore}%
1330 \fi
1331 \or % capPos after
1332 \if@twocolumn
1333 \if@firstcolumn
1334 \ifhv@twoColumnCaption
1335 \afterpage{\afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol{#1}}}}%
1336 \else
1337 \afterpage{\afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter{#1}}}}%
1338 \fi
1339 \else
1340 \ifhv@twoColumnCaption
1341 \afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol{#1}}}%
1342 \else
1343 \afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter{#1}}}%
1344 \fi
1345 \fi
1346 \else% \if@twocolumn
1347 \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter}%
1348 \fi
1349 \else % \ifcase Any other caption
1350 \if@twocolumn
1351 \if@firstcolumn
1352 \afterpage{\afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}}}%
1353 \else
1354 \afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}}%
1355 \fi
1356 \else

```

25 The Package Source

```

1357     \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}%
1358     \fi
1359     \fi% \ifcase
1360     \fi% main ifoddpge
1361     \endgroup% started at main macro \hvFloat
1362 }
1363
1364 \def\set@Normal@Bottom@Caption{\@ifnextchar*\set@Normal@Bottom@CaptionStar\set@Normal@Bottom@Caption@}
1365 \def\set@Normal@Bottom@Caption@{%
1366     \begin{\hv@floatType}[!b]
1367         \ifhv@separatorLine\drawSepLine\fi
1368     %     \expandafter\captionsetup\expandafter{\hv@caption@format}%
1369         \ifx\hv@shortCap\@empty
1370             \captionof{\hv@floatType}{\hv@longCap}%
1371         \else
1372             \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1373         \fi
1374         \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1375     \end{\hv@floatType}%
1376 }
1377 \def\set@Normal@Bottom@CaptionStar*{%
1378     \begin{\hv@floatType*}[!b]
1379         \ifhv@separatorLine\drawSepLine\fi
1380     %     \expandafter\captionsetup\expandafter{\hv@caption@format}%
1381         \ifx\hv@shortCap\@empty
1382             \captionof{\hv@floatType}{\hv@longCap}%
1383         \else
1384             \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1385         \fi
1386         \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1387     \end{\hv@floatType*}%
1388 }
1389
1390
1391 \def\do@hvFloat@doubleFULLPAGE@CaptionBefore{%
1392 % \setcounter{hv@tempCNTfigA}{\value{figure}}%
1393 % \setcounter{hv@tempCNTfigB}{\value{figure}}%
1394 % \setcounter{hv@tempCNTtabA}{\value{table}}%
1395 % \setcounter{hv@tempCNTtabB}{\value{table}}%
1396 \afterpage{%
1397     \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1398     \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% no
        interlineskip
1399     \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1400     \thispagestyle{empty}%
1401     \ifx\hv@floatType\hv@figure
1402         \global\refstepcounter{hv@tempCNTfigB}%
1403     \else
1404         \global\refstepcounter{hv@tempCNTtabB}% before caption
1405     \fi
1406     \expandafter\label\expandafter{\hv@label}%
1407     \clipbox*{0 0 \the\hv@leftPageObjectWidth{ } \height}{\usebox{\hvObjectBox}}%
1408     \afterpage{%

```



```

1409 \if@twocolumn\newpage\null\newpage\fi
1410 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1411 \thispagestyle{empty}%
1412 \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
    paperheight+0.5\ht\hvObjectBox
1413 \hspace*{\hv@tempWidthA}%
1414 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1415 \clipbox*{\the\hv@leftPageObjectWidth{} \dp\hvObjectBox{} \wd\hvObjectBox{} \ht\hvObjectBox}{\usebox\
    hvObjectBox}%
1416 \ifx\hv@floatType\hv@figure
1417 \global\refstepcounter{hv@tempCNTfigA}%
1418 \else
1419 \global\refstepcounter{hv@tempCNTtabA}% before caption
1420 \fi
1421 \expandafter\label\expandafter{\hv@label-2}%
1422 \newpage\if@twocolumn\null\newpage\fi
1423 }}%
1424 }
1425
1426 \newif\ifhv@temp
1427
1428 \def\do@hvFloat@doubleFULLPAGE@CaptionAfter{%
1429 \afterpage{%
1430 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1431 \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% no
    interlineskip
1432 \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1433 \thispagestyle{empty}%
1434 \clipbox*{0 \the\dp\hvObjectBox{} \the\hv@leftPageObjectWidth{} \the\ht\hvObjectBox}{\usebox\hvObjectBox}
    %
1435 \ifx\hv@floatType\hv@figure
1436 \refstepcounter{hv@tempCNTfigA}%
1437 \else
1438 \refstepcounter{hv@tempCNTtabA}% before caption
1439 \fi
1440 \ifx\hv@label\@empty\else\label{\hv@label}\fi
1441 % \afterpage{%
1442 \newpage\if@twocolumn\null\newpage\fi
1443 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1444 \thispagestyle{empty}%
1445 \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
    paperheight+0.5\ht\hvObjectBox
1446 \hspace*{\hv@tempWidthA}%
1447 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1448 \clipbox*{\the\hv@leftPageObjectWidth{} \dp\hvObjectBox{} \wd\hvObjectBox{} \ht\hvObjectBox}{\usebox\
    hvObjectBox}%
1449 \ifx\hv@floatType\hv@figure
1450 \refstepcounter{hv@tempCNTfigB}%
1451 \else
1452 \refstepcounter{hv@tempCNTtabB}% before caption
1453 \fi
1454 \expandafter\label\expandafter{\hv@label-2}%
1455 \newpage\if@twocolumn\null\newpage\fi

```

25 The Package Source

```

1456 \begin{\hv@floatType}[!b]
1457 \ifhv@separatorLine\drawSepLine\fi
1458 % \expandafter\captionsetup\expandafter{\hv@caption@format}%
1459 \ifx\hv@shortCap\@empty
1460 \captionof{\hv@floatType}{\hv@longCap}%
1461 \else
1462 \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap}%
1463 \fi
1464 \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1465 \end{\hv@floatType}%
1466 }%}%
1467 }
1468
1469 \def\do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol{%
1470 \afterpage{%
1471 \global\savebox{\hv@objectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1472 \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% no
interlineskip
1473 \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1474 \thispagestyle{empty}%
1475 \ifx\hv@floatType\hv@figure
1476 \refstepcounter{hv@tempCNTfigA}%
1477 \else
1478 \refstepcounter{hv@tempCNTtabA}% before caption
1479 \fi
1480 \ifx\hv@label\@empty\else\label{\hv@label}\fi
1481 \clipbox*{0 0 \the\hv@leftPageObjectWidth{ } \height}{\usebox{\hv@objectBox}%
1482 \newpage\if@twocolumn\null\newpage\fi
1483 \global\savebox{\hv@objectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1484 \thispagestyle{empty}%
1485 \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
paperheight+0.5\ht{\hv@objectBox}
1486 \hspace*{\hv@tempWidthA}%
1487 \global\savebox{\hv@objectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1488 \clipbox*{\the\hv@leftPageObjectWidth{ } \dp{\hv@objectBox}{ } \wd{\hv@objectBox}{ } \ht{\hv@objectBox}{ }\usebox{\
hv@objectBox}%
1489 \ifx\hv@floatType\hv@figure
1490 \refstepcounter{hv@tempCNTfigB}%
1491 \else
1492 \refstepcounter{hv@tempCNTtabB}% before caption
1493 \fi
1494 \ifx\hv@label\@empty\else\label{\hv@label-2}\fi
1495 \newpage
1496 \begin{\hv@floatType*}[!b]
1497 \hv@twoColumnCaptiontrue
1498 \ifhv@separatorLine\drawSepLine\fi
1499 % \expandafter\captionsetup\expandafter{\hv@caption@format}%
1500 \ifx\hv@shortCap\@empty
1501 \captionof{\hv@floatType}{\hv@longCap}%
1502 \else
1503 \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap}%
1504 \fi
1505 \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi

```

```

1506     \end{\hv@floatType*}%
1507 }%
1508 }
1509
1510 \def\do@hvFloat@doubleFULLPAGE@CaptionOther#1{%
1511 \afterpage{%
1512   \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1513   \thispagestyle{empty}%
1514   \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
      paperheight+0.5\ht\hvObjectBox
1515   \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1516   \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1517   \clipbox*{0 \depth}{\hv@leftPageObjectWidth}{\height}{\usebox{\hvObjectBox}%
1518   \ifx\hv@floatType\hv@figure
1519     \refstepcounter{hv@tempCNTfigA}%
1520   \else
1521     \refstepcounter{hv@tempCNTtabA}% before caption
1522   \fi
1523   \label{\hv@label}%
1524   \afterpage{%
1525     \if@twocolumn\newpage\if@firstcolumn\else\null\newpage\fi\fi
1526     \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1527     \thispagestyle{empty}%
1528     \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
      paperheight+0.5\ht\hvObjectBox
1529     \hspace*{\hv@tempWidthA}%
1530     \clipbox*{\hv@leftPageObjectWidth}{\dp\hvObjectBox}{\wd\hvObjectBox}{\ht\hvObjectBox}{\usebox\
      hvObjectBox}%
1531     \ifx\hv@floatType\hv@figure
1532       \refstepcounter{hv@tempCNTfigB}%
1533     \else
1534       \refstepcounter{hv@tempCNTtabB}% before caption
1535     \fi
1536     \expandafter\label\expandafter{\hv@label-2}%
1537     \savebox\hvCaptionBox{\parbox{0.9\ht\hvObjectBox}{\captionof{\hv@floatType}{\hv@longCap}}}%
1538     \ifnum#1 > 0\relax % rotation with 90°
1539 % \setlength\hv@tempWidthB{\dimexpr\ht\hvCaptionBox+\wd\hvObjectBox+2\hvSet@bindCorrection}%
1540 \ifdim\hv@tempWidthB < 2\paperwidth
1541   \rotatebox[origin=lb]{90}{\makebox[\paperheight][c]{\parbox{0.8\ht\hvObjectBox}{%
1542 % \expandafter\captionsetup\expandafter{\hv@caption@format}%
1543   \ifx\hv@shortCap\@empty
1544     \captionof{\hv@floatType}{\hv@longCap}%
1545   \else
1546     \captionof{\hv@floatType}{\hv@shortCap}\hv@longCap}%
1547   \fi
1548   }}% rotatebox
1549   \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1550 \else% ifdim: no space left on page
1551   \put(-2\ht\hvCaptionBox,0.5\ht\hvObjectBox){\makebox(0,0){\rotatebox{90}{\minipage{\textwidth}\
      centering
1552     \parbox{0.8\textwidth}{%
1553     \ifx\hv@shortCap\@empty
1554       \captionof{\hv@floatType}{\hv@longCap}%

```

25 The Package Source

```

1555         \else
1556         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1557         \fi
1558     }%
1559     \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1560 \endminipage}}}%
1561 \fi
1562 \else% ifnum, caption not rotated, under or over the right page
1563 \setlength\hv@tempWidthA{\dimexpr\paperheight-\ht\hvObjectBox}%
1564 \ifdim\hv@tempWidthA > \ht\hvCaptionBox
1565 \else
1566 \put(\the\dimexpr1.5\paperwidth-\wd\hvObjectBox-\hvSet@bindCorrection,\the\dimexpr\ht\hvCaptionBox
1567 % \abovecaptionskip+\belowcaptionskip){\makebox[0pt][c]{\parbox{\textwidth}{%%
1568 \expandafter\captionsetup\expandafter{\hv@caption@format}%
1569 \ifx\hv@shortCap\@empty
1570 \captionof{\hv@floatType}{\hv@longCap}%
1571 \else
1572 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap}%
1573 \fi
1574 \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1575 \fi
1576 \fi% end \ifnum#1>0
1577 \newpage\if@twocolumn\newpage\fi
1578 }%
1579 }%
1580 }
1581
1582
1583 \def\setBottomCaption{%
1584 \begin{\hv@floatType}[!b]%
1585 \ifhv@separatorLine\drawSepLine\fi
1586 \par
1587 \usebox\hvCaptionBox
1588 \end{\hv@floatType}%
1589 }
1590
1591 \def\setPageObject{%
1592 \ifhv@star
1593 \begin{\hv@floatType*}[p]%
1594 \else
1595 \begin{\hv@floatType}[p]%
1596 \fi
1597 \ifhv@FULLPAGE
1598 \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep}%-0.5\baselineskip%
1599 \checkoddpage
1600 \if@twoside
1601 \ifoddpage
1602 \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1603 \else
1604 \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1605 \fi
1606 \else

```

```

1607     \hspace*{\the\dimexpr-\oddsidemargin-\parindent-1in}%
1608     \fi
1609     \AtBeginShipoutNext{\thispagestyle{empty}}%
1610     \usebox\hvObjectBox%
1611 \else
1612     \usebox\hvObjectBox
1613 \fi
1614 \ifhv@star
1615     \end{\hv@floatType}%
1616 \else
1617     \end{\hv@floatType}%
1618 \fi
1619 }
1620
1621 \ExplSyntaxOn
1622
1623 \def\getMultiCaptionAndLabel{%
1624     \global\sbox\hvCaptionBox{\minipage[b]{\linewidth}%
1625 %   \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1626     \setlength\belowcaptionskip{5pt}%
1627     \setlength\abovecaptionskip{0pt}%
1628     \hv@cntb=\clist_count:N\l_clist_Type
1629     \advance\hv@cntb by \@ne
1630     \hv@cнта=1
1631     \loop
1632     \edef\@cptype{\clist_item:Nn\l_clist_Type{\hv@cнта}}%
1633     \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{\hv@cнта}}%
1634     \ifx\@tempa\@empty
1635         \caption{\clist_item:Nn\l_clist_Caption{\hv@cнта}}%
1636     \else
1637         \expandafter\caption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{\hv@cнта}}%
1638     \fi
1639     \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cнта}}%
1640     \ifx\@tempa\@empty
1641     \else
1642         \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cнта}-cap}\fi
1643     \advance\hv@cнта by \@ne
1644     \ifnum\hv@cнта<\hv@cntb
1645     \repeat
1646 \endminipage}%
1647 }
1648
1649 \def\getMultiObjectAndLabel{%
1650     \global\sbox\hvObjectBox{%
1651         \ifhv@vFill
1652             \minipage[b][\textheight][s]{\columnwidth}%
1653         \else
1654             \minipage{\columnwidth}%
1655         \fi
1656 %   \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1657     \ifx\hvSet@objectPos\hv@Right\raggedleft\else
1658     \ifx\hvSet@objectPos\hv@Left\raggedleft\else
1659     \ifx\hvSet@objectPos\hv@Center\centering

```

25 The Package Source

```

1660 \fi\fi\fi
1661 \hv@cntb=\clist_count:N\l_clist_Type
1662 \advance\hv@cntb by \@ne
1663 \hv@cmta=1
1664 \loop
1665 \def\@temp{\clist_item:Nn\l_clist_Object{\hv@cmta}}%
1666 \ifhv@objectFrame\frame{\@temp}\else\@temp\fi
1667 \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1668 \edef\@tempb{\clist_item:Nn\l_clist_Type{\hv@cmta}}%
1669 \edef\@captype{\hv@p\@tempb}%
1670 \ifx\@tempa\@empty
1671 \else
1672 \refstepcounter{\@captype}%
1673 \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1674 \fi
1675 \ifnum\hv@cmta<\clist_count:N\l_clist_Type\par\hv@vskip\fi
1676 \advance\hv@cmta by \@ne
1677 \ifnum\hv@cmta<\hv@cntb
1678 \ifhv@vFill\vfill\fi
1679 \repeat
1680 \endminipage}%
1681 }
1682
1683 \def\getMultiSubCaptionAndLabel{%
1684 \global\sbox\hvCaptionBox{\minipage{\linewidth}%
1685 % \ifx\hv@caption@format\@empty\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1686 \setlength\belowcaptionskip{5pt}%
1687 \setlength\abovecaptionskip{0pt}%
1688 \xdef\@captype{\clist_item:Nn\l_clist_Type{1}}% the same for all subfloats
1689 \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{1}}%
1690 \ifx\@tempa\@empty
1691 \caption{\clist_item:Nn\l_clist_Caption{1}}%
1692 \else
1693 \expandafter\caption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{1}}%
1694 \fi
1695 \edef\@tempa{\clist_item:Nn\l_clist_Label{1}}%
1696 \ifx\@tempa\@empty\else\expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{1}-cap}\fi
1697 \endminipage}%
1698 }
1699
1700 \def\getMultiSubObjectAndLabel{%
1701 \global\sbox\hvObjectBox{%
1702 \ifhv@vFill
1703 \minipage[b][\textheight]{s}{\columnwidth}%
1704 \else
1705 \minipage{\columnwidth}%
1706 \fi
1707 % \ifx\hv@subcaption@format\@empty\else
1708 % \expandafter
1709 % \captionsetup\expandafter[\expandafter s\expandafter u\expandafter b\expandafter]\expandafter
1710 % {\hv@subcaption@format}%
1711 % \fi
1712 \ifx\hvSet@objectPos\hv@Right\raggedleft\else

```



```

1713 \ifx\hvSet@objectPos\hv@Left\raggedleft\else
1714 \ifx\hvSet@objectPos\hv@Center\centering
1715 \fi\fi\fi
1716 \hv@cntb=\clist_count:N\l_clist_Caption
1717 \advance\hv@cntb by \@ne
1718 \hv@cna=2
1719 \edef\@captype{\clist_item:Nn\l_clist_Type{1}}% the same for all subfloats
1720 \loop
1721 \def\@temp{\clist_item:Nn\l_clist_Object{\hv@cna}}%
1722 \ifhv@objectFrame\frame{\@temp}\else\@temp\fi
1723 \beginingroup
1724 \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{\hv@cna}}%
1725 \ifx\@tempa\@empty
1726 \subcaption{\clist_item:Nn\l_clist_Caption{\hv@cna}}%
1727 \else
1728 \expandafter\subcaption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{\hv@cna}}%
1729 \fi
1730 \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cna}}%
1731 \ifx\@tempa\@empty
1732 \else
1733 \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cna}}%
1734 \fi
1735 \endgroup
1736 \ifnum\hv@cna<\clist_count:N\l_clist_Type\par\hv@vskip\fi
1737 \advance\hv@cna by \@ne
1738 \ifnum\hv@cna<\hv@cntb
1739 \ifhv@vFill\vfill\fi
1740 \repeat
1741 \edef\@tempa{\clist_item:Nn\l_clist_Label{1}}% the main label at the end
1742 \ifx\@tempa\@empty
1743 \else
1744 \addtocounter{\@captype}{-1}% to get the same <object>-ref as "label"-cap
1745 \refstepcounter{\@captype}%
1746 \expandafter\label\expandafter{\@tempa}%
1747 \fi
1748 \endminipage}%
1749 }
1750 \ExplSyntaxOff
1751
1752 \def\getSingleCaptionAndLabel{%
1753 \global\sbox\hvCaptionBox{\minipage{\linewidth}%
1754 \setlength\belowcaptionskip{5pt}%
1755 \setlength\abovecaptionskip{0pt}%
1756 \edef\@captype{\hv@floatType}%
1757 \expandafter\ifx\expandafter\relax\hv@shortCap\relax
1758 \caption{\hv@longCap}%
1759 \else
1760 \caption[\hv@shortCap]{\hv@longCap}%
1761 \fi
1762 \ifx\hv@label\@empty\else\label{\hv@label-cap}\fi
1763 \endminipage}%
1764 }
1765

```

25 The Package Source

```
1766 \def\set@caption@object#1{%    first caption, then object  #1=\hv@floatType
1767   \ifhv@multiFloat
1768     \getMultiCaptionAndLabel
1769   \else
1770     \ifhv@subFloat
1771       \getMultiSubCaptionAndLabel
1772     \else
1773       \getSingleCaptionAndLabel
1774     \fi
1775   \fi
1776   \edef\@capttype{\hv@p#1}%
1777   \ifhv@multiFloat
1778     \getMultiObjectAndLabel
1779   \else
1780     \ifhv@subFloat
1781       \getMultiSubObjectAndLabel
1782     \else
1783       \global\sbox\hvObjectBox{%
1784         \refstepcounter{\@capttype}%
1785         \ifhv@objectFrame\frame{\hv@floatObject}\else\hv@floatObject\fi
1786         \expandafter\ifx\expandafter\relax\hv@label\relax
1787         \else
1788           \expandafter\label\expandafter{\hv@label}%
1789         \fi
1790       }%
1791     \fi
1792   \fi
1793 }
1794 %
1795 \endinput
```