Typesetting captions with the caption package*

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Abstract

The caption package offers customization of captions in floating environments such figure and table and cooperates with many other packages.¹

Introduction

Within the standard LATEX classes captions haven't received the attention they deserve. Simply typeset as an ordinary paragraph there is no remarkable visual difference from the rest of the text, like here:

Figure 1: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

There should be possibilities to change this; for example, it would be nice if you could make the text of the caption a little bit smaller as the normal text, add an extra margin, typeset the caption label with the same font family and shape as your headings etc. Just like this one:

Figure 2 – White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

You can do this easily with this package as there are many ready-to-use caption formatting options, but you are free to define your very own stuff, too.

PRELIMINARY DOCUMENTATION

Please note that this document is inconsistent and not finished yet. It'll try to update it within the next months; the actual version can always be found here.

^{*}This package has version number v3.1e, last revised 2007/11/04.

 $^{^{1}}$ A complete re-work of the user interface done with Steven D. Cochran and Frank Mittelbach has lead to the enhanced version 3.0.

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1 Using this package

\usepackage Insert

\usepackage[(options)] {caption} [2007/11/04]

into the preamble of your document, i.e. the part of your document between \documentclass and \begin{document}. The options control how your captions will look like; e.g.,

would result in captions looking like the second one in the introduction.\captionsetup\captionsetup for a later change of options the caption package provides the command

\captionsetup[{float type}] { (options) }

So

```
\usepackage[margin=10pt,font=small,labelfont=bf]{caption}
```

and

```
\usepackage{caption}
\captionsetup{margin=10pt,font=small,labelfont=bf}
```

are equal in their results.

It's good to know that <code>\captionsetup</code> has an effect on the current environment only. So if you want to change settings for the current figure or table only, just place the <code>\captionsetup</code> command inside the figure or table right before the <code>\caption</code> command. For example

```
\begin{figure}
...
\captionsetup{singlelinecheck=off}
\caption{...}
\end{figure}
```

switches the single-line-check off, but only for this figure so all the other captions remain untouched.

(For a description of the optional parameter *(float type)* see section 3: *Commands*.)

2 **Options**

2.1 Formatting

format = A figure or table caption mainly consists of three parts: the caption label, which says if this object is a 'Figure' or 'Table' and what number is associated with it, the caption text itself, which is normally a short description of contents, and the caption separator which separates the text from the label.

The *caption format* determines how this information will be presented; it is specified with the option

 $format = \langle format name \rangle$,

having the name of the caption format as its argument. There are two standard caption formats:

plain	Typesets the captions as a normal paragraph.	
hang	Indents the caption text, so it will 'hang' under the first line of the text.	
	Own formats can be defined using \DeclareCaptionFormat. (See section 4: <i>Own enhancements</i>)	

An example: Specifying the option

format=hang

yields captions like this:

- Figure 3: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.
- indention= For both formats (plain and hang) you can setup an extra indention starting at the second line of the caption. You do this with the option

indention= $\langle amount \rangle$.

Two examples:

format=plain,indention=.5cm

Figure 4: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

format=hang,indention=-0.5cm

Figure 5: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

labelformat= With the option

labelformat=(label format name)

you specify how the caption label will be typeset. There are four standard caption label formats:

default	The caption label will be typeset as specified by the document class, usually this means the name and the number (like simple). (This is the default behaviour.)
empty	The caption label will be empty. (This option makes sense when used together with other options like labelsep=none.)
simple	The caption label will be typeset as a name and a number.
parens	The number of the caption label will be typeset in parentheses.
	Own label formats can be defined using \DeclareCaptionLabelFormat. (See section 4: <i>Own enhancements</i>)

An example: Using the options

labelformat=parens,labelsep=quad

gives captions like this one:

Figure (6) White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

labelsep= With the option

labelsep=(*label separator name*)

you specify what caption separator will be used. You can choose one of the following:

none	There is no caption separator. (This option makes sense when used together with other options like labelformat=empty.)
colon	The caption label and text will be separated by a colon and a space.
period	The caption label and text will be separated by a period and a space.
space	The caption label and text will be separated by a single space.
quad	The caption label and text will be separated by a .
newline	The caption label and text will be separated by a line break $(\backslash \backslash)$.
endash	The caption label and text will be separated by an en-dash, surrounded by spaces ($$).
	Own separators can be defined using \DeclareCaptionLabelSeparator. (See section 4: <i>Own enhancements</i>)

Three examples:

labelsep=period

Figure 7. White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

labelsep=newline, singlelinecheck=false

Figure 8

White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

labelsep=endash

Figure 9 – White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

2.2 Justification

justification= As addition to the caption format you could also specify a *caption justification*; it is specified with the option

justification=(justification name) .

You can choose one of the following:

justified	Typesets the caption as a normal paragraph.
centering	Each line of the caption will be centered.
centerlast	The last line of each paragraph of the caption text will be centered.
centerfirst	Only the first line of the caption will be centered.
raggedright	Each line of the caption will be moved to the left margin.
RaggedRight	Each line of the caption will be moved to the left margin, too. But this time the command \RaggedRight of the ragged2e package will be used to achieve this. ² The main difference is that the word breaking algorithm of T _E X will work inside captions.
raggedleft	Each line of the caption will be moved to the right margin.
	Own justifications can be defined using \DeclareCaptionJustification. (See section 4: <i>Own enhancements</i>)

 $^{^{2}}$ The need for the ragged2e package will be detected at run-time, therefore you maybe need a second LATEX run if this option is used.

Three examples:

justification=centerlast

Figure 10: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

format=hang, justification=raggedright

Figure 11: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

labelsep=newline, justification=centering

Figure 12

White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

singlelinecheck= The standard LATEX document classes (article, report, and book) automatically center a caption if it fits in one single line:

Figure 13: A short caption.



The caption package adapts this behaviour and therefore usually ignores the justification & indention you have set with justification= & indention= in such case. But you can switch this special treatment of such short captions off with the option

singlelinecheck= $\langle bool
angle$

Using false, no, off or 0 for (bool) switches the extra centering off:

singlelinecheck=false

Doing so the above short caption would look like

Figure 13: A short caption.

You switch the extra centering on again by using true, yes, on or 1 for $\langle bool \rangle$. (The default is on.)

2.3 Fonts

font= labelfont= textfont=

t= There are three font options which affects different parts of the caption: One affecting the whole caption (font), one which only affects the caption label and separator t= (labelfont) and at least one which only affects the caption text (textfont). You set them up using the options

font={ (<i>font options</i>) }	,
<pre>labelfont={ (font options) }</pre>	, and
<pre>textfont={ (font options) }</pre>	

And these are the available font options:

footnotesizeThe size usually used for footnotessmallSmall sizenormalsizeNormal sizelargeLarge sizeLargeEven larger sizeupUpright shapeitIalic shapeslSlanted shape
normalsizeNormal sizelargeLarge sizeLargeEven larger sizeupUpright shapeitItalic shape
largeLarge sizeLargeEven larger sizeupUpright shapeitItalic shape
LargeEven larger sizeupUpright shapeitItalic shape
up Upright shape it Italic shape
it Italic shape
•
sl Slanted shape
sc Small Caps shape
md Medium series
bf Bold series
rm Roman family
sf Sans Serif family
tt Typewriter family
singlespacing \singlespacing (see setspace package)
onehalfspacing \onehalfspacing
doublespacing \doublespacing
Own font options can be defined using \DeclareCaptionFont. (See section 4: <i>Own enhancements</i>)

If you use only one of these options you can omit the braces; e.g., the options font={small} and font=small will give the same result.

Two examples:

font={small,it},labelfont=bf

Figure 14: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

font=small,labelfont=bf,textfont=it

Figure 15: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

2.4 Margins and further paragraph options

margin= width=

For all captions you can specify *either* an extra margin *or* a fixed width. You do this by using the options

> margin=(*amount*) or width=(*amount*)

Nevertheless what option you use, the left and right margin will be the same.

Two examples will illustrating this:

margin=10pt

Figure 16: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

width=.75\textwidth

Figure 17: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

This option is useful for captions containing more than one paragraph. It specifies the parskip= extra vertical space inserted between them:

parskip=(amount)

One example:

margin=10pt,parskip=5pt

Figure 18: First paragraph of the caption. This one contains some test, just to show how these options affect the layout of the caption.

Second paragraph of the caption. This one contains some text, too, to show how these options affect the layout of the caption.

The option hangindent=

hangindent=(*amount*)

is for setting up a hanging indention starting from the second line of each paragraph. If the caption contains just a single paragraph, using this option leads to the same result as the option indention= you already know about. But if the caption contains multiple paragraphs you will notice the difference:

format=hang,indention=-.5cm

Figure 19: First paragraph of the caption. This one contains some test, just to show how these options affect the layout of the caption.

Second paragraph of the caption. This one contains some text, too, to show how these options affect the layout of the caption.

format=hang,hangindent=-.5cm

Figure 20: First paragraph of the caption. This one contains some test, just to show how these options affect the layout of the caption.

Second paragraph of the caption. This one contains some text, too, to show how these options affect the layout of the caption.

2.5 Styles

style=

A suitable combination of caption options is called *caption style*. You can compare them more or less to page styles which you set up with \pagestyle: The caption style provides all settings for a whole caption layout.

You switch to an already defined caption style with the option

style=(style name) .

The caption package pre-defines two styles: base and default.

New feature v3 1 The base style puts all options you already know about to values reflecting the look of the captions when using one of the base LAT_EX document classes article, report, and book. This means that specifying the option

style=base

has the same effect as specifying all these options:

format=plain,labelformat=default,labelsep=colon, justification=justified,font=,labelfont=, textfont=,margin=0pt,indention=0pt,parindent=0pt hangindent=0pt,singlelinecheck=true

(But justification=centering, indention=0pt will be set if the caption fits into a single line.)

In contrast the default style follows the default values, reflecting the look of the captions given by the document class you actually use. This style is selected by default and represents these options:

```
format=default,labelformat=default,labelsep=default,
justification=default,font=default,labelfont=default,
textfont=default,margin=0pt,indention=0pt,parindent=0pt
hangindent=0pt,singlelinecheck=true
```

(But again justification=centering, indention=0pt will be set if the caption fits into a single line.)

So if you use one of the base LATEX document classes, both base and default point to the nearly same settings.

Note: Own caption styles can be defined using \DeclareCaptionStyle. (See section 4: Own enhancements)

Skips 2.6

aboveskip= belowskip=

The vertical spaces above and below the caption are controlled by the skips \abovecaptionskip and \belowcaptionskip. The standard LATEX document classes article, report and book set \abovecaptionskip to 10pt and \belowcaptionskip to 0pt, other document classes may use other values.

Both skips can be changed with the command \setlength, but you can use these options, too:

```
aboveskip=(amount)
                     and
belowskip=(amount)
```

Using \abovecaptionskip and \belowcaptionskip has a major design flaw: position= If the caption is typeset *above* (and not *below*) the figure or table they are not set up very useful at default, because there will be some extra space above the caption but no space between the caption and the figure or table itself. (Remember: \belowcaptionskip is usually set to Opt.)

Please compare the spacing in these small tables:

	A B
Table 1: A table	C D
A B	
C D	Table 2: A table

But you can fix this by using the option position=: It specifies how the spacing above and below the caption will be used:

position=top (or position=above)

tells the caption package to use the spacing useful for caption above the figure or table and

position=bottom (or position=below)

tells the caption package to use the spacing useful for captions *below* the figure or table. (The last one is the default setting except for longtables.)

So adding an extra \captionsetup{position=top} to the left example table gives you proper spacing around both captions:

Table 3:	A table	А	В
		С	D
А	В		
С	D	Table 4:	A table

(Technically speaking \abovecaptionskip and \belowcaptionskip will be swapped if you specify the option position=top, so in both cases \abovecaptionskip will be used between the caption and the figure or table itself.)

This option is especially useful when used together with the optional argument of the \captionsetup command. (See section 3: *Commands* for details) For example

```
\captionsetup[table] {position=top}
```

tableposition=

causes all captions within tables to be treated as captions *above* the table (regarding spacing around it). Because this is a very common setting the caption package offers an abbreviating option for the use with \usepackage:

```
\usepackage[...,tableposition=top] {caption}
```

is equivalent to

```
\usepackage[...]{caption}
\captionsetup[table]{position=top}
```

3 Commands

\caption The command

\caption[(lst_entry)] { (heading) }

typesets the caption inside a floating environment like figure or table. Well, you already know this, but the caption package offers an extension: If you leave the argument $\langle lst_entry \rangle$ empty, no entry in the list of figures or tables will be made. For example:

\caption[]{A figure without entry in the list of figures.}

\caption* The longtable package defines the command \caption* which typesets the caption
without label and without entry in the list of tables. An example:

```
\begin{longtable}{cc}
  \caption*{A table}\\
  A & B \\
  C & D \\
\end{longtable}
```

looks like

A	В
С	D

This package offers this feature, too, so you can use this command now within every floating environment like figure or table, like:

```
\begin{table}
  \caption*{A table}
  \begin{tabular}{cc}
   A & B \\
   C & D \\
   \end{tabular}
}
```

\captionof Sometimes you want to typeset a caption outside a floating environment, putting a fig-\captionof* ure within a minipage for instance. For this purpose the caption package offers the command

```
\operatorname{captionof} \{ \langle float type \rangle \} [ \langle lst_entry \rangle ] \{ \langle heading \rangle \}.
```

Note that the first argument, the $\langle float type \rangle$, is mandatory here, because the \captionof command needs to know which name to put into the caption label (e.g. "Figure" or "Table") and in which list to put the contents entry. An example:

```
\captionof{figure}{A figure}
\captionof{table}{A table}
```

typesets captions like this:

Figure 21: A figure

Table 6: A table

The star variant \captionof* has the same behaviour as the \caption* command: it typesets the caption without label and without entry to the list of figures or tables.

Please note that you should use both \captionof and $\captionof *$ only *inside* boxes or environments (like \parbox or minipage), otherwise an error message will be issued.³

\captionsetup

We already know the \captionsetup command (see section 1: Using this package), but this time we get enlighten about its optional argument $\langle float type \rangle$. Remember, the syntax of this command is

```
\captionsetup[{float type}] { (options) }
```

If a $\langle float type \rangle$ gets specified, all the $\langle options \rangle$ don't change anything at this time. Instead they only get marked for a later use, when a caption inside of a floating environment of the particular type $\langle float type \rangle$ gets typeset. For example

```
\captionsetup[figure] { (options) }
```

forces captions within a figure environment to use the given $\langle options \rangle$. Here comes an example to illustrate this:

```
\captionsetup{font=small}
\captionsetup[figure]{labelfont=bf,textfont=it}
```

gives captions like this:

Figure 22: A figure

Table 7: A table

As you see the command $\captionsetup[figure] \{...\}$ only changed the look of the figure caption labels, not touching the other ones.

As $\langle float type \rangle$ you can usually give one of these two only: figure or table. But as we will see later some LATEX packages (like the float, longtable, and sidecap package for example) offer additional floating environments and these two commands can also be used with them. (See section 6: *Supported packages*)

New feature v3.1 There is also a starred variant of \captionsetup :

\captionsetup*[(float type)] {(options)}

While the non-starred variant gives you a warning if the $\langle options \rangle$ are actually not used throughout the document (e.g. a \captionsetup[table] {font=sf} without a table), the starred variant will not. This is quite useful when setting generic options which are independent of a specific document.



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³This only happens if you use ε -TeX as underlying TeX engine. Otherwise no error message will be issued, but a page break can appear between content and caption. Furthermore some strange effects could occur, e.g., mixed-up figure and table settings regarding captions.

\clearcaptionsetup If you want to get rid of these parameters marked for an automatic use within a particular environment you can use the command

```
\clearcaptionsetup[\langle option \rangle] \{\langle float type \rangle\}.
```

For example $\clearcaptionsetup{figure} would clear all the extra handling for figures in the example above:$

```
\captionsetup{font=small}
\captionsetup[figure]{labelfont=bf,textfont=it}
...
\caption{A figure}
...
\clearcaptionsetup{figure}
...
\caption{A figure}
...
```

Figure 23: A figure

Figure 24: A figure

New feature v3.1 If an optional argument (option) is given, only the settings regarding this particular (option) are cleared.⁴ While the example above not only clears the options labelfont=bf, textfont=it for figures (but all options for figures instead), this one would only clear the labelfont=bf setting, leaving all other settings for figures intact:

```
\captionsetup{font=small}
\captionsetup[figure]{labelfont=bf,textfont=it}
...
\caption{A figure}
...
\clearcaptionsetup[labelfont]{figure}
...
\caption{A figure}
...
```

Figure 25: A figure

Figure 26: A figure

Analogous to $\captionsetup*$ there is also a starred form $\clearcaptionsetup*$ which suppresses warnings if the given $\langle option \rangle$ was not setup for the specified $\langle float type \rangle$.

⁴You can only specify *one* option here, not a list of options. If you want to clean more than one option, you need to use more than one \clearcaptionsetups .

\showcaptionsetup For debugging purposes the command

```
\showcaptionsetup{ (float type) }
```

is offered. It generates a logfile entry, showing the given options for the specified $\langle float type \rangle$. For example

```
\captionsetup[figure]{labelfont=bf,textfont=it}
\showcaptionsetup{figure}
```

gives the info:

```
Caption Info: Option list on 'figure'
Caption Data: {labelfont=bf,textfont=it} on input line 5.
```

3.1 Continued floats

\ContinuedFloat Sometimes you want to split figures or tables without giving them their own reference number. This is what the command

\ContinuedFloat

is for; it should be used as first command inside the floating environment. It prevents the increment of the relevant counter (usually done by \caption) so a figure or table with a \ContinuedFloat in it gets the same reference number as the figure or table before. An example:

```
\begin{table}
\caption{A table}
...
\end{table}
...
\begin{table}\ContinuedFloat
\caption{A table (cont.)}
...
\end{table}
```

gives the following result:

Table 8: A table

Table 8: A table (cont.)

4 Own enhancements

\DeclareCaptionFormat	A family of commands is provided to allow users to define their own formats. This enables information on separators, justification, fonts, and styles to be associated with a name and kept in one place (these commands need to appear in the document preamble, this is the part between \documentclass and \begin{document}} . You can define your own caption formats using the command
	\DeclareCaptionFormat{ $(name)$ }{ $(code using \#1, \#2 and \#3)$ }.
	At usage the system replaces #1 with the caption label, #2 with the separator and #3 with the text. So the standard format plain is pre-defined by the caption package as
	<pre>\DeclareCaptionFormat{plain}{#1#2#3\par}</pre>
DeclareCaptionLabelFormat	Likewise you can define your own caption label formats:
	\DeclareCaptionLabelFormat{ $(name)$ } { $(code using \#1 and \#2)$ }
	At usage #1 gets replaced with the name (e.g. "figure") and #2 gets replaced with the reference number (e.g. "12").
\bothIfFirst \bothIfSecond	If you define your own caption label formats and use the subfig package[18], you should take care of empty caption label names. For this purpose the commands
	$\bothIfFirst{\langle first arg \rangle} {\langle second arg \rangle} and \bothIfSecond{\langle first arg \rangle} {\langle second arg \rangle}$
	are offered. \bothIfFirst tests if the first argument exists (means: is not empty), \bothIfSecond tests if the second argument exists. If yes, both arguments get typeset, otherwise none of them.
	For example the standard label format simple is <i>not</i> defined as
	<pre>\DeclareCaptionLabelFormat{simple}{#1~#2} ,</pre>
	because this could cause an extra space if #1 is empty. Instead simple is defined as
	<pre>\DeclareCaptionLabelFormat{simple}{\bothIfFirst{#1}{~}#2} ,</pre>
DeclareCaptionLabelSeparat	causing the space to appear only if the label name is present. ∘You can define your own caption label separators with
	$\DeclareCaptionLabelSeparator{(name)}{(code)}$.
	Again an easy example taken from the caption package itself:
	<pre>\DeclareCaptionLabelSeparator{colon}{: }</pre>

DeclareCaptionJustification You can define your own caption justifications with

\DeclareCaptionFont

\DeclareCaptionJustification{(*name*)}{(*code*)}

The $\langle code \rangle$ simply gets typeset just before the caption. E.g. using the justification raggedright, which is defined as

```
\DeclareCaptionJustification{raggedright} {\raggedright}
```

lets captions with all lines moved to the left margin. You can define your own caption fonts with

 $\DeclareCaptionFont \{\langle name \rangle\} \{\langle code \rangle\}$.

For example this package defines the options small and bf as

\DeclareCaptionFont{small}{\small} and \DeclareCaptionFont{bf}{\bfseries} .

An example which brings color into life:

```
\usepackage{color}
\DeclareCaptionFont{red}{\color{red}}
\DeclareCaptionFont{green}{\color{green}}
\DeclareCaptionFont{blue}{\color{blue}}
\captionsetup{labelfont={blue,bf},textfont=green}
```

Figure 27: White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

But since the caption package already includes the tricky definition

\DeclareCaptionFont{color}{\color{#1}}

you can get the same result simply with

\DeclareCaptionStyle You can define your own caption styles with

\DeclareCaptionStyle { (*name*) } [(*additional options*)] { (*options*) }

Remember, caption styles are just a collection of suitable options, saved under a given name. You can wake up these options at any time with the option $style=\langle style name \rangle$. All caption styles are based on the base set of options. (See section 2.5: *Styles* for a complete list.) So you only need to specify options which are different to them. If you specify $\langle additional \ options \rangle$ they get used in addition when the caption fits into a single line and this check was not disabled with the option singlelinecheck=off. Again a very easy example taken from the core of this package: The caption style base is pre-defined as

```
\DeclareCaptionStyle{base}%
[justification=centering,indention=0pt]{} .
```

4.1 Further Examples

If you would like to have a line break between caption label and text you could define it this way:

\DeclareCaptionFormat{myformat}{#1#2\\#3}

If you select this format with \captionsetup{format=myformat} you get captions like this:

Figure 28:

White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

You could even use an indention with this caption format:

```
\captionsetup{format=myformat,indention=1cm}
```

This would look like this:

Figure 29:

White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

Instead, you would like to have an indention only of the first line of the caption text? No problem, e.g.

```
\newlength\myindention
\DeclareCaptionFormat{myformat}%
    {#1#2\\\hspace*{\myindention}#3}
...
\setlength\myindention{1cm}
\captionsetup{format=myformat}
```

would give you captions like

Figure 30:

White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

But you want to have an caption option for this indention, so you can use it for example with \captionsetup[figure] {myindention=...}? This could be done, too:

```
\newlength\myindention
\DeclareCaptionOption{myindention}%
        {\setlength\myindention{#1}}
\DeclareCaptionFormat{myformat}%
```

{#1#2\\\hspace\myindention #3}

\captionsetup{format=myformat,myindention=1cm}

would give the same result as the example above.

A different example: You want captions to look like this:

White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses. *(Figure 31)*

You could do it this way:

```
\DeclareCaptionFormat{reverse}{#3#2#1}
\DeclareCaptionLabelFormat{fullparens}%
        {(\bothIfFirst{#1}{~}#2)}
\DeclareCaptionLabelSeparator{fill}{\hfill}
\captionsetup{format=reverse,labelformat=fullparens,
        labelsep=fill,font=small,labelfont=it}
```

Another example: The caption text should go into the left margin; a possible solution would be:

\DeclareCaptionFormat{llap}{\llap{#1#2}#3\par} \captionsetup{format=llap,labelsep=quad,singlelinecheck=no}

As a result you would get captions like this:

Figure 32 White sand beaches. The pink smoothness of the conch shell. A sea abundant with possibilities. Duty-free shops filled with Europe's finest gifts and perfumes. Play your favorite game of golf amidst the tropical greens on one of the many championship courses.

5 Document classes & Babel support

Please note: Many document classes already have build-in options and commands for customizing captions. If these possibilities are sufficient for you, there is usually no need for you to use the caption package at all. And if you are just interested in using the command \captionof, loading of the very small capt-of is usually sufficient.

This section will give you an overview of the document classes the caption supports, what do they already offer regarding captions, what side effects will occur when using the caption package with them, and what are the 'default' settings for them.

New feature v3.1

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The 'default' settings depend on the document class you use; they represent how the class author wanted the captions to look like. So for example setting format=default can give you different visual designs when used with different document classes.

If you don't find the document class you use in this section, you usually don't have to worry: Many document classes are derived from one of the standard document classes article, report, or book, and behave the same regarding captions. The caption package automatically does a compatibility check against the document class used and will give you a clear warning if a incompatibility was detected. If you don't get such warning everything is fine, but if you get it the usage of the caption package is not recommended and especially not supported.

(If you get such a compatibility warning but decide to use the caption package anyway, you should watch carefully what side-effects occur, usually the look and feel of your captions will change by just including the caption package without options, meaning they do not look like as intended by the author of the document class. If this is fine for you, you should first specify the option style=base via \usepackage[style=base]{caption} or \captionsetup{style=base} to set the caption package into a well-defined state. Afterwards you can start setting your own options additionally and keep your fingers crossed.)

5.1 Standard LATEX: article, report, and book

Option	default value
format=	plain
labelformat=	simple
labelsep=	colon
justification=	justified
font=	none
labelfont=	none
textfont=	none

(Note: This also applies to document classes derived from them.)

5.2 A_{MS} : amsart, amsproc, and amsbook

Option	default value
format=	plain
labelformat=	simple
labelsep=	a period + \enspace
justification=	justified
font=	\@captionfont
labelfont=	\@captionheadfont
textfont=	\@captionfont\upshape

(\@captionfont will be set to \normalfont, and \@captionheadfont to \scshape by the A_MS document classes.)

Furthermore the margin will be set to \captionindent for more-than-one-line captions (which will be set to $\exists pc$ by the \mathcal{AMS} classes), the margin for single-line captions will be set to the half of it instead. If you want to use a common margin for both, insert \clearcaptionsetup[margin*]{singleline} into the preamble of your document, after loading the caption package.

Additionally the options figureposition=b,tableposition=t will be set. You can override these settings by specifing other values for figureposition= or tableposition= in the option list while loading the caption package.

5.3 beamer

Option	default value
format=	plain
labelformat=	not numbered
labelsep=	colon
justification=	raggedright
font=	use beamer caption settings
labelfont=	use beamer caption name settings
textfont=	none

Build-in features and side-effects:

You can setup font and color settings with <code>\setbeamerfont {caption} { (options) }</code> and <code>\setbeamerfont {caption name} { (options) }</code>. This will still work, unless you set a different font with <code>\captionsetup {font=(options) }</code> or <code>\captionsetup {labelfont=(options) }</code>.

Furthermore the beamer classes offer different caption templates which can be choosen with \setbeamtertemplate{caption} [$\langle template \rangle$]. Since the caption package replaces this caption template mechanism, \defbeamertemplate*{caption} { $\langle template \ code \rangle$ } and \setbeamertemplate{caption} [$\langle template \rangle$] will have no function when the caption package is used.

5.4 KOMA-Script: scrartcl, scrreprt, and scrbook

Option	default value
format=	use \setcapindent & \setcaphanging settings
labelformat=	simple
labelsep=	use \captionformat
justification=	justified
font=	<pre>use \setkomafont{caption} settings</pre>
labelfont=	<pre>use \setkomafont {captionlabel} settings</pre>
textfont=	none

Build-in features:

The KOMA-Script document classes offer many ways to customize the look and feel of the captions. For an overview and a full description please take a look at the KOMA-Script documentation, section 'Tables and Figures'.

Side effects:

The optional argument of \setcapwidth is not supported (yet) and will be ignored if used in conjunction with the caption package. Furthermore the KOMA-Script options tablecaptionabove & tablecaptionbelow and the commands \captionabove & \captionbelow are stronger than the position= setting offered by the caption package.

5.5 NTG: artikel, rapport, and boek

Option	default value
format=	plain
labelformat=	simple
labelsep=	colon
justification=	justified
font=	none
labelfont=	use \CaptionLabelFont
textfont=	use \CaptionTextFont

Build-in features and side-effects:

\CaptionLabelFont and \CaptionTextFont can be set either directly or by using \CaptionFonts. Both is still supported unless you use one of the two options labelfont= or textfont= offered by the caption package.

5.6 SMF classes: smfart and smfbook

Since the SMF document classes are derived from the A_MS document classes the same default values are valid here.

Additionally the margin is limited up to the tenth of the \linewidth. If you don't like this limitation, you can switch it off with the option maxmargin=off or maxmargin=false (which both means the same).

5.7 The frenchb Babel option

If you use the frenchb option of the babel package with one of the three standard LATEX classes (or a one derived from them) the default labelsep= will be set to \CaptionSeparator (offered by frenchb), overriding the default value set by the document class. So redefining \CaptionSeparator will still work, unless you don't select a different labelsep= than the default one.

Please load the caption package after the babel package.

5.8 The frenchle and frenchpro packages

If you use the frenchle or frenchpro package, the default labelsep= will be set to \captionseparator (offered by frenchle/pro) plus \space, overriding the default value set by the document class. So redefining \captionseparator will still work, unless you don't select a different labelsep= than the default one.

Furthermore the default textfont= will be set to textfont=it, since this emulates the default setting of \captionfont defined by the frenchle or frenchpro package. Please note that the command \captionfont is used by the caption package internally for a different purpose, so you should not change it (anymore).

The command $\unnumbered captions {\langle figure or table \rangle }$ will still work, but only unless you don't select a different labelformat = than the default one.

Please load the caption package after the frenchle or frenchpro package.

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6 Supported packages

The caption package was adapted to the following packages which deals with captions, too:

float, floatflt, fltpage, hyperref, hypcap, listings, longtable, picinpar, picins, rotating, sidecap, subfigure, supertabular, threeparttable, and wrapfig

Furthermore the floatrow and the subfig package supports the caption package and use its \captionsetup interface.

6.1 float

The float package[5] introduces the commands \restylefloat to give existing floating environments a new look & feel and \newfloat to define new floating environments. It also provides the H float placement option of the obsolete here package.

For floating environments defined with \newfloat or \restylefloat the position option has no effect on the main caption anymore, since its placement and spacing will be controlled by the selected float style instead.

Furthermore a caption style and options defined with the name of the float style will be executed additionally to the regular ones. Using this mechanism the caption package emulates the default look & feel of the ruled captions: It defines the caption style

So to change this you need either define your own caption style called ruled or use \captionsetup[ruled] { (options) }.

Also by using this mechanism the skip between a boxed float and its caption is specified, overriding its global value:

\captionsetup[boxed]{skip=2pt}

For changing this just use $\captionsetup[boxed] \{skip=\langle value \rangle\}\)$ with an appropriate value. Or if you want to use the global skip setting instead you can remove the usage of the local setting for these floats with $\clearcaptionsetup[skip] \{boxed\}$.

Note: Only one single caption can be typeset inside environments defined with \newfloat or \restylefloat, futhermore these environments are not behaving exactly like the pre-defined floats figure & table. As a consequence many packages do not coorperate well with these. Furthermore the float package has some caveats & limitations, so if you just want to define a new simple floating environment—behaving like figure or table—I recommend using \DeclareFloatingEnvironment instead. And for defining non-simple floating environments and customization I recommend using the floatrow package[7] instead.

6.2 floatflt

The floatflt package[6] offers figures and tables which do not span the full width of a page and are float around by text.

If you want to setup special options for the floatingfigure & floatingtable New feature v3 1 environments you can use

```
\captionsetup[floatingfigure] { (options) }
\captionsetup[floatingtable] { (options) }
```

These options will be executed additionally to the regular ones for figure or table.

Note: The margin resp. width setting will not be used for these figures & tables, unless you set it explicit with \captionsetup[floatingfigure] {...} or \captionsetup[floatingtable] {... }.

6.3 fltpage

The fltpage package[8] offers the outhouse of the caption for figures or tables which needs the whole page for its contents. This will be done by placing the caption on the bottom of the previous or next page.

New feature

Two options control the links to the FPfigure and FPtable:

v3 1

FPlist=caption or FPlist=figure

If set to caption, the list entry will link to the caption; if set to figure, it will link to the figure contents. (The default setting is FPlist=caption.)

FPref=caption or FPref=figure

If set to caption, a \ref, \pageref, \autoref, or \nameref will link to the caption; if set to figure, it will link to the figure contents. (The default setting is FPref=figure.)

If you want to setup special options for the FPfigure & FPtable environments you can use

```
\captionsetup[FPfigure] { (options) }
\captionsetup[FPtable]{(options)}
```

These options will be executed additionally to the regular ones for figure or table. Furthermore $\DefineFloatingEnvironment \{ \langle name \rangle \}$ will also define an environment called FP(*name*) which behaves like FPfigure and FPtable.

6.4 hyperref

The hyperref package[9] is used to handle cross-referencing commands in LaTeX to produce hypertext links in the document.

There are two options available to control the placement of hyperlink anchors:

New feature v3.1

hypcap=true or hypcap=false

If set to true all hyperlink anchors – where entries in the List of Figures, \ref , and \autoref will link to – are placed at the beginning of the (floating) environment.

If set to false the hyperlink anchor is (usually) placed at the caption.

(The default setting is hypcap=true.)

hypcapspace=(*amount*)

Because it looks poor if the hyperlink points exactly at the top of the figure or table, you can specify a vertical distance between the hyperlink anchor and the (floating) environment itself, e.g. hypcapspace=0pt removes this distance.

(The default setting is hypcapspace=0.5\baselineskip.)

Both settings have no effect in lstlistings (provided by the listings package), longtables (provided by the longtable package), and supertabulars (provided by the supertabular package), within these environments hyperlink anchors will always be placed as if hypcap=true & hypcapspace=0pt would be set.

Please note:

 $\left(\frac{type}{1}\right)$

Without hyperref loaded, both will give you identical results. But with hyperref loaded, and with hypcap=true requested, the hyperlink anchor will be placed different. For example:

```
\begin{minipage}{\linewidth}
...
\captionof{figure}{A figure}
\end{minipage}
```

will place the hyperlink anchor at the caption. (And if hypcap=true is set, you will get a warning about this.) But

```
\begin{minipage}{\linewidth}
  \captionsetup{type=figure}
  ...
  \caption{A figure}
  \end{minipage}
```

will place the hyperlink anchor at the beginning of the minipage, since \captionsetup{type=figure} does not only set the caption type to "figure" but does place a hyperlink anchor, too.

\caption[]{...} vs. \captionsetup{listof=false}+\caption{...}

Again, without hyperref loaded, both will give you identical results. But with hyperref loaded, the difference is in the nuances. So for example the optional argument of \caption will also be written to the aux file, and will be used by the \nameref command. So if you choose to use \caption with empty optional argument, \nameref will also give you an empty result. So it's better to use \captionsetup{listof=false} if you don't want an entry in the List of Figures or List of Tables.

6.5 hypcap

The hypcap package[10] offers a solution to the problem that links to a float using hyperref may anchors to the caption rather than the beginning of the float. Since the caption package v3.1 already solves this problem for itself, the hypcap package is usually not needed, at least when you use the caption package.

If the hypcap package is loaded additionally to the hyperref package, it takes over the control of the hyperlink anchor placement from the caption package, overriding the options hypcap= & hypcapspace=.

So for a manual placement of hyperlink anchors $\captionsetup{type=\langle type \rangle}$ is not sufficient anymore, instead you need to use \capstart (provided by the hypcap package) for this.

Regarding the automatical placement the hypcap package offers good placement of hyperlink anchors for the floating environments figure and table only. In contrast the hypcap=true option of the caption package also offers good placements of hyperlink anchors for floatingfigures (provided by the floatflt package), FPfigures & FPtables (provided by the fltpage package), figwindows (provided by the picinpar package), parpics (provided by the picins package), SCfigures (provided by the sidecap package), threeparttables (provided by the threeparttable package, and wrapfigures (provided by the wrapfig package).

6.6 listings

The listings package[11] typesets programming code.

If you want to setup special options for the lstlinsting environment you can use

```
\captionsetup[lstlisting]{(options)}
```

6.7 longtable

The longtable package[12] offers an environment which behaves similar to the tabular environment, but the table itself can span multiple pages.

If you want to setup special options for the longtable environment you can use

 $\captionsetup[longtable] \{ \langle options \rangle \}$.

These options will be executed additionally to the regular ones for table.

The margin & width settings usually override \LTcapwidth , so you get an equal look & feel of the captions in tables and longtables. But if you set \LTcapwidth to a value different from its default = 4in, the caption package will follow that. (But

 $\track{LTcapwidth will be overwritten by \captionsetup[longtable] {width=<math>\langle value \rangle$ }, even if it is set to a value different than 4in.)

New feature

ature Note: \captionof and \ContinuedFloat do not work for longtables. If you need a longtable which does not increment the table counter please use the longtable* environment offered by the caption package.

6.8 picinpar

Similar to the floatfit package the picinpar package[13] offers figures and tables which do not span the full width of a page and are float around by text. For a detailed discussion about the differences between these packages please take a look at The LATEX Companion[1].

New feature If you want to setup special options for the figwindow & tabwindow environments v3.1 you can use

\captionsetup[figwindow] { (options) }
\captionsetup[tabwindow] { (options) }

These options will be executed additionally to the regular ones for figure or table.

Note: The margin resp. width setting will not be used for these figures & tables, unless you set it explicit with \captionsetup[figwindow] {...} or \captionsetup [figtable] {...}.

6.9 picins

Similar to the floatflt and picinpar package the picins package[14] offers figures and tables which do not span the full width of a page and are float around by text. For a detailed discussion about the differences between these packages please take a look at The LATEX Companion[1].

New feature

If you want to setup special options for the parpic environment you can use

\captionsetup[parpic] { (options) }

These options will be executed additionally to the regular ones for figure or table.

Furthermore \piccaption[]{...} produce no entry in the List of Figures, and \piccaption*{...} gives an unlabeled & unnumbered caption.

Note: The margin resp. width setting will not be used for these figures & tables if \piccaptionside or \piccaptiontopside is used. The width setting will not be used (but the margin setting will) if \piccaptionoutside or \piccaptioninside is used. But you can override this by setting it explicit with \captionsetup[parpic]{...}.

Note: If you want to have a \piccaption of another type as figure, please do *not* re-define \@captype as suggested by the picins documentation. Please use the \piccaptiontype{ $\langle type \rangle$ } command which is offered by the caption package instead, e.g.:

```
\piccaptiontype{table}
\piccaption{An example table}
\parpic(50mm,10mm)[s]{...}
```

6.10 rotating

The rotating package[15] offers the floating environments sidewaysfigure and sidewaystable which are just like normal figures and tables but rotated by 90 degree. Furthermore a command \rotcaption is offered for rotated captions only.

The command \rotcaption will be extended by the caption package, so \rotcaption* or \rotcaptionof can be used analogous to \caption and \captionof.

New feature v3.1 Furthermore \DefineFloatingEnvironment { (*name*) } will also define an environment called sideways(*name*) which behaves like sidewaysfigure and sidewaystable.

6.11 sidecap

The sidecap package[16] offers the floating environments SCfigure and SCtable which are like usual figures and tables but the caption will be put *beside* the contents.

If you want to setup special options for the SCfigure & SCtable environments you can use

\captionsetup[SCfigure]{(options)}
\captionsetup[SCtable]{(options)}

These options will be executed additionally to the regular ones for figure or table.

New feature v3.1

Furthermore \DefineFloatingEnvironment {(name)} will also define an environment called SC(name) which behaves like SCfigure and SCtable.

Note: The sidecap package offers its own options for justification. If set, they will override the one specified with the caption option justification= for captions beside their contents.

Note: The margin resp. width setting will not be used for these figures & tables, unless you set it explicit with \captionsetup[SCfigure]{...} or \captionsetup [SCtable]{...}.

(Instead of using the sidecap package you can also use the floatrow package[7] for this purpose.)

6.12 subfigure

The subfigure package[17] provides support for small or 'sub' figures and tables within a single figure or table environment. This package is obsolete, new users should use subfig instead.

Since the subfigure package is obsolete it will only be supported in a way that old documents (which have used the caption package v1.x during development) should still compile as expected.

Please use the subfig package instead with supports the caption package v3.x.

(See the subfig package[18] documentation for details.)

6.13 supertabular

The supertabular package[19] offers an environment which is quite similar to the longtable environment provided by the longtable package[12]: Both offers the typesetting of tables which can span multiple pages. For a detailed discussion about the differences between these two powerful packages please take a look at The LATEX Companion[1].

If you want to setup special options for the supertabular environment you can use

 $\operatorname{captionsetup}[\operatorname{supertabular}] \{\langle options \rangle\}$.

These options will be executed additionally to the regular ones for table.

Note: \ContinuedFloat does not work for supertabulars.

6.14 threeparttable

Provides a scheme for tables that have a structured note section after the table contents and the caption. This scheme provides an answer to the old problem of putting footnotes in tables—by making footnotes entirely unnecessary.

New feature If you want to setup special options for the threeparttable & measuredfigure v3.1 environments you can use

```
\captionsetup[threeparttable]{(options)}
\captionsetup[measuredfigure]{(options)}
```

These options will be executed additionally to the regular ones for table or figure.

Note: Since the caption will have the same width as the contents here, the margin resp. width setting will not be used for these figures & tables, at least unless you set it explicit with \captionsetup[threeparttable]{...} or \captionsetup [measuredfigure]{...}.

(Instead of using the sidecap package you can also use the floatrow package[7] for this purpose.)

6.15 wrapfig

Similar to the floatfit, the picinpar, and the picins package the wrapfig package[21] offers figures and tables which do not span the full width of a page and are float around by text. For a detailed discussion about the differences between these packages please take a look at The LATEX Companion[1].

New feature v3.1

If you want to setup special options for the wrapfigure & wraptable environments you can use

```
\captionsetup[wrapfigure]{(options)}
\captionsetup[wraptable]{(options)}
```

These options will be executed additionally to the regular ones for figure or table.

Furthermore $\DefineFloatingEnvironment{\langle name \rangle}$ will also define an environment called wrap(name) which behaves like wrapfigure and wraptable.

Note: The margin resp. width setting will not be used for these figures & tables, unless you set it explicit with \captionsetup[wrapfigure] {...} or \captionsetup [wraptable] {...}.

Note: If the wrapfig package should be used in coorperation with the float package, it needs to be loaded *after* the float package. Furthermore \newfloat or \restylefloat commands *must* be placed after *both* packages have been loaded.

7 Compatibility to older versions

7.1 caption v1.*x*

This version of the caption package still supports the old options and commands provided by the version 1.x of this package. So there shouldn't occur any problems compiling old documents, but please don't mix old options and commands with the new ones. This isn't supported and can cause ugly side effects.

Here comes a short oversight of the obsolete options and how they have been replaced within this version of the caption package:

caption $v1.x$	caption v3.x
normal	format=plain
hang	format=hang
isu	format=hang
center	justification=centering
centerlast	justification=centerlast
nooneline	singlelinecheck=off
scriptsize	font=scriptsize
footnotesize	font=footnotesize
small	font=small
normalsize	font=normalsize
large	font=large
Large	font=Large
up	labelfont=up
it	labelfont=it
sl	labelfont=sl
SC	labelfont=sc
md	labelfont=md
bf	labelfont=bf
rm	labelfont=rm
sf	labelfont=sf
tt	labelfont=tt

Beside the options for setting up the desired font there were also the commands \captionsize resp. \captionfont and \captionlabelfont who could be redefined with \renewcommand and allowed an alternate and more flexible way to change the font used for captions. This mechanism was replaced by the commands

```
\DeclareCaptionFont{...}{...} and
\captionsetup{font=...,labelfont=...}
```

(See section 4: Own enhancements)

Setting the margin for captions was done in v1.x with

This was replaced by

\captionsetup{margin=...}

(See section 2.4: *Margins and further paragraph options*) For example the old-style code

```
\usepackage[hang,bf]{caption}
\renewcommand\captionfont{\small\sffamily}
\setlength\captionmargin{10pt}
```

will still work fine, but should be written today as

or

The quite exotic option ruled which allowed a partial usage of the caption settings for ruled floats defined with the float package will be emulated by this version of the caption package, too. But using this option is not recommended anymore since this version of the caption package offers a more flexible way for changing the captions of these floating environments:

```
\DeclareCaptionStyle{ruled} {... }
```

resp.

```
\captionsetup[ruled]{...}
```

(See section 4: Own enhancements, section 3: Commands, and section 6.1: float)

7.2 caption2 v2.*x*

Although they do very similar stuff, the packages caption and its experimental and now obsolete variant caption2 have a very different implementation design. Therefore a full compatibility could not be offered. For that reason you will still find a file called caption2.sty in this package distribution, so old documents using the caption2 package will still compile fine.

Newly created documents should use the actual version of the caption package instead. In most cases it's sufficient to replace the command

```
\usepackage[...]{caption2}
```

by

\usepackage[...]{caption}

But some options and commands will not be emulated, so you can get error messages afterwards. This section will hopefully help you removing these errors. If you have problems migrating from caption2 to caption please don't hesitate to send me an e-mail asking for help.

In addition to the obsolete options shown in the last section these ones will be emulated, too:

caption2 $v2.x$	caption v3.x
flushleft	justification=raggedright
flushright	justification=raggedleft
oneline	singlelinecheck=on

Setting the margin for captions was done in v2.x with

```
\setcaptionmargin{...} resp. \setcaptionwidth{...}
```

This was replaced by

```
\captionsetup{margin=...} resp. \captionsetup{width=...} .
```

(See section 2.4: *Margins and further paragraph options*) Setting an indention was done in *v*2.*x* with

```
\captionstyle{indent}
\setlength\captionindent{...} .
```

This is now done with

```
\captionsetup{format=plain,indention=...} .
```

The so-called single-line-check was controlled by the commands <code>\onelinecaptions-false</code> (for switching the check off) and <code>\onelinecaptionstrue</code> (for switching the check on). This was replaced by <code>\captionsetup{singlelinecheck=off}</code> resp. <code>\captionsetup{singlelinecheck=on}</code>. (See section 2.2: Justification)

The commands

```
\captionlabeldelim, \captionlabelsep, \captionstyle,
\defcaptionstyle, \newcaptionstyle, and \renewcaptionstyle
```

do not have a simple replacement and therefore will not be emulated by this version of the caption package. (So using them will cause error messages.) Rewriting such code is not always easy and straight-ahead, but by conscientious reading of this manual you should find appropriate options and commands instead.

The v2.x option ignoreLTcapwidth do not have a replacement, too. But in most cases you can simply drop using that option because in this version of the caption package the value of \LTcapwidth will be ignored anyway (unless you set it to a different value than the default one which is 4in). (See section 6.7: *longtable*)

7.3 caption v3.0

The caption package v3.0 did not support any document classes other than the standard LATEX ones: article, report, and book. Therefore the default settings used to be fixed, but now the caption package supports more classes, therefore they are now set in dependence on the document class used.

For example: While in v3.0 the default caption justification used to be always justified, it's now still justified when using one of the standard document

classes, but raggedright will be used as default format when when used with the beamer document class.

An easy way to select the 'old' defaults is using the option style=base when loading the caption package (or later on using \captionsetup).

Another new feature is the automatic check for compatibility; if an incompatibility will be found, a warning message will be issued and if a strong incompatibility was found some features of the caption package will be disabled. Please note that only this check was added to the caption package, so if you get such warning message, the previous versions of the caption package were incompatible as well, but did not issued such warning, they were "only" having side-effects or causing problems. So these warnings only say that some bad side effects or problems could happen, but not that they actually will happen. Anyway, if you use the caption package in such circumstances, you should use it with care.

8 Alphabetical Reference

8.1 Commands

Command	Section
\abovecaptionskip	2.6
\belowcaptionskip	2.6
\caption	3
\caption*	3
\captionbox	??
\captionof	3
\captionof*	3
\captionsetup	3
\captionsetup*	3
\centerfirst	2.2
\centerlast	2.2
\clearcaptionsetup	3
\clearcaptionsetup*	3
\ContinuedFloat	3.1
\DeclareCaptionFont	4
\DeclareCaptionFormat	4
\DeclareCaptionFormat*	4
\DeclareCaptionJustification	4
\DeclareCaptionLabelFormat	4
\DeclareCaptionLabelSeparator	4
\DeclareCaptionLabelSeparator*	4
\DeclareCaptionListOfFormat	4
\DeclareCaptionOption	4
\DeclareCaptionStyle	4
\DeclareCaptionTextFormat	4
\DeclareFloatingEnvironment	??
\showcaptionsetup	3

8.2 Options

Option	Short description	Section
aboveskip	sets the skip above caption	2.6
belowskip	sets the skip below caption	2.6
compatibility ¹	force (non-)compatibility	5
figurename ¹	sets the figure name	??
figureposition ¹	gives a hint about the figure caption position	2.6
font	sets the font	2.3
format	sets the format	2.1
FPlist	to where the list entry of a FPfigure should link?	6.3
FPref	to where a \ref to a FPfigure should link?	6.3
hangindent	sets the hang indention	2.4
hypcap	select 'hypcap' feature	6.4
hypcapspace	sets the distance between hyperlink & contents	6.4
indention	sets the indention	2.4
justification	sets the justification	2.2
labelfont	sets the font of the caption label	2.3
labelformat	sets the format of the caption label	2.1
labelsep	sets the label separator	2.1
labelseparator	sets the label separator	2.1
listof	switches the entries in the 'List of' on or off	??
listofformat	sets the 'List of' entry format	??
margin	sets the margin	2.4
margin*	sets the margin, but only if no width is set	2.4
maxmargin	sets the max. margin	2.4
minmargin	sets the min. margin	2.4
options	executes the given option list	??
parindent	sets the paragraph indention	2.4
parskip	sets the skip between paragraphs	2.4
position	gives a hint about the caption position	2.6
singlelinecheck	switches the single-line-check on or off	2.2
skip	sets the skip between content & caption	2.6
strut	switches the usage of \struts on or off	2.1
style	sets the caption style	2.5
tablename ¹	sets the table name	??
tableposition ¹	gives a hint about the table caption position	2.6
textfont	sets the font of the caption text	2.3
textformat	sets the format of the caption text	2.1
twoside	selects the two-side mode	??
type	sets the caption type & places a hyperlink anchor	??
type*	sets the caption type of places a hyperinin anener	??
width	sets a fixed caption width	2.4

Note: Obsolete options are not listed here. See

section 7.1: *caption* v1.x and

section 7.2: *caption2 v2.x* for a list of these options.

¹These options are only available in the preamble of the document.

8.3 Warnings

```
\caption will not be redefined since it's already
redefined by a document class or package which is
unknown to the caption package.
```

As a result some features will not work as expected.

If the caption package detects that some (unknown) documentclass or package has enhanced \caption, it will not redefine \caption, too, since this would simply kill the enhancement. As a result some features, like \caption*, \ContinuedFloat, using the optional argument of \captionsetup, or the options listof= & hypcap= will be ignored or not work as expected.

If you don't care about the original enhancements but would like to use the full range of features of the caption package instead you can give the unsupported(!) option compatibility=false a try and keep your fingers crossed. (But you will get the next warning instead.)

(See section 5: Document classes & Babel support)

Caption type was already set to $\langle type \rangle'$.

This warning informs you about mixed caption options. For example if you use a $captionof{table}{...}$ inside a figure environment, this would result in using both option sets for that specific caption, the ones for figure (specified with $captionsetup[figure]{...}$) and the one for table (specified with $captionsetup[table]{...}$) as well.

(See section 3: Commands)

```
Forced redefinition of \caption since the
unsupported(!) package option `compatibility=false'
was given. Please fasten your seat belts, as we may
experience turbulence!
```

Since you were so keen to specify the option compatibility=false the caption package will try to do its best to fulfill your wishes. But depending on the document class or other packages you use that can end in non-functional features or even errors. So keep your fingers crossed!

(See section 5: Document classes & Babel support)

Hyperref support is turned off because hyperref has stopped early.

If the hyperref package stopps early during loading (because of what-ever reason), the hyperref support of the caption package will not be available. As a result you could get hyperref warnings and non-functional hyperlinks to figures or tables.

(See section 6.4: *hyperref*)

Ignoring optional argument [$\langle pos \rangle$] of \setcapwidth.

The caption package tries to emulate the KOMA-Script commands regarding captions as best as it can. But the optional argument of the KOMA-Script command \setcapwidth is not (yet) working if you use this package, so if you try to use it anyway, you will get this warning.

(See section 5.4: KOMA-Script: scrartcl, scrreprt, and scrbook)

Internal Warning: (*warning message*).

You should never see this warning, either you use a package which redefines figure or table and which is unknown to the caption package, or this is a bug in the caption package. Please send me an e-mail reporting this issue.

\label before \caption ignored

Regarding \label the floating environments behave differently than its non-floating counterparts: The internal reference will not be generated at the beginning of the environment, but at \caption instead. So you have to place the \label command either *after* the \caption command or inside the caption text.

Option $\langle option \rangle'$ was not in list $\langle option \ list \rangle'$.

If you try to remove a specific option of an option list, for example with \clearcaptionsetup[position]{table}, and this option can not be found inside the option list, you will get this warning. If this is not because of a typo and you would like to suppress this warning, use \clearcaptionsetup* instead of \clearcaptionsetup.

(See section 3: *Commands*)

Option list '(option list)' undefined.

If you try to remove a specific option of an option list, for example with \clearcaptionsetup[format]{figure}, and this option list is not defined (yet), you will get this warning. If this is not because of a typo and you would like to suppress this warning, use \clearcaptionsetup* instead of \clearcaptionsetup.

(See section 3: Commands)

`ragged2e' package not loaded, therefore substituting \raggedright for \RaggedRight.

The caption option justification=RaggedRight is only full functional if you have the ragged2e package installed in your T_EX system. If not, you will get this warning, and justification=RaggedRight will be treated as justification=raggedright.

(See section 2.2: Justification)

Obsolete option 'ignoreLTcapwidth' ignored.

The caption2 package option ignoreLTcapwidth will not be emulated by this version of the caption package, usually you can simply wipe it away.

(See section 7.2: *caption2 v2.x* and section 6.7: *longtable*)

'ragged2e' support has been changed. Rerun to get captions right.

The ragged2e package will only be loaded by the caption package if it is actually needed. At least two LATEX runs are needed for that, so on the first run you could get this warning. Just compile your document again and this warning should go away.

(See section 2.2: Justification)

Reference on page (page no.) undefined.

(See section 2.4: Margins and further paragraph options)

The option 'hypcap=true' will be ignored for this particular \caption.

The caption package hasn't found a proper hyperlink anchor for this particular caption, so it decides to ignore the setting hypcap=true (which is set by default). As a result a link to this caption (e.g. in the List of Figures, or set by \ref or \autoref) will link you to the caption of the figure or table, not to the figure or table itself.

This can happen if you use \captionof inside a non-floating environment, but also if you use some package which redefines figure or table, and which is unknown to the caption package.

If this is ok for you but you want to supress this warning, simply place a \captionsetup{hypcap=false} just before the \caption or \captionof command which is causing the warning. If this is not ok for you you can try to set a hyperlink anchor with \captionsetup{type= $\langle float type \rangle$ } for yourself.

(See section 6.4: *hyperref*)

Unsupported document class (or package) detected, usage of the caption package is *not* recommended.

Either the document class you use is unknown to the caption package, or you have included a package in your document which redefines \@makecaption (which is responsible for typeseting the caption) as well. This means the caption package will either change the design of captions in an unwanted way, or it even refuses to work correctly at all.

(See section 5: Document classes & Babel support)

Unused $\langle captionsetup[\langle type \rangle]$.

You have specified options with \captionsetup[$\langle type \rangle$] which are not used later on. This can be because of a typo in $\langle type \rangle$, or because you use a package which redefines figure or table and which is unknown to the caption package, or simply because you don't have any usage of the environment $\langle type \rangle$ after this line.

If you want to supress this warning you can use $\captionsetup \star$ instead of \captionsetup .

(See section 3: *Commands*)

```
Usage of the (package) package together with the caption package is strongly *not* recommended.
Instead of loading the (package) package you should use the caption package option 'tableposition=top'.
```

The package $\langle package \rangle$ is dealing with caption skips as well. Please decide which one do you actually want to use, the caption package or the other one, using both can lead to wrong skips above or below the caption.

(See section 2.6: Skips)

8.4 Errors

```
Argument of \@caption has an extra }.
```

Paragraph ended before \@caption was complete.

If you want to typeset something special (like a tabular) as caption, you need to give an optional argument to \caption resp. \captionof for the List of Figures resp. List of Tables, too, even if you don't use such list.

(See section 3: Commands, ??: ??, and section 6.4: hyperref)

\caption outside float.

You have placed a \caption command outside a floating environment or a longtable. If this is what you want to, please use either \captionsetup{ type= $\langle type \rangle$ } + \caption or \captionof.

(See section 3: *Commands*)

\caption outside box or environment. -or-\captionsetup{type=...} outside box or environment. -or-

\captionsetup{type*=...} or \captionof outside box or environment.

```
You have placed a \caption, \captionof, or \captionsetup{type=\langle type \rangle} command outside an box, group, or environment. This is not supported.
```

(See section 3: Commands)

\ContinuedFloat outside float.

You have placed a \ContinuedFloat command outside a floating environment. If this is what you want to, please use the combination \captionsetup{type= $\langle type \rangle$ } + \ContinuedFloat.

Please note that \ContinuedFloat inside a longtable is not working (yet), but maybe using the longtable * environment, which typesets a longtable without incrementing the table counter, if sufficient for you.

(See section 3: Commands and section 6.7: longtable)

Continued $\langle type \rangle'$ after $\langle type \rangle'$.

At the moment continued figures or tables are not allowed to be interrupted by a floating envionment of another type, e.g. a table between a figure and a continued figure.

(See section 3.1: Continued floats)

```
For a successful cooperation of the 'wrapfig' package with the 'float' package you should load the 'wrapfig' package *(right) after* the 'float' package.
```

Please take care of the load order of packages if you use the wrapfig package in coorperation with the float package.

(See section 6.15: wrapfig)

For a successful cooperation of the 'wrapfig' package with the 'float' package you should use at least 'wrapfig' version 3.6.

Please take care of the version of the wrapfig package if you use the wrapfig package in coorperation with the float package.

(See section 6.15: *wrapfig*)

```
For a successful cooperation we need at least version \langle date \rangle' of package \langle package \rangle, but only version \langle old-date \rangle' is available.
```

The caption package does not work with such an outdated package, please update it to a more recent version, at least to the one requested.

Internal Error: (*error message*).

You should never see this error. Please send me an e-mail reporting this issue.

Not allowed in longtable * environment.

The usage of caption is not allowed inside the longtable* environment. Please use either caption* for a caption without label or use the regular longtable environment instead.

Not available in compatibility mode.

The feature required is not supported in compatibility mode. 'compatibility mode' means that the caption package has detected either an incompatible document class or an incompatible package which also extents the \caption command. Leaving the original extention intact, some features of the caption package are not supported.

(See section 7: Compatibility to older versions)

Only one \caption can be placed in this environment.

Inside the environments offered by the fltpage and sidecap package only one caption can be placed. (This is due implementation design.)

```
Option clash for package caption.
- but sometimes also -
```

Missing \begin{document}.

The caption package has already been loaded by some other LATEX package, so you can't do that again specifying different options. A candidate causing this could be the subfig package; if this is the case, please load the caption package *before* the subfig package or specify the option caption=false while loading the subfig package.

(See the subfig package[18] documentation)

Paragraph ended before \caption@makecurrent was complete.

If you want to typeset multi-paragraph captions, you need to give an optional argument to \caption resp. \captionof for the List of Figures resp. List of Tables, too, even if you don't use such list.

(See section 3: Commands, ??: ??, and section 6.4: hyperref)

```
The option 'labelsep=(name)' does not work
with 'format=hang'.
    -or-
The option 'labelsep=(name)' does not work
with \setcaphanging (which is set by default).
```

A caption label separator which contains a \\ command (like labelsep= newline) can not be combined with a hanging caption format (like format= hang). Please select either another caption label seperator (e.g. labelsep=colon) or another caption format (e.g. format=plain).

(See section 2.1: Formatting resp. section 5.4: KOMA-Script: scrartcl, scrrept, and scrbook)

The package option 'caption=false' is obsolete. Please pass this option to the subfig package instead and do *not* load the caption package anymore.

You have specified the option caption=false. This used to be a workaround for not using the whole caption package, leaving the caption stuff offered by the document class or other packages intact, but keeping the subfig package working. This mechanism is obsolet and not offered anymore, please pass this option to the subfig instead and do not load the caption package anymore.

(See the subfig package[18] documentation)

Undefined boolean value '\value'.

You tried to set a boolean option (like singlelinecheck= or hypcap=) with an improper value. Only false, no, off, 0 or true, yes, on, 1 is allowed here.

Undefined format $\langle name \rangle'$.

You tried to set a caption format which does not exists. Maybe a typo!? (See section 2.1: *Formatting*)

Undefined label format $\langle name \rangle'$.

You tried to set a caption label format which does not exists. Maybe a typo!? (See section 2.1: *Formatting*)

Undefined label separator ' $\langle name \rangle$ '.

You tried to set a caption label separator which does not exists. Maybe a typo!? (See section 2.1: *Formatting*)

Undefined list-of format '(name)'.

You tried to set a caption list-of format which does not exists. Maybe a typo!? (See ??: ??)

Undefined position $\langle name \rangle'$.

You tried to set a caption position with an improper value. Maybe a typo!? (See section 2.6: *Skips*)

Undefined style (name)'.

You tried to set a caption style which does not exists. Maybe a typo!? (See section 2.5: *Styles*)

Undefined text format '(name)'.

You tried to set a caption text format which does not exists. Maybe a typo ??

(See section 2.1: *Formatting*)

You can't use both, the (obsolete) caption2 *and* the (current) caption package.

This error message says it all, you simply can't do that. Please use only the caption package.

(See section 7.2: *caption2* v2.x)

You can't use the caption package option `tableposition=position' and use the (package package, too. -or-You can't use the global option `tablecaptionabove' and use the (package package, too.

The package $\langle package \rangle$ is dealing with caption skips as well. Please decide which one do you actually want to use, the caption package or the other one, using both this way will lead to wrong skips above or below the caption.

(See section 2.6: Skips)

9 Further reading

I recommend the following documents for further reading:

• The T_EX FAQ – Frequently asked questions about T_EX and LAT_EX:

http://faq.tug.org/

• A French FAQ can be found at

http://www.grappa.univ-lille3.fr/FAQ-LaTeX/

• "What is a minimal working example?" from Christian Faulhammer and Ulrich Schwarz:

http://www.minimalbeispiel.de/mini-en.html

• epslatex from Keith Reckdahl contains many tips around including graphics in LATEX 2ε documents. You will find this document in the directory

ftp://tug.ctan.org/pub/tex/info/epslatex/

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