

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 L^AT_EX 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 v3.1c, last revised 2007/10/17.

¹A 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[\langle options \rangle]{caption}[2007/10/17]
```

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.,

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

would result in captions looking like the second one in the introduction.

`\captionsetup` For a later change of options the caption package provides the command

```
\captionsetup[\langle float type \rangle]{\langle options \rangle}
```

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 `\captionsetup` 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 `\captionsetup` command inside the `figure` or `table` right before the `\caption` 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 *\langle float type \rangle* 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=⟨format name⟩` ,

having the name of the caption format as its argument.

There are two standard caption formats:

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

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.

`indentation=` For both formats (`plain` and `hang`) you can setup an extra indentation starting at the second line of the caption. You do this with the option

`indentation=⟨amount⟩`.

Two examples:

`format=plain,indentation=.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,indentation=-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:

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

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:

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

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:

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

²The need for the `ragged2e` package will be detected at run-time, therefore you may 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 L^AT_EX 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 & indentation you have set with `justification=` & `indentation=` in such case. But you can switch this special treatment of such short captions off with the option

```
singlelinecheck=<bool> .
```

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 *<bool>*. (The default is on.)

2.3 Fonts

`font=` 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 (`labelfont`) and at least one which only affects the caption text (`textfont`). You set them up using the options


```
font={\font options} ,
labelfont={\font options} , and
textfont={\font options} .
```

And these are the available font options:

```
scriptsize      Very small size
footnotesize    The size usually used for footnotes
small           Small size
normalsize      Normal size
large           Large size
Large           Even larger size
up              Upright 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: Own enhancements)
```

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

parskip= This option is useful for captions containing more than one paragraph. It specifies the 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.

hangindent= The option

hangindent=*<amount>*

is for setting up a hanging indentation 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 `indentation=` you already know about. But if the caption contains multiple paragraphs you will notice the difference:

```
format=hang,indentation=-.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=\langle style name \rangle .
```

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 L^AT_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,indentation=0pt,parindent=0pt
hangindent=0pt,singlelinecheck=true
```

(But `justification=centering,indentation=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,indentation=0pt,parindent=0pt
hangindent=0pt,singlelinecheck=true
```

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

So if you use one of the base L^AT_EX 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](#))

2.6 Skips

`aboveskip=` The vertical spaces above and below the caption are controlled by the skips `\abovcaptionskip` and `\belowcaptionskip`. The standard L^AT_EX document classes `article`, `report` and `book` set `\abovcaptionskip` to 10pt and `\belowcaptionskip` to 0pt, other document classes may use other values.

`belowskip=`

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

`aboveskip=<amount>` and
`belowskip=<amount>` .

`position=`

Using `\abovcaptionskip` and `\belowcaptionskip` has a major design flaw: 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 0pt.)

Please compare the spacing in these small tables:

Table 1: A table

A	B
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

A	B
C	D

A	B
C	D

Table 4: A table

(Technically speaking `\abovcaptionskip` and `\belowcaptionskip` will be swapped if you specify the option `position=top`, so in both cases `\abovcaptionskip` 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 `⟨lst_entry⟩` 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 table

A	B
C	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}
\end{table}
```

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

```
\captionof{⟨float type⟩}[⟨lst_entry⟩]{⟨heading⟩} .
```

Note that the first argument, the `⟨float type⟩`, 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 *⟨float type⟩*.

Remember, the syntax of this command is

```
\captionsetup[⟨float type⟩]{⟨options⟩} .
```

If a *⟨float type⟩* gets specified, all the *⟨options⟩* 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 *⟨float type⟩* gets typeset. For example

```
\captionsetup[figure]{⟨options⟩}
```

forces captions within a *figure* environment to use the given *⟨options⟩*.

Here comes an example to illustrate this:

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

gives captions like this:

Figure 22: A figure

Table 7: A table

As you see the command `\captionsetup[figure]{labelfont=bf}` only changed the font of the figure caption labels, not touching all other ones.

`\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{⟨float type⟩} .
```

For example `\clearcaptionsetup{figure}` would clear the extra handling in the example above:

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.

Figure 23: A figure

Table 8: A table

As *float type* 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.

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 9: A table

...

Table 9: A table (cont.)

4 Own enhancements

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}`).

`\DeclareCaptionFormat` 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

```
\DeclareCaptionFormat{plain}{#1#2#3\par}
```

`\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{<first arg>}{<second arg>} and  
\bothIfSecond{<first arg>}{<second arg>}
```

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 *not* defined as

```
\DeclareCaptionLabelFormat{simple}{#1~#2}
```

because this could cause an extra space if #1 is empty. Instead `simple` is defined as

```
\DeclareCaptionLabelFormat{simple}{\bothIfFirst{#1}{~}#2}
```

causing the space to appear only if the label name is present.

`\DeclareCaptionLabelSeparator` You can define your own caption label separators with

```
\DeclareCaptionLabelSeparator{<name>}{<code>}
```

Again an easy example taken from the caption package itself:

```
\DeclareCaptionLabelSeparator{colon}{:}
```

`\DeclareCaptionJustification` You can define your own caption justifications with

```
\DeclareCaptionJustification{<name>}{<code>} .
```

The `<code>` 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.

`\DeclareCaptionFont` You can define your own caption fonts with

```
\DeclareCaptionFont{<name>}{<code>} .
```

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 24: 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

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

`\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=<style name>`.

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 `<additional options>` 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,indentation=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 25:

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 indentation with this caption format:

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

This would look like this:

Figure 26:

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 indentation only of the first line of the caption text? No problem, e.g.

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

would give you captions like

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

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

```

        {#1#2\\\hspace\myindentation #3}
...
\captionsetup{format=myformat,myindentation=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 28)

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 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.

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



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 L^AT_EX: article, report, and book

Option	default value
<code>format=</code>	<code>plain</code>
<code>labelformat=</code>	<code>simple</code>
<code>labelsep=</code>	<code>colon</code>
<code>justification=</code>	<code>justified</code>
<code>font=</code>	<i>none</i>
<code>labelfont=</code>	<i>none</i>
<code>textfont=</code>	<i>none</i>

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

5.2 \mathcal{AMS} : 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 \mathcal{AMS} document classes.)

Furthermore the margin will be set to \captionindent for more-than-one-line captions (which will be set to 3pc 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 specifying other values for figureposition= or tableposition= in the option list while loading the caption package.

5.3 beamer

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

Build-in features and side-effects:

You can setup font and color settings with \setbeamerfont{caption}{\langle options \rangle} and \setbeamerfont{caption name}{\langle options \rangle}. This will still work, unless you set a different font with \captionsetup{font=\langle options \rangle} or \captionsetup{labelfont=\langle options \rangle}.

Furthermore the beamer classes offer different caption templates which can be chosen with \setbeamerteremplate{caption}[\langle template \rangle]. Since the caption package replaces this caption template mechanism, \defbeamerteremplate*{caption}{\langle template code \rangle} and \setbeamerteremplate{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=	<i>use \setcapindent & \setcaphanging settings</i>
labelformat=	simple
labelsep=	<i>use \captionformat</i>
justification=	justified
font=	<i>use \setkomafont{caption} settings</i>
labelfont=	<i>use \setkomafont{captionlabel} settings</i>
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=	<i>use \CaptionLabelFont</i>
textfont=	<i>use \CaptionTextFont</i>

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 \mathcal{AMS} 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 L^AT_EX 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 \unnumberedcaptions{*figure or table*} 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.

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

```
\DeclareCaptionStyle{ruled}{labelfont=bf,labelsep=space,
                             strut=off}.
```

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=<value>}` 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`, furthermore these environments are not behaving exactly like the pre-defined floats `figure` & `table`. As a consequence many packages do not cooperate 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.

New feature
v3.1

If you want to setup special options for the floatingfigure & floatingtable environments you can use

```
\captionsetup[floatingfigure]{\langle options \rangle}  
\captionsetup[floatingtable]{\langle options \rangle} .
```

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
v3.1

Two options control the links to the FPfigure and FPtable:

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]{\langle options \rangle}  
\captionsetup[FPtable]{\langle options \rangle} .
```

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\langle name \rangle 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.

New feature
v3.1

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

`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`.)

`hycapSPACE=<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. `hycapSPACE=0pt` removes this distance.

(The default setting is `hycapSPACE=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` & `hycapSPACE=0pt` would be set.

Please note:

`\captionof{<type>}{...}` vs. `\captionsetup{type=<type>}+\caption{...}`

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 anchor 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=<type>}` 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 `lstlisting` 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]{<options>}
```

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

New feature
v3.1

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 floatflt 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 L^AT_EX Companion[1].

New feature v3.1 If you want to setup special options for the figwindow & tabwindow environments 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 L^AT_EX Companion[1].

New feature v3.1 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.

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 \@capytype as suggested by the picins documentation. Please use the \piccaptiontype{\type} 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 sidewaysstable 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 sidewaysstable.

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]{\langle options \rangle}
\captionsetup[SCTable]{\langle options \rangle} .
```

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

New feature
v3.1

Furthermore \DefineFloatingEnvironment{\langle name \rangle} will also define an environment called SC\langle name \rangle 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 L^AT_EX Companion[1].

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

```
\captionsetup[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
v3.1 If you want to setup special options for the `threeparttable` & `measuredfigure` environments you can use

```
\captionsetup[threeparttable]{\langle options \rangle}
\captionsetup[measuredfigure]{\langle options \rangle} .
```

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 `floatflt`, 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 L^AT_EX Companion[1].

New feature
v3.1 If you want to setup special options for the `wrapfigure` & `wraptable` environments you can use

```
\captionsetup[wrapfigure]{\langle options \rangle}
\captionsetup[wraptable]{\langle options \rangle} .
```

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\langle name \rangle` 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 cooperation 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

```
\setlength{\captionmargin}{...} .
```

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

```

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

```

or

```

\usepackage{caption}
\captionsetup{format=hang,labelfont=bf,font={small,sf},
margin=10pt}

```

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 indentation was done in v2.x with

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

This is now done with

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

The so-called single-line-check was controlled by the commands `\onelinecaptionsfalse` (for switching the check off) and `\onelinecaptionstrue` (for switching the check on). This was replaced by `\captionsetup{singlelinecheck=off}` resp. `\captionsetup{singlelinecheck=on}`. (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 L^AT_EX 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
<code>\abovecaptionskip</code>	2.6
<code>\belowcaptionskip</code>	2.6
<code>\caption</code>	3
<code>\caption*</code>	3
<code>\captionbox</code>	??
<code>\captionof</code>	3
<code>\captionof*</code>	3
<code>\captionsetup</code>	3
<code>\captionsetup*</code>	3
<code>\centerfirst</code>	2.2
<code>\centerlast</code>	2.2
<code>\clearcaptionsetup</code>	3
<code>\clearcaptionsetup*</code>	3
<code>\ContinuedFloat</code>	3.1
<code>\DeclareCaptionFont</code>	4
<code>\DeclareCaptionFormat</code>	4
<code>\DeclareCaptionFormat*</code>	4
<code>\DeclareCaptionJustification</code>	4
<code>\DeclareCaptionLabelFormat</code>	4
<code>\DeclareCaptionLabelSeparator</code>	4
<code>\DeclareCaptionLabelSeparator*</code>	4
<code>\DeclareCaptionListOfFormat</code>	4
<code>\DeclareCaptionOption</code>	4
<code>\DeclareCaptionStyle</code>	4
<code>\DeclareCaptionTextFormat</code>	4
<code>\DeclareFloatingEnvironment</code>	??
<code>\showcaptionsetup</code>	3

8.2 Options

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

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 [`\pos`] 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 *'<option>'* was not in list *'<option list>'*.

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 \TeX 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.

If you use a `twoside` page layout, the `caption` package needs to track the page numbers to get the margins right. At least two \LaTeX runs are needed for that, on the first run you could get this warning. Just compile your document again and this warning should go away.

(See [section 2.4: Margins and further paragraph options](#))

The option `'hyccap=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 `hyccap=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 suppress this warning, simply place a `\captionsetup{hyccap=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=<float type>}` 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 typesetting 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 `\captionsetup[<type>]`.

You have specified options with `\captionsetup[<type>]` which are not used later on. This can be because of a typo in `<type>`, 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 `<type>` after this line.

If you want to suppress this warning you can use `\captionsetup*` 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 `<package>` 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 }.

-or-

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=<type>} + \caption or \captionof.

(See [section 3: Commands](#))

\caption outside group or environment.

You have placed a \caption command outside an box, group, or environment. This is not supported.

(See [section 3: Commands](#))

\captionsetup{type=<type>} outside group or environment.

You have placed a \captionof or \captionsetup{type=<type>} 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=<type>} + \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 '<type>' after '<type>'.

At the moment continued figures or tables are not allowed to be interrupted by a floating environment 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 cooperation 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 cooperation with the float package.

(See [section 6.15: wrapfig](#))

For a successful cooperation we need at least version `'<date>'` of package `<package>`, but only version `'<old-date>'` 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 extends the `\caption` command. Leaving the original extension 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.

– or maybe –

Missing `\begin{document}`.

The caption package has already been loaded by some other L^AT_EX 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 separator (e.g. `labelsep=colon`) or another caption format (e.g. `format=plain`).

(See [section 2.1: *Formatting*](#) resp. [section 5.4: *KOMA-Script: scrartcl, scrreprt, 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 obsolete 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 `'<name>'`.

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

(See [section 2.1: *Formatting*](#))

Undefined label format `'<name>'`.

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

(See [section 2.1: *Formatting*](#))

Undefined label separator `'<name>'`.

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 `'<name>'`.

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 '*\langle name \rangle*'.

You tried to set a caption text format which does not exist. 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=\langle position \rangle`' and use the `\langle package \rangle` package, too.

-or-

You can't use the global option '`tablecaptionabove`' and use the `\langle package \rangle` 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 \TeX FAQ – Frequently asked questions about \TeX and \LaTeX :
<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 2 ϵ documents. You will find this document in the directory
<ftp://tug.ctan.org/pub/tex/info/epslatex/>

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