

The ltcaption package*

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Abstract

This package fixes caption problems with other-than-centered aligned longtables.
(solves [L^AT_EX PR tools/3387](#))

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*This package has version number v1.1, last revised 2007/09/01.

1 The user interface

Just include this package *after* the longtable package[1], e.g.:

```
\usepackage{longtable, ltcaption}
```

`\LTcapleft` `\LTcapright` You can alter the centering of the caption box (of width `\LTcapwidth`) by setting the lengths `\LTcapleft` & `\LTcapright` to appropriate values. These are set to `\fill` by default, just like the values `\LTleft` & `\LTright`.

`\LTcapmarginfalse` Another option is the usage of the command `\LTcapmarginfalse` which makes the ltcaption package using the values `\LTleft` & `\LTright` instead of `\LTcapleft` & `\LTcapright`.

Note: If the ltcaption package will be used with one of the NTG document classes[2], `\CaptionLabelFont` & `\CaptionTextFont` will not only be used for figure & table captions, but for longtable captions as well.

Note: These adoptions do not work when used with one of the KOMA-Script classes[3] `scrartcl`, `scrreprt` or `scrbook`, the KOMA-Script settings for captions are used instead. Same with the caption package which also uses its own options and settings.

`\LTcapttype` As a bonus feature this package patches the longtable package so `\LTcapttype` will be used internally instead of the fixed caption type 'table'. So for example this code snippet:

```
\renewcommand\LTcapttype{figure}
\begin{longtable}{ll}
\caption{An example longtable}\\
A & B \\
C & D \\
\end{longtable}
```

will result in a longtable like this:

Figure 7: An example longtable

A	B
C	D

`longtable*` Another bonus feature is the addition of the environment `longtable*` which does not increment the table counter. (As a consequence, `\caption` is not available for such longtables, but `\caption*` still is.)

2 Spot the difference

Without the `lcaption` package:

Table 1: Left aligned longtable left aligned longtable left aligned
longtable

This is only a test

Table 2: Right aligned longtable right aligned longtable right aligned
longtable

This is only a test

Table 3: Centered longtable centered longtable centered longtable centered
longtable

This is only a test

With the `lcaption` package (and the default value of `\LTcapwidth`):

Table 4: Left aligned longtable left aligned longtable left aligned
longtable

This is only a test

Table 5: Right aligned longtable right aligned longtable right aligned
longtable

This is only a test

Table 6: Centered longtable centered longtable centered longtable centered
longtable

This is only a test

With the `lrcaption` package and `\LTcapwidth=\linewidth`:

Table 7: Left aligned longtable left aligned longtable left aligned longtable left aligned longtable

This is only a test

Table 8: Right aligned longtable right aligned longtable right aligned longtable right aligned longtable

This is only a test

Table 9: Centered longtable centered longtable centered longtable centered longtable

This is only a test

With the `lrcaption` package and `\LTcapleft=0pt` resp. `\LTcapright=0pt`:

Table 10: Left aligned longtable left aligned longtable left aligned longtable

This is only a test

Table 11: Right aligned longtable right aligned longtable right aligned longtable

This is only a test

With the `ltablex` package and `\LTcapleft=\tabcolsep`
resp. `\LTcapright=\tabcolsep`:

Table 12: Left aligned longtable left aligned longtable left aligned
longtable

This is only a test

Table 13: Right aligned longtable right aligned longtable right aligned
longtable

This is only a test

With the `ltablex` package and `\LTcapmarginfalse`:

Table 14: Left aligned longtable left aligned longtable left aligned
longtable

This is only a test

Table 15: Right aligned longtable right aligned longtable right aligned
longtable

This is only a test

Table 16: Centered longtable centered longtable centered longtable cen-
tered longtable

This is only a test

3 The Implementation

3.1 Identification

```
1 \NeedsTeXFormat{LaTeX2e}[1994/12/01]
2 \ProvidesPackage{ltcaption}[2007/09/01 v1.1 longtable captions (AR)]
```

3.2 User interface

`\LTcapttype` `\LTcapttype` is preset to `table`.

```
3 \providecommand*\LTcapttype{table}
4 \providecommand*\ext@table{lot}
```

`\ext@lstlisting` Since the listings package do not define `\ext@lstlisting`, but we needed it when `\renewcommand\LTcapttype{lstlisting}` was done by the end user, we define it here.

```
5 \@ifundefined{caption@AtBeginDocument}\AtBeginDocument\caption@AtBeginDocument{%
6   \@ifpackageloaded{listings}{%
7     \providecommand*\ext@lstlisting{lol}%
8   }{}}
```

To save \TeX memory some stuff will not be defined if the caption package is loaded.

```
9 \@ifpackageloaded{caption}{}{%
```

`\LTcapleft` Our skips and the flag belonging to them.

`\LTcapright` (Default: Use these skips (and not `\LTleft` & `\LTright`.)

```
\ifLTcapmargins
10 \newskip\LTcapleft \LTcapleft=\fill
11 \newskip\LTcapright \LTcapright=\fill
12 \newif\ifLTcapmargins \LTcapmarginstrue
```

`\CaptionLabelFont` These commands are provided by the NTG document classes. To make this package work with other document classes as well, we need to define `\CaptionLabelFont` & `\CaptionTextFont` here.

```
13 \providecommand*\CaptionLabelFont{}
14 \providecommand*\CaptionTextFont{}
15 }
```

3.3 The longtable patch

`\LT@array` We insert our stuff into the definition of `\LT@array` here. Since the `hyperref` package patches `\LT@array` as well and since this only works with the original definition of `\LT@array`, we have to do this after the `hyperref` package, i.e. `\AtBeginDocument`.

```
16 \@ifundefined{caption@AtBeginDocument}\AtBeginDocument\caption@AtBeginDocument{%
17   \let\ltcaption@ORI@LT@array\LT@array
18   \renewcommand*\LT@array{%
```

We modify the next `\refstepcounter` resp. `\H@refstepcounter` & `\hyper@makecurrent`, so `\LTcapttype` is used instead of `{table}`.

```
19   \let\ltcaption@ORI@refstepcounter\refstepcounter
20   \let\ltcaption@ORI@H@refstepcounter\H@refstepcounter
21   \def\refstepcounter##1{%
```

```

22      \let\refstepcounter\lrcaption@ORI@refstepcounter
23      \let\H@refstepcounter\lrcaption@ORI@H@refstepcounter
24      \refstepcounter\LTcaption}%
25      \def\H@refstepcounter##1{%
26        \let\refstepcounter\lrcaption@ORI@refstepcounter
27        \let\H@refstepcounter\lrcaption@ORI@H@refstepcounter
28        \H@refstepcounter\LTcaption}%
29      \let\lrcaption@ORI@hyper@makecurrent\hyper@makecurrent
30      \def\hyper@makecurrent##1{%
31        \let\hyper@makecurrent\lrcaption@ORI@hyper@makecurrent
32        \hyper@makecurrent\LTcaption}%

```

We redefine `\lst@@caption` so `\thelstlisting` will print out its counter, too.

```

33      \def\lst@@caption{\relax}%
34      \lrcaption@ORI@LT@array}%
35 }

```

`\LT@caption` The original implementation:

```

\def\LT@caption#1[#2]#3{%
  \LT@makecaption#1\fnun@table{#3}%
  \def\@tempa{#2}%
  \ifx\@tempa\@empty\else
    {\let\\\space
     \addcontentsline{lot}{table}{\protect\numberline{\thetable}{#2}}}%
  \fi}

```

Our implementation simply uses `\LTcaption` instead of `{table}`:

```

36 \def\LT@caption#1[#2]#3{%
37   \LT@makecaption#1{\csname fnun@\LTcaption\endcsname}{#3}%
38   \def\@tempa{#2}%
39   \ifx\@tempa\@empty\else
40     {\let\\\space
41      \addcontentsline{\csname ext@\LTcaption\endcsname}{\LTcaption}%
42      {\protect\numberline{\csname the\LTcaption\endcsname}{#2}}}%
43   \fi}

```

`\LT@makecaption` `\LT@makecaption{<cmd>}{<label>}{<text>}`

Original code:

```

\def\LT@makecaption#1#2#3{%
  \LT@mcol\LT@cols c{\hbox to\z@{\hss\parbox[t]\LTcapwidth{%
    % Based on article class "\@makecaption", "#1" is "\@gobble" in star
    % form, and "\@firstofone" otherwise.
    \sbox\@tempboxa{#1{#2: }#3}%
    \ifdim\wd\@tempboxa>\hsize
      #1{#2: }#3%
    \else
      \hbox to\hsize{\hfil\box\@tempboxa\hfil}%
    \fi
    \endgraf\vskip\baselineskip}%
  \hss}}

```

Our code:¹

```

44 \renewcommand\LT@makecaption[3]{%
45   \LT@makecaption{%
46     \sbox\@tempboxa{#1{\CaptionLabelFont#2:} }\CaptionTextFont#3}%
47     \ifdim\wd\@tempboxa>\hsize
48       #1{\CaptionLabelFont{#2:} }\CaptionTextFont#3%
49     \else
50       \hbox to\hsize{\hfil\box\@tempboxa\hfil}%
51     \fi
52   \endgraf\vskip\baselineskip}}

53 \newcommand\LT@makecaption[1]{%
54   \caption@LT@make{\hb@xt@\hsize{%
55     \ifLTcapargins
56       \hspace\LTcapleft
57       \FBifLTcapwidth{\advance\LTcapwidth-\LTcapleft}%
58     \else
59       \hspace\LTleft
60       \FBifLTcapwidth{\advance\LTcapwidth-\LTleft}%
61     \fi
62     \FBifLTcapwidth{\advance\LTcapwidth-%
63       \ifLTcapargins\LTcapright\else\LTright\fi}%
64     \parbox[t]{\LTcapwidth{#1}%
65     \ifLTcapargins
66       \hskip\LTcapright
67     \else
68       \hskip\LTright
69     \fi}}}

```

This one will be usually defined by the `fr-longtable` package, which is part of the `floatrow` package[4]:

```

70 \AtBeginDocument{\providecommand*\FBifLTcapwidth[1]{} }

```

`\caption@LT@make` Typesets the caption as `\multicolumn...`

```

71 \newcommand\caption@LT@make[1]{%
72   \noalign{\caption@LT@config}%

```

Note: If used with the `array` package `\caption@LTfmt` needs to be expanded, therefore we need some `\expandafter` here.

```

73   \expandafter\LT@mcol\expandafter\LT@cols\expandafter{\caption@LTfmt}{%
74     \hb@xt@\z@{%
75       \hspace\caption@LTleft
76       \parbox[t]{\linewidth{#1}%
77       \hspace\caption@LTright}}}%

```

`\caption@LT@config` `\caption@LT@config` analyses `\LTleft` & `\LTright` and set `\caption@LTleft` & `\caption@LTright` accordingly to the ‘opposite’ values, e.g., `\LTleft=1cm` will result to `\caption@LTleft=-1cm` and `\LTleft=0pt` plus `1fill` will result to `\caption@LTleft=0pt` minus `1fill`. Furthermore `\caption@LTfmt` is set to the according multicolumn format; this is far away from being bulletproof (e.g., a stretch or shrink will always be treated as ‘fill’) but will hopefully cover all ‘real’ cases.

```

78 \newcommand*\caption@LT@config{%

```

¹Adapted to the `floatrow` package by Olga Lapko


```

79 \caption@LT@parse\LTleft\caption@LTleft\caption@ifLTleft
80 \caption@LT@parse\LTRight\caption@LTRight\caption@ifLTRight
81 \xdef\caption@LTfmt{%
82   @{} \caption@ifLTleft{\caption@ifLTRight{c}{r}}{l}{@{}}

```

\caption@LT@parse Parsing of the skip, we collect a \@fixpart, a @pluspart, and a \@minuspart and make our definitions based on that.

```

83 \newcommand*\caption@LT@parse[3]{%
84   \let\@pluspart\@undefined
85   \let\@minuspart\@undefined
86   \expandafter\caption@LT@parse@\expandafter\@fixpart\the#1 x %
87   \xdef#2{-\@fixpart
88     \ifx\@minuspart\@undefined\else
89       \space\@plus\space\@minuspart
90     \fi
91     \ifx\@pluspart\@undefined\else
92       \space\@minus\space\@pluspart
93     \fi}%
94   \let#3\@firstoftwo
95   \ifx\@pluspart\@undefined
96     \ifx\@minuspart\@undefined
97       \let#3\@secondoftwo
98     \fi
99   \fi}
100 \def\caption@LT@parse@#1#2 {%

```

Note: \def\@tempa{#2}\ifx\@tempa\@plus... would not work here because of different catcodes.

```

101 \edef\@tempa{\@car#2\@nil}%
102 \if p\@tempa
103   \def\next{\caption@LT@parse@\@pluspart}%
104 \else\if m\@tempa
105   \def\next{\caption@LT@parse@\@minuspart}%
106 \else\if x\@tempa
107   \let\next\relax
108 \else
109   \def#1{#2}%
110   \def\next{\caption@LT@parse@ @}%
111 \fi\fi\fi
112 \next}

```

3.4 The longtable* environment

longtable* We simply suppress anything which has to do with reference counters or hyper links here.

```

113 \newenvironment{longtable*}%
114   {\let\refstepcounter\@gobble
115    \let\H@refstepcounter\@gobble
116    \let\hyper@makecurrent\@gobble
117    \let\Hy@raisedlink\@gobble
118    \let\ltcaption@ORI@LT@caption\LT@caption
119    \def\LT@caption##1[##2]##3{%

```

```

120 \ifx##1\@firstofone
121 \PackageError{ltcaption}%
122 {Not allowed in longtable* environment}%
123 {If you do not understand this error, please take a closer
124 look\MessageBreak at the documentation of the 'ltcaption'
125 package.\MessageBreak \@ehc}%
126 \else
127 \ltcaption@ORI@LT@c@ption{##1}[{##2}]{##3}%
128 \fi}%
129 \longtable}%
130 {\endlongtable}

```

3.5 Adaption for KOMA-Script

```

131 \ifundefined{@komalongtablefalse}{}{%
132 \if@komalongtable
133 \renewcommand{\LT@makecaption}[3]{%
134 \noalign{%
135 \if@captionabove
136 \vskip\belowcaptionskip
137 \else
138 \vskip\abovecaptionskip
139 \fi
140 }%
141 \caption@LT@make{%
142 \@@makecaption{#1}{#2}{#3}%
143 \endgraf
144 \if@captionabove
145 \vskip\abovecaptionskip
146 \else
147 \vskip\belowcaptionskip
148 \fi
149 }%
150 }%
151 \let\LT@@makecaption\@undefined
152 \fi}

```

References

- [1] David Carlisle: *The longtable package*, 2004/02/01
- [2] Victor Eijkhout: *An introduction to the Dutch L^AT_EX document classes*, 3 September 1989
- [3] Markus Kohm & Jens-Uwe-Morawski: *KOMA-Script – a versatile L^AT_EX 2_ε bundle*, 2007-01-09
- [4] Olga Lapko: *The floatrow package documentation*, 2006/07/24