## The eolgrab package

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#### Abstract

This package implements a generic argument grabber to catch an argument that is delimited by the line end.

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<sup>\*</sup>Please report any issues at https://github.com/ho-tex/oberdiek/issues

#### 1 Documentation

The starting point for this package was a feature request of Arno Trautmann in the mailing list texhax<sup>1</sup> [1]. A macro \eolsection should behave like \section, but the argument should be delimited by the line end instead of given in curly braces:

```
\eolsection My Title
```

Phil Taylor answered this with an implementation for \eolsection. Because this feature could be useful for other macros as well, I answered with an implementation of \eolgrab as general solution [3].

Both formats plain  $T_E X$  and  $L\!\!\!/ T_E X$  are supported by the package, see the example for **\eolsection** below.

```
\eolgrab \{\langle code \rangle\}\ \langle argument \rangle\ \langle EOL \rangle
```

Macro \eolgrab takes two arguments. The first argument is  $\langle code \rangle$ , a classical undelimited TEX macro argument. The second argument is delimited by the line end  $\langle EOL \rangle$ . The macro calls  $\langle code \rangle$  with  $\langle argument \rangle$  as argument in curly braces. Because the catcode of the line end is changed, \eolgrab will not work in the argument of other macros. Macro \eolgrab is made robust if either  $\varepsilon$ -TEX's \protected or IATEX's \DeclareRobustCommand is available.

```
\langle code \rangle \ \langle argument \rangle \ \langle EOL \rangle
```

Macro \eolgrabopt passes  $\langle argument \rangle$  as optional argument to  $\langle code \rangle$  if  $\langle argument \rangle$  is not empty.

\eolgrabopt\item foo

becomes to

\item[{foo}]

The curly argument braces are added to support square brackets inside  $\langle argument \rangle$ . If the  $\langle argument \rangle$  is empty:

\eolgrabopt\item

then

\item

is called without optional argument.

#### 1.1 Examples

• The line

\eolgrab\section My Title

is equivalent to

\section{My Title}

• The next example uses the star form of \section. Then the command to be called consists of two tokens. Therefore the first argument of \eolgrab needs curly braces:

\eolgrab{\section\*}My Title

<sup>&</sup>lt;sup>1</sup>Info page for mailing list texhax: http://tug.org/mailman/listinfo/texhax

becomes

```
\section*{My Title}
```

• Now IATEX's \PackageError is used. This macro has three arguments, the package or class name, the message text and the help text. A standard help text of IATEX is used as given in macro \@ehc. The second argument, the message text is used as argument, delimited by line end:

```
\eolgrab{\PackageError{foobar}}%
Some error message text\MessageBreak%
with several lines
\@ehc
```

In the first two lines of the example, the line end is suppressed by the comment character (percent), thus the argument is delimited by the line end of the third line. The result is:

• The original request for macro \eolsection, see above, can be implemented easily with the help of \eolgrab. Example for LATEX:

```
\usepackage{eolgrab}
\newcommand*{\eolsection}{\eolgrab\section}
```

Example for plain T<sub>E</sub>X:

```
\input eolgrab.sty\relax
\def\eolsection{\eolgrab\section}
```

And a sophisticated variant for LATEX that also supports the star syntax and the optional argument:

```
\*example-sec\
   1
   2
                                         \documentclass{article}
   3
                                        \usepackage{eolgrab}
    4
                                        \makeatletter
   5
                                         \newcommand*{\eolsection}{%
   6
                                                \@ifstar{%
                                                      \eolgrab{\section*}%
   7
                                               }{%
    8
                                                       \@ifnextchar[{%
   9
10
                                                              \eoloptsection
11
                                                      }{%
12
                                                               \eolgrab\section
13
                                                       }%
14
                                               }%
15
16
                                        \newcommand*{\eoloptsection}[1][]{%
                                                \ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ens
17
18
                                        \makeatother
19
                                        \begin{document}
20
21
                                         \tableofcontents
22
                                         \eolsection Section without star and optional argument
23
                                        \eolsection*Section with star
24
                                        \eolsection[Short section title]Long section title
25
                                        \end{document}
26
                                         ⟨/example-sec⟩
```

#### 1.1.1 Small IATEX document as example

```
27 (*example-ltx)
28 \RequirePackage{eolgrab}
29 \eolgrab\documentclass article
30 \eolgrab\begin document
31 \eolgrab\section Hello World
32 \eolgrab\emph Some text
33 \eolgrab\end document
34 (/example-ltx)
```

#### 1.1.2 IFTEX document with environments

```
35 (*example-env)
36 \documentclass{article}
37 \usepackage{eolgrab}
38 \newcommand*{\Begin}{\eolgrab
                                      \begin}
39 \newcommand*{\End }{\eolgrab \end }
40 \newcommand*{\Item }{\eolgrabopt\item }
41 \Begin document
    \Begin itemize
42
     \Item
43
44
       first item
45
     \Item
       second item
46
    \End itemize
47
    \Begin description
48
49
     \Item foo
      is the first syllable of foobar.
50
     \Item bar
51
      is the second syllable of foobar.
52
   \End description
53
54 \End document
55 (/example-env)
```

#### 1.2 Limitations

Macro \eolgrab needs to catch the line end. If TEX reads a line, then it throws away the line end characters (carriage return, line feed) and removes spaces at the end of the line. Then it adds the character with the character code that is given by \endlinechar at the end of the line. The category code of the inserted character is given by the current value of its \catcode. If \endlinechar is not a valid character code (especially if it is negative), then no character is added.

In plain TEX and LATEX the standard settings of the inserted endline character is the character with code 13 (or ^^M in TEX notation) with catcode 5 (end of line). That means the inserted end of line character behaves like a space token. For example, it is removed after macro names. Therefore \eolgrab changes the catcode.

Therefore \eolgrab has some limitations:

- Like other verbatim stuff, the macro \eolgrab cannot be used in the argument of other macros. \eolgrab want to change the catcode of the end of line character. If this character is read before, because it is processed as argument of another macro, the catcode is already set and is not reassigned later if \eolgrab changes the category code for this character code.
- The argument must not contain the end of line character. Otherwise the first end of line character is already taken as delimiter, leaving the rest of the line outside the argument.
- Because \eolgrab is probably mostly used in the line with the delimited argument. Therefore changes of \endlinechar will not affect the current line.

## 2 Implementation

```
56 (*package)
```

#### 2.1 Reload check and package identification

Reload check, especially if the package is not used with LATEX.

```
57 \begingroup\catcode61\catcode48\catcode32=10\relax%
    \catcode13=5 % ^^M
    \endlinechar=13 %
59
 60 \catcode35=6 % #
 61 \catcode39=12 % '
 62 \catcode44=12 %,
 63 \catcode45=12 % -
 64 \catcode46=12 %.
 65 \catcode58=12 %:
 66 \catcode64=11 % @
 67 \catcode123=1 % {
    \catcode125=2 % }
 68
    \expandafter\let\expandafter\x\csname ver@eolgrab.sty\endcsname
 69
    \ifx\x\relax % plain-TeX, first loading
 70
 71
    \else
 72
     \def\empty{}%
 73
      \ifx\x\empty % LaTeX, first loading,
 74
       % variable is initialized, but \ProvidesPackage not yet seen
 75
       \expandafter\ifx\csname PackageInfo\endcsname\relax
 76
 77
         \def\x#1#2{\%}
          \immediate\write-1{Package #1 Info: #2.}%
 78
        1%
 79
       \else
 80
         \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
 81
 82
       \x{eolgrab}{The package is already loaded}%
 83
       \aftergroup\endinput
 84
 85
      \fi
 86
    \fi
 87 \endgroup%
Package identification:
 88 \begingroup\catcode61\catcode48\catcode32=10\relax%
    \catcode13=5 % ^^M
 89
    \endlinechar=13 %
 90
    \catcode35=6 % #
 91
 92
    \catcode39=12 % '
 93
    \catcode40=12 % (
 94
    \catcode41=12 % )
    \catcode44=12 % ,
 96
    \catcode45=12 % -
    \colored{catcode46=12 \%} .
 97
98
    \catcode47=12 % /
    \catcode58=12 %:
99
100 \catcode64=11 % @
101 \catcode91=12 % [
102 \catcode93=12 % ]
103 \catcode123=1 % {
    \catcode125=2 % }
104
105
    \expandafter\ifx\csname ProvidesPackage\endcsname\relax
106
      \def \x#1#2#3[#4]{\endgroup}
107
       \immediate\write-1{Package: #3 #4}%
       \xdef#1{#4}%
108
     }%
109
    \else
110
      \def \ \#1\#2[\#3]{\endgroup}
111
```

```
#2[{#3}]%
112
       \ifx#1\@undefined
113
         \xdef#1{#3}%
114
115
        \inf #1 \operatorname{lax}
116
117
         \xdef#1{#3}%
       \fi
118
      }%
119
120 \fi
121 \expandafter\x\csname ver@eolgrab.sty\endcsname
122 \ProvidesPackage{eolgrab}%
123 [2016/05/16 v1.1 Catch arguments delimited by end of line (HO)]%
```

#### 2.2 Catcodes

```
124 \begingroup\catcode61\catcode48\catcode32=10\relax%
125 \catcode13=5 % ^^M
126 \endlinechar=13 %
127 \catcode123=1 % {
128 \catcode125=2 % }
129 \catcode64=11 % @
130 \def\x{\endgroup}
131
                \verb|\expandafter| edef| csname eolgrab@AtEnd| endcsname{% }
132
                    \endlinechar=\the\endlinechar\relax
133
                    \color=\the\color=13\relax
                    \verb|\catcode32=\\ \verb|\the\catcode32\\ \verb|\relax|
134
                    \color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\the\color=\t
135
                    \colored{catcode61} \to \colored{catcode61}
136
137
                    \colored{catcode64} \to \colored{catcode64}
                    \catcode123=\the\catcode123\relax
138
                    \color=\the\color=125\relax
139
               }%
140
141 }%
142 \x\catcode61\catcode48\catcode32=10\relax\%
143 \catcode13=5 \% ^^M
144 \endlinechar=13 %
145 \catcode35=6 \% #
146 \catcode64=11 % @
147 \catcode123=1 % {
148 \catcode125=2 % }
149 \def\TMP@EnsureCode#1#2{%
150 \edef\eolgrab@AtEnd{%
151
               \eolgrab@AtEnd
               \color=\the\color=1\
152
153 }%
154 \color=154 \color=154
155 }
156 \TMP@EnsureCode{40}{12}% (
157 \TMP@EnsureCode{41}{12}%)
158 \TMP@EnsureCode{42}{12}% *
159 \TMP@EnsureCode\{46\}\{12\}\%.
160 \TMP@EnsureCode{47}{12}% /
161 \TMP@EnsureCode{91}{12}% [
162 \TMP@EnsureCode{93}{12}% ]
163 \TMP@EnsureCode{94}{7}% ^
164 \edf\ed\AtEnd\ed\AtEnd\ed\noexpand\endinput\}
```

#### 2.3 Resources

```
    165 \begingroup\expandafter\expandafter\endgroup
    166 \expandafter\ifx\csname RequirePackage\endcsname\relax
    167 \input ltxcmds.sty\relax
    168 \input infwarerr.sty\relax
```

```
169 \else
                                                                 \RequirePackage{ltxcmds}[2010/12/04]%
                                                                 \RequirePackage{infwarerr}[2010/04/08]%
                                                     171
                                                     172 \fi
\eolgrab@ifdefinable
                                                     173 \label{ltx@IfUndefined{@ifdefinable}{}}
                                                                 \t 0
                                                     175
                                                                         \@PackageError{eolgrab}{%
                                                     176
                                                                            Command \ltx@backslashchar#1 already defined%
                                                     177
                                                     178
                                                     179
                                                                    }%
                                                                 }%
                                                     180
                                                     181 }{%
                                                                  \def\eolgrab@ifdefinable#1{%
                                                                     \expandafter\@ifdefinable\csname#1\endcsname
                                                     183
                                                                 }%
                                                     184
                                                     185 }
                                                     2.4
                                                                     Macro \eolgrab
                             \eolgrab
                                                     186 \eolgrab@ifdefinable{eolgrab}{%
                                                     187
                                                                 \verb|\line| It x@If Undefined {DeclareRobustCommand} {\%}
                                                     188
                                                                         \def\eolgrab#1%
                                                     189
                                                                    }{%
                                                     190
                                                                         \newcommand\eolgrab{}%
                                                     191
                                                                         \DeclareRobustCommand*\eolgrab
                                                     192
                                                                    }%
                                                     193
                                                                 }{%
                                                     194
                                                                     \protected\def\eolgrab#1%
                                                     195
                                                     196
                                                                 }{%
                                                     197
                                                                     \begingroup
                                                                     \endlinechar=13 %
                                                     198
                                                                     \catcode13=\ltx@active
                                                     199
                                                                     \ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath}\ensuremath{\ensuremath{\mbox{\ensuremath{\mbox{\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremat
                                                     200
                                                               }%
                                                     201
                                                     202 }
                    \eolgrabopt
                                                     203 \eolgrab@ifdefinable{eolgrabopt}{%
                                                                  \ltx@IfUndefined{protected}{%
                                                     204
                                                                     \ltx@IfUndefined{DeclareRobustCommand}{%
                                                     205
                                                     206
                                                                         \def\eolgrabopt#1%
                                                     207
                                                     208
                                                                         \newcommand\eolgrabopt{}%
                                                                         \verb|\DeclareRobustCommand*| eolgrabopt|
                                                     209
                                                                    }%
                                                     210
                                                                 }{%
                                                     211
                                                                     \protected\def\eolgrabopt#1%
                                                     212
                                                     213
                                                                 }{%
                                                     214
                                                                     \begingroup
                                                                     \endlinechar=13 %
                                                     215
                                                                     \catcode13=\ltx@active
                                                     216
                                                     217
                                                                     \eolgrab@opt{#1}%
                                                     218
                                                                 }%
                                                     219 }
                                                     220 \begingroup
                                                     221 \catcode13=\ltx@active \%
                                                     222 \ltx@firstofone{\endgroup %
```

```
\eolgrab@
                                                                                                                                                                                                                          \ensuremath{\texttt{def}\eolgrab@\#1\#2^^M\{\%\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\ensuremath{\texttt{M}}\e
                                                                                                                                                                    223
                                                                                                                                                                                                                                          \endgroup %
                                                                                                                                                                    224
                                                                                                                                                                    225
                                                                                                                                                                                                                                            #1{#2}%
                                                                                                                                                                    226 }%
\eolgrab@opt
                                                                                                                                                                                                                            227
                                                                                                                                                                                                                                            \endgroup %
                                                                                                                                                                    228
                                                                                                                                                                                                                                            \t \
                                                                                                                                                                    229
                                                                                                                                                                                                                                                            #1%
                                                                                                                                                                    230
                                                                                                                                                                    231
                                                                                                                                                                                                                                          }{%
                                                                                                                                                                                                                                                          #1[{#2}]%
                                                                                                                                                                    232
                                                                                                                                                                                                                                        }%
                                                                                                                                                                    233
                                                                                                                                                                    234 }%
                                                                                                                                                                    235 }%
                                                                                                                                                                    236 \eolgrab@AtEnd%
                                                                                                                                                                    237 \langle /package \rangle
```

#### 3 Test

#### 3.1 Catcode checks for loading

```
238 (*test1)
239 \catcode`\{=1 %
240 \catcode`\}=2 %
241 \catcode`\#=6 %
242 \catcode`\@=11 %
243 \expandafter\ifx\csname count@\endcsname\relax
244 \countdef\count@=255 %
245 \fi
246 \expandafter\ifx\csname Qgobble\endcsname\relax
247 \long\def\@gobble#1{}%
248 \fi
249 \expandafter\ifx\csname @firstofone\endcsname\relax
250 \log \left(\frac{41}{\#1}\right)
251 \fi
252 \expandafter\ifx\csname loop\endcsname\relax
253 \expandafter\@firstofone
254 \else
255 \expandafter\@gobble
256 \fi
257 {%
258 \def \leq 1 = 1
      \def\body{#1}%
259
      \iterate
260
261 }%
    \def\iterate{%
262
263
264
       \let\next\iterate
265
      \else
       \let\next\relax
266
      \fi
267
      \next
268
269 }%
270 \left| \text{let}\right|
271 }%
272 \def\RestoreCatcodes{}
273 \count@=0 %
```

```
274 \loop
275 \edef\RestoreCatcodes{%
276
     \RestoreCatcodes
     \catcode\the\count@=\the\catcode\count@\relax
278 }%
279 \ifnum\count@<255 %
280 \advance\count@ 1 %
281 \repeat
282
283 \def\RangeCatcodeInvalid#1#2{%
    \count@=#1\relax
284
    \loop
285
     \catcode\count@=15 %
286
    \index(0) = \frac{2\pi}{2}
287
     \advance\count@ 1 %
288
    \repeat
289
290 }
291 \def\RangeCatcodeCheck#1#2#3{\%
    \count@=#1\relax
292
293
    \loop
     \ifnum#3=\catcode\count@
294
     \else
295
       \errmessage{%
296
        Character \the\count@\space
297
        with wrong catcode \the\catcode\count@\space
298
299
        instead of \number#3%
300
      }%
301
     \fi
    302
     \advance \count@ 1 \%
303
    \repeat
304
305 }
306 \def\space{ }
307 \expandafter\ifx\csname LoadCommand\endcsname\relax
    \def\LoadCommand{\input eolgrab.sty\relax}%
309 \fi
310 \def\Test{%
311 \RangeCatcodeInvalid{0}{47}%
312 \RangeCatcodeInvalid{58}{64}%
313 \RangeCatcodeInvalid{91}{96}%
314 \RangeCatcodeInvalid{123}{255}%
315 \catcode`\@=12 %
316 \catcode`\\=0 %
317
    \catcode`\%=14 %
318
    \LoadCommand
    \RangeCatcodeCheck{0}{36}{15}%
    \RangeCatcodeCheck{37}{37}{14}%
321
    \RangeCatcodeCheck{38}{47}{15}%
322
    \RangeCatcodeCheck{48}{57}{12}%
323
    \RangeCatcodeCheck{58}{63}{15}%
    \RangeCatcodeCheck{64}{64}{12}%
324
    325
    \RangeCatcodeCheck{91}{91}{15}%
326
    \RangeCatcodeCheck{92}{92}{0}%
327
328
    \RangeCatcodeCheck{93}{96}{15}%
    \RangeCatcodeCheck{97}{122}{11}%
    \RangeCatcodeCheck{123}{255}{15}%
331
    \RestoreCatcodes
332 }
333 \Test
334 \csname @@end\endcsname
335 \end
```

```
336 (/test1)
```

#### 3.2 Tests for plain TeX

```
337 (*test2)
338 \input eolgrab.sty\relax
339 \catcode`\{=1 \%
340 \catcode^{}=2 \%
341 \eolgrab{\immediate\write16}Hello World
342 \def\TestExpected{foo bar}
343 \leftarrow \frac{1}{3}
344
345 \ \text{TestExpected} 
346 \ \mbox{immediate}\mbox{write}16{* Ok (foo bar)}\%
347 \else
348 \errmessage{Test failed (foo bar)}%
349 \fi
350
351 \begingroup
352 \def\TestExpected{foobar}%
     \endlinechar=-1 %
    \eolgrab{\def\TestResult}foo
354
355 bar
    ^^M
356
357 \ifx\TestExpected\TestResult
      \immediate\write16{* Ok (foobar)}%
358
359
      \errmessage{Test failed (foobar)}%
360
    \fi
361
362 \endgroup
363
364 \csname @@end\endcsname\end
365 \langle /test2 \rangle
```

#### 4 Installation

#### 4.1 Download

**Package.** This package is available on CTAN<sup>2</sup>:

CTAN:macros/latex/contrib/oberdiek/eolgrab.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/eolgrab.pdf Documentation.

**Bundle.** All the packages of the bundle 'oberdiek' are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

CTAN:install/macros/latex/contrib/oberdiek.tds.zip

TDS refers to the standard "A Directory Structure for TEX Files" (CTAN:tds/tds.pdf). Directories with texmf in their name are usually organized this way.

#### 4.2 Bundle installation

**Unpacking.** Unpack the oberdiek.tds.zip in the TDS tree (also known as texmf tree) of your choice. Example (linux):

unzip oberdiek.tds.zip -d ~/texmf

 $<sup>^2 {\</sup>tt http://ctan.org/pkg/eolgrab}$ 

Script installation. Check the directory TDS:scripts/oberdiek/ for scripts that need further installation steps. Package attachfile2 comes with the Perl script pdfatfi.pl that should be installed in such a way that it can be called as pdfatfi. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

#### 4.3 Package installation

**Unpacking.** The .dtx file is a self-extracting docstrip archive. The files are extracted by running the .dtx through plain T<sub>E</sub>X:

```
tex eolgrab.dtx
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as texmf tree):

```
\begin{array}{lll} \mbox{eolgrab.sty} & \rightarrow \mbox{tex/generic/oberdiek/eolgrab.sty} \\ \mbox{eolgrab.pdf} & \rightarrow \mbox{doc/latex/oberdiek/eolgrab.pdf} \\ \mbox{example/eolgrab-example-ltx.tex} & \rightarrow \mbox{doc/latex/oberdiek/example/eolgrab-example-env.tex} \\ \mbox{example/eolgrab-example-env.tex} & \rightarrow \mbox{doc/latex/oberdiek/example/eolgrab-example-env.tex} \\ \mbox{example/eolgrab-example-sec.tex} & \rightarrow \mbox{doc/latex/oberdiek/example/eolgrab-esc.tex} \\ \mbox{test/eolgrab-test1.tex} & \rightarrow \mbox{doc/latex/oberdiek/test/eolgrab-test2.tex} \\ \mbox{eolgrab.dtx} & \rightarrow \mbox{source/latex/oberdiek/eolgrab.dtx} \\ \end{array}
```

If you have a docstrip.cfg that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

#### 4.4 Refresh file name databases

If your  $T_EX$  distribution (te $T_EX$ , mik $T_EX$ , ...) relies on file name databases, you must refresh these. For example, te $T_EX$  users run texhash or mktexlsr.

#### 4.5 Some details for the interested

Unpacking with IATEX. The .dtx chooses its action depending on the format:

plain TEX: Run docstrip and extract the files.

**LATEX:** Generate the documentation.

If you insist on using  $\LaTeX$  for docstrip (really, docstrip does not need  $\LaTeX$ ), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{eolgrab.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file ltxdoc.cfg. For instance, put this line into this file, if you want to have A4 as paper format:

```
\verb|\PassOptionsToClass{a4paper}{article}|
```

An example follows how to generate the documentation with pdfLATFX:

```
pdflatex eolgrab.dtx
makeindex -s gind.ist eolgrab.idx
pdflatex eolgrab.dtx
makeindex -s gind.ist eolgrab.idx
pdflatex eolgrab.dtx
```

### 5 Catalogue

The following XML file can be used as source for the TEX Catalogue. The elements caption and description are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is eolgrab.xml.

```
366 (*catalogue)
367 <?xml version='1.0' encoding='us-ascii'?>
368 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
369 <entry datestamp='$Date$' modifier='$Author$' id='eolgrab'>
370 <name>eolgrab</name>
371 <caption>Catch arguments delimited by end of line.</caption>
372 <authorref id='auth:oberdiek'/>
373 <copyright owner='Heiko Oberdiek' year='2011'/>
374 cense type='lppl1.3'/>
375 <version number='1.1'/>
376
    <description>
      The package defines the command <tt>\eolgrab</tt> that reads an
377
      string terminated by end of line, and then calls a macro with that
378
      string as argument. Thus
379
      \eolgrab\section My title is equivalent to
380
381
      \section{My title}
382
      383
      A second command <tt>\eolgrabopt</tt> provides the string as an
384
      optional argument (which is useful for <tt>\item</tt>, for example).
385
      The package is part of the xref refid='oberdiek'>oberdiek bundle.
386
387
    </description>
    <documentation details='Package documentation'</pre>
388
       href='ctan:/macros/latex/contrib/oberdiek/eolgrab.pdf'/>
389
390 <ctan file='true' path='/macros/latex/contrib/oberdiek/eolgrab.dtx'/>
    <miktex location='oberdiek'/>
391
392 <texlive location='oberdiek'/>
393 <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'/>
394 </entry>
395 (/catalogue)
```

#### 6 References

- [1] Arno Trautmann, [texhax] read argument until EOL; mailing list texthax@tug.org, 2011-01-06; http://tug.org/pipermail/texhax/2011-January/016517.html.
- [2] Philip Taylor, Re: [texhax] read argument until EOL; mailing list texhax@tug.org, 2011-01-06; http://tug.org/pipermail/texhax/2011-January/016519.html.
- [3] Heiko Oberdiek, Re: [texhax] read argument until EOL; mailing list texhax@tug.org, 2011-01-06; http://tug.org/pipermail/texhax/2011-January/016526.html.

## 7 History

#### [2011/01/12 v1.0]

First public version.

#### [2016/05/16 v1.1]

• Documentation updates.

## 8 Index

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