

The **linegoal*** package

A new “dimen” corresponding to the remainder of the line

FC

2010/11/30 – version 2.6

Abstract

linegoal provides a macro `\linegoal` which expands to the dimension of the remainder of the line. It requires pdf_TE_X for its `\pdfsavepos` primitive. With pdf_TE_X, `\pdfsavepos` works in pdf mode (`\pdfoutput>0`) **and also in dvi mode** (`\pdfoutput=0`). Two compilations (at least) are necessary to get the correct line goal.

Saying: `\somedimen = \linegoal`

or: `\setlength \somedimen {\linegoal}`

sets `\somedimen` to be the (horizontal) length of the remainder of the current line. This can be useful for use with `tabularx`, `tabular*` or `tabu` for example.

At first run: `\linegoal` expands to `\linewidth` and writes the correct line goal into the `.aux` file.

Other runs: `\linegoal` expands to the value read in the `.aux` file and (eventually) updates the correct line-goal into the `.aux` file, if the value has changed.

linegoal requires pdf_TE_X (in pdf or dvi mode) and the module `zref-savepos` of `zref`¹ package.

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This documentation is produced with the `+DocStrip+` utility.

→ To get the documentation, run (thrice): `pdflatex linegoal.dtx`
 To get the index, run: `makeindex -s gind.ist linegoal.idx`
 To get the package, run: `etex linegoal.dtx`

The `.dtx` file is embedded into this pdf file thank to `embedfile` by H. Oberdiek.

1. `zref`: CTAN:macros/latex/contrib/oberdiek/

1 User interface

1.1 `\linegoal`: a macro which behaves mostly like a `dimen`

The first aim of `\linegoal` is to give a facility to get the length of the remainder of the line. This is possible with pdfTeX and its `\pdfsavepos` primitive. For convenience, `linegoal` loads and uses the `zref-savepos` package from H. Oberdiek.

`\pdfsavepos` is supplied by pdfTeX in both pdf and dvi modes. If the document is not compiled with pdfTeX then `\linegoal` will expand to `\linewidth` in any case.

This is a tabularx that fills the remainder of the line:

```
\begin{tabularx}{\linegoal{||X|}}\hline
  Something & Something else \\\
  Something & Something else \\\hline
\end{tabularx}
```

Typical application is for tabulars of variable width like tabularx or tabu. Package tabu has a `linegoal` option to use `\linegoal` as default target for the whole tabular.

This is a tabularx that fills the remainder of the line:

Something	Something else
Something	Something else

This is a tabu that fills the half of the remainder of the line:

```
$\begin{tabu}to .5\linegoal{||\red{X[$c]}|\red{X[2$c]}|\red{}} \tabucline[red]-
  \alpha & \beta      \\\ \tabucline[on 2pt,red]-
  \gamma & \delta      \\\ \tabucline[red]-
\end{tabu}$
```

This is a tabu that fills the half of the remainder of the line:

α	β
γ	δ

Please, refer to tabu documentation for more information on the preamble and the command `\tabucline` used here as an example.

1.2 The verbose package option

You can load `linegoal` with the `[verbose]` option to get the line-goals as information in your `.log` file.

2 Implementation

2.1 Identification

- The package namespace is `\LNGL@`

```
1 <*package>
2 \NeedsTeXFormat{LaTeX2e}% LaTeX 2.09 can't be used (nor non-LaTeX)
3   [2005/12/01]% LaTeX must be 2005/12/01 or younger
4 \ProvidesPackage{linegoal}
5   [2010/11/30 v2.6 - A new dimen corresponding to the remainder of the line]
```

2.2 Requirements

The package requires `zref` and its module `zref-savepos`.

It requires `srclfile` for a patch when using the `calc` package.

```
6 \ifdefined\pdfsavepos\else % works also in dvi mode
7   \PackageWarning{linegoal}
8     {This package requires pdfTeX for its \string\pdfsavepos\space primitive\MessageBreak
```

```

9      pdfTeX has not been detected and \string\linegoal\space will expand\MessageBreak
10     to \string\linewidth\space in any case}
11     \gdef\linegoal{\linewidth}%
12     \expandafter\endinput
13 \fi
14 \RequirePackage{etex,zref,zref-savepos}

```

2.3 zref properties

```

15 \zref@newprop*{\linegoal}[\linewidth]{\dimexpr
16   \linewidth-\the\pdfastxpos sp
17   +\ifodd\zref@extractdefault{\linegoal/posx.\the\LNGL@unique}{page}\c@page
18     \oddsidemargin
19   \else\evensidemargin
20   \fi
21   +1in+\hoffset
22   \relax
23 }% linegoal zref-property

```

2.4 The linegoal macro

\linegoal

```

24 \newcommand*\linegoal{%
25   \zref@extract{\linegoal.\the\LNGL@unique}{\linegoal}\LNGL@setlinegoal
26 }% \linegoal
27 \globcount\LNGL@unique
28 \globdimen\LNGL@tempdim
29 \def\LNGL@setlinegoal{\relax\csname LNGL@set\ifdefined\calc@next!\fi\endcsname}
30 \expandafter\def\csname LNGL@set!\endcsname{!\LNGL@set}
31 \protected\def\LNGL@set{%
32   \@bsphack
33   \if@filesw
34     \pdfsavepos
35     \zref@refused{\linegoal.\the\LNGL@unique}%
36     \LNGL@tempdim\zref@extractdefault{\linegoal.\the\LNGL@unique}{\linegoal}\maxdimen
37     \zref@labelbyprops{\linegoal/posx.\the\LNGL@unique}{page,posx}%
38     \zref@labelbyprops{\linegoal.\the\LNGL@unique}{\linegoal}%
39     \ifdim\zref@extract{\linegoal.\the\LNGL@unique}{\linegoal}=\LNGL@tempdim
40       \LNGL@info
41     \else \expandafter\LNGL@warn%
42       \number\zref@extractdefault{\linegoal/posx.\the\LNGL@unique}{page}\c@page\relax
43     \fi
44     \global\advance\LNGL@unique\@ne
45   \else\LNGL@noauxerr
46   \fi
47   \@esphack
48 }% \LNGL@set

```

2.5 Error, Warning and Info

```

49 \def\LNGL@noauxerr{\PackageError{\linegoal}
50   {\string\linegoal\space does not work if output file are disabled
51   \MessageBreak please check the value of \string\if@filesw!}\@ehd
52 }% \LNGL@noauxerr
53 \def\LNGL@warn#1\relax{\PackageWarning{\linegoal}
54   {\string\linegoal\space value on page #1
55   \MessageBreak has changed since last run
56   \MessageBreak Please rerun to get correct values}%
57 }% \LNGL@warn
58 \def\LNGL@info{\PackageInfo{\linegoal}
59   {\string\linegoal=\the\LNGL@tempdim\space

```

```

60 (on page \number\zref@extractdefault{linegoal/posx.\the\LNGL@unique}{page}\c@page)}%
61 %% \showthe\linewidth
62 }% \LNGL@info
63 \let\LNGL@info\@empty

```

2.6 The verbose package option

\verbose (package option)

```

64 \DeclareOption{verbose}{\let\LNGL@info \LNGL@info}
65 \ProcessOptions
66 \end{package}

```

3 History

[2010/11/30 v2.6]

- Added the verbose package option.

[2010/11/19 v2.2]

- Fix a bug when using a syntax like .5\linegoal.
Hence a better fitting with tabu package (version 1.4 - 2010/11/20).

[2010/10/31 v2.1]

- [linegoal](#) works also without pdf_TE_X, but \linegoal is replaced by \linewidth in any case.
A warning is displayed.

[2010/09/25 v2.0]

- New approach: \setlength is not used anymore.
\linegoal behaves more like a real dimen.
code like: \hspace*\linegoal is now possible.

[2010/06/20 v1.2]

- Modification in warning message...

[2010/06/06 v1.1]

- The first release required some small corrections !

[2010/05/07 v1.0]

- First version.

4 References

[1] Heiko Oberdiek: *The zref package*; 2010/05/01 v2.17; [CTAN:macros/latex/contrib/oberdiek/](#).

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		D
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