The `typogrid` package[*]

Harald Harders

`h.harders@tu-bs.de`

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Abstract

This package produces a typographic grid on every page of the document. That grid consists of vertical lines that devide the text block into columns. This may be useful to get the horizontal measures (distances etc.) into good values.

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1 Usage

Load the package using the

      `\usepackage[`⟨*options*⟩`]{typogrid}`

command. Valid options are `final`, `draft`, and `columns=`⟨*value*⟩. The options `final` and `draft` may be given explicitely or implicitely from the document-class options.

When `draft` is given the typographic grid is switched on; if `final` or none of the above is given it is switched off.

The `columns` option determines the number of columns printed. If it is not given, a default of 12 is used.

`\typogridsetup`   There is a second possibility to change the number of columns. You may use the `\typogridsetup` command that takes a keyval list as argument. This version suports only `columns=`⟨*value*⟩, e.g.,

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```
\typogridsetup{columns=4}
```

You may also change the number of columns within the text.

2   The implementation

Heading of the package:

```
1 \ProvidesPackage{typogrid}[2003/10/29 v\fileversion\space Typographic grid]
2 \RequirePackage{eso-pic}[2002/11/16]
3 \RequirePackage{calc}
4 \RequirePackage{keyval}
```

Introduce the used lengths.

```
5 \newlength{\tpg@left}%
6 \newlength{\tpg@top}%
7 \newlength{\tpg@bottom}%
8 \newlength{\tpg@gridwidth}%
```

Introduce the used counters and set the default number of columns.

```
9 \newcounter{tpg@bloecke}%
10 \setcounter{tpg@bloecke}{12}%
```

\typogridsetup Declare a command that can be used to change the appearence of the typographic grid. The argument takes a list of keyval options.

```
11 \newcommand*\typogridsetup[1]{%
12   \expandafter\setkeys\expandafter{typogrid}{#1}}
```

Define the key columns that takes the number of columns.

```
13 \define@key{typogrid}{columns}{%
14   \setcounter{tpg@bloecke}{#1}%
15   \ifnum\arabic{tpg@bloecke}<1
16     \PackageError{typogrid}{Less than 1 column given}{You have to
17       declare at least 1 column.}%
18     \setcounter{tpg@bloecke}{1}%
19   \fi
20 }
```

Package options:

```
21 \newif\iftpg@draft
22 \DeclareOption{draft}{\tpg@drafttrue}
23 \DeclareOption{final}{\tpg@draftfalse}
24 \DeclareOption*{\expandafter\typogridsetup\expandafter{\CurrentOption}}
```

```
25 \ExecuteOptions{final}
26 \ProcessOptions\relax
```

Start the grid with the first page (should not be necessary).

```
27 \AtBeginDocument{%
```

Print the grid on any page.

```
28   \iftpg@draft
29     \typeout{Typographic grid switched on}%
30     \AddToShipoutPicture{%
```

Set the unit length each time because the use may have changed it. Do everything inside a group to prevent the changes to be seen outside.

```
31      \begingroup
32      \normalcolor
33      \setlength{\unitlength}{1pt}%
34      \thinlines
```

Calculate the distance of the text block from the page corner.

```
35      \setlength{\tpg@top}{\paperheight-1in-\topmargin-\headheight-\headsep}%
36      \setlength{\tpg@bottom}{\tpg@top-\textheight}%
37      \setlength{\tpg@gridwidth}{\textwidth/\thetpg@bloecke}%
```

Calculate the number of vertical lines to be printed.

```
38      \@tempcnta=\thetpg@bloecke
39      \advance\@tempcnta by 1
```

The left distance varies between odd and even pages.

```
40      \ifodd\arabic{page}%
41        \setlength{\tpg@left}{\oddsidemargin+1in}%
42      \else
43        \setlength{\tpg@left}{\evensidemargin+1in}%
44      \fi
```

Print horizontal lines.

```
45      \put(\strip@pt\tpg@left,\strip@pt\tpg@top){%
46        \line(1,0){\strip@pt\textwidth}}%
47      \put(\strip@pt\tpg@left,\strip@pt\tpg@bottom){%
48        \line(1,0){\strip@pt\textwidth}}%
```

Print equidistant vertical lines.

```
49      \multiput(\strip@pt\tpg@left,\strip@pt\tpg@bottom)%
50              (\strip@pt\tpg@gridwidth,0){\the\@tempcnta}{%
51        \line(0,1){\strip@pt\textheight}}%
52      \endgroup
53    }%
54  \else
55    \typeout{Typographic grid switched off}%
56  \fi
57 }
```