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# The typogrid package

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## Abstract

This package produces a typographic grid on every page of the document. That grid consists of vertical lines that divide 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`, `columns=value`, `headings=true,false`, and `margin=true,false`. The options `final` and `draft` may be given explicitly or implicitly 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.

If `headings=true` is given, a grid is printed for the head line and the foot line, too (this is the default, you may also omit it). If `headings=false` is given, no grid is printed for the headings.

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\typogridsetup	<p>With <code>margin=false</code>, you can switch off printing a frame around the area for margin notes (default is to print the frame).</p> <p>There is a second possibility to change the typographic grid. You may use the <code>\typogridsetup</code> command that takes a keyval list as argument. The same keywords are allowed as in the <code>\usepackage</code> line, e.g.,</p>
\typogrid	<pre data-bbox="453 517 804 544">\typogridsetup{columns=4}</pre> <p>You may use this command within the text in order to change the grid at arbitrary position of the document. The change takes effect on the next page.</p> <p>If you have switched off printing of the grid, you may get a grid for single pages using</p> <pre data-bbox="453 719 900 745">\AddToShipoutPicture*{\typogrid}</pre> <p>The package defines the length <code>\gridwidth</code> which is as long as the space between two grid lines. You may use it to scale pictures to fit to the grid, for instance.</p>
	<h2 data-bbox="384 887 699 925">2 Shortcomings</h2>
	<ul data-bbox="424 954 1337 1093" style="list-style-type: none"> <li>• Calculation of position and size of the headings and the margin works for standard cases, only.</li> <li>• If the text width changes from one page to the next, the grid width is wrong on the first page after the change.</li> </ul>
	<h2 data-bbox="384 1144 826 1182">3 The implementation</h2>
\typogridsetup	<p>Heading of the package:</p> <pre data-bbox="384 1249 903 1361"> 1 \ProvidesPackage{typogrid} 2 [2011/12/31 v0.21 Typographic grid] 3 \RequirePackage{calc} 4 \RequirePackage{keyval} </pre> <p>Introduce the used lengths.</p> <pre data-bbox="384 1417 707 1444">5 \newlength{\gridwidth}%</pre> <p>Introduce the used counters and set the default number of columns.</p> <pre data-bbox="384 1496 820 1576"> 6 \newcount\tpg@blocks% 7 \newcounter{tpg@blocks@new}% 8 \setcounter{tpg@blocks@new}{12}% </pre> <p>Declare a command that can be used to change the appearance of the typographic grid. The argument takes a list of keyval options.</p> <pre data-bbox="384 1675 1031 1733"> 9 \newcommand*\typogridsetup[1]{% 10 \expandafter\setkeys\expandafter{typogrid}{#1}} </pre> <p>Define the key <code>columns</code> that takes the number of columns.</p> <pre data-bbox="384 1800 1235 1915"> 11 \define@key{typogrid}{columns}{% 12 \setcounter{tpg@blocks@new}{#1}% 13 \ifnum\the\c@tpg@blocks@new&lt;1\relax 14 \PackageError{typogrid}{Less than 1 column given}{You have to </pre>

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<pre> 15     declare at least 1 column.}% 16     \setcounter{tpg@blocks@new}{1}% 17     \fi 18 }  Define the key headings to switch on or off a frame around the headings. 19 \newif\iftpg@headings 20 \newif\iftpg@headings@new 21 \tpg@headings@newtrue 22 \define@key{typogrid}{headings}[true]{% 23   \csname tpg@headings@new#1\endcsname 24 }  Define the key margin to switch on or off a frame around the margin. 25 \newif\iftpg@margin 26 \newif\iftpg@margin@new 27 \tpg@margin@newtrue 28 \define@key{typogrid}{margin}[true]{% 29   \csname tpg@margin@new#1\endcsname 30 }  Package options: 31 \newif\iftpg@draft 32 \DeclareOption{draft}{\tpg@drafttrue} 33 \DeclareOption{final}{\tpg@draftfalse} 34 \DeclareOption{colorgrid}{\PassOptionsToPackage{\CurrentOption}{eso-pic}} 35 \DeclareOption{grid}{\PassOptionsToPackage{\CurrentOption}{eso-pic}} 36 \DeclareOption*{\expandafter\typogridsetup\expandafter{\CurrentOption}}  Default is no grid. 37 \ExecuteOptions{final} 38 \ProcessOptions\relax  Load this package after processing the options. 39 \RequirePackage{eso-pic}[2002/11/16]  \typogrid Define the command that produces the grid. 40 \newcommand*\typogrid{% Switch to black and thin lines. 41   \begingroup 42     \normalcolor 43     \thinlines  Calculate the number of lines to be printed. 44     \@tempcnta=\tpg@blocks 45     \advance\@tempcnta by -1%  Print a frame around the text block. 46     \AtTextLowerLeft{% 47       \put(0,0){% 48         \framebox(\LenToUnit{\textwidth},\LenToUnit{\textheight}){}}%  Print the vertical lines for the grid. 49       \multiput(\LenToUnit{\gridwidth},0)% 50         (\LenToUnit{\gridwidth},0){\the\@tempcnta}{% 51         \line(0,1){\LenToUnit{\textheight}}}% 52     }% </pre>			
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<p>Print a frame around the head line if wanted.</p> <pre> 53 \iftpg@headings 54 \AtTextUpperLeft{% 55 \put(0,\LenToUnit{\headsep}){% 56 \framebox(\LenToUnit{\textwidth},\LenToUnit{\headheight}){}}% </pre> <p>Print the grid.</p> <pre> 57 \multiput(\LenToUnit{\gridwidth},\LenToUnit{\headsep})% 58 (\LenToUnit{\gridwidth},0){\the@tempcnta}{% 59 \line(0,1){\LenToUnit{\headheight}}}% 60 }% </pre> <p>Print a line below the foot line if wanted (the height of the foot line is not available).</p> <pre> 61 \AtTextLowerLeft{% 62 \put(0,\LenToUnit{-\footskip}){% 63 \line(1,0){\LenToUnit{\textwidth}}}% </pre> <p>Print the grid.</p> <pre> 64 \put(0,\LenToUnit{-\footskip}){% 65 \line(0,1){\LenToUnit{\baselineskip}}}% 66 \put(\LenToUnit{\textwidth},\LenToUnit{-\footskip}){% 67 \line(0,1){\LenToUnit{\baselineskip}}}% 68 \multiput(\LenToUnit{\gridwidth},\LenToUnit{-\footskip})% 69 (\LenToUnit{\gridwidth},0){\the@tempcnta}{% 70 \line(0,1){\LenToUnit{\baselineskip}}}% 71 }% 72 \fi </pre> <p>Print a frame around the margin if wanted.</p> <pre> 73 \iftpg@margin 74 \AtTextLowerLeft{% 75 \@tempdima=\textwidth\advance\@tempdima\marginparsep% 76 \if@twoside% 77 \ifodd\c@page 78 \else 79 \@tempdima=-\marginparsep\advance\@tempdima-\marginparwidth% 80 \fi% 81 \fi% 82 \put(\LenToUnit{\@tempdima},0){% 83 \framebox(\LenToUnit{\marginparwidth},% 84 \LenToUnit{\textheight}){}}% 85 }% 86 \fi 87 \endgroup </pre> <p>Calculate the width of each grid. Store it globally to be able to use it inside the document.</p> <pre> 88 \setlength\gridwidth{\textwidth/\arabic{tpg@blocks@new}}% 89 \global\gridwidth=\gridwidth 90 \global\tpg@blocks=\arabic{tpg@blocks@new}% 91 \iftpg@headings@new 92 \global\tpg@headingstrue 93 \else 94 \global\tpg@headingsfalse 95 \fi 96 \iftpg@margin@new </pre>			
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97  \global\tpg@margintrue
98  \else
99  \global\tpg@marginfalse
100 \fi
101 }

Start the grid at \begin{document}. Do it that late to enable the author to switch
between draft and final before that position.
102 \AtBeginDocument{%
Print the grid on any page if wanted.
103 \iftpg@draft
104  \typeout{Typographic grid switched on}%
105  \AddToShipoutPicture{\typogrid}%
106 \else
107  \typeout{Typographic grid switched off}%
108 \fi

Declare width of grid for first page of document.
109 \setlength\gridwidth{\textwidth/\arabic{tpg@blocks@new}}%
110 \global\tpg@blocks=\arabic{tpg@blocks@new}%
111 \iftpg@headings@new
112  \tpg@headingstrue
113 \else
114  \tpg@headingsfalse
115 \fi
116 \iftpg@margin@new
117  \tpg@margintrue
118 \else
119  \tpg@marginfalse
120 \fi
121 }

```

## Change History

0.10	General: First version . . . . . 1	Rolf Niepraschk . . . . . 1
0.20	General: Reimplementation with respect to <code>showframe.sty</code> by	General: Set date and version explicitly in <code>\ProvidesPackage</code> . . 1 Update Makefile . . . . . 1

## Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

<b>A</b>	<code>\AtBeginDocument</code> . . 102	<b>B</b>
<code>\AddToShipoutPicture</code>	<code>\AtTextLowerLeft</code> . .	
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