

# Textpos: absolute positioning of text on the page\*

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This package facilitates placing boxes at absolute positions on the LaTeX page. There are several reasons why this might be useful, but the main one (or at least my motivating one) is to help produce a large-format conference poster.

This package provides a single environment, which contains the text (or graphics, or table, or whatever) which is to be placed on the page, and which specifies where it is to be placed.

The package tries not to get in the way. That is, you should be able to use most of the apparatus of L<sup>A</sup>T<sub>E</sub>X in your poster, such as section headings, citations, graphics inclusion, and so on. Please let me know if you experience problems in this respect.

This package requires the services of Martin Schröder's package `everyshi`. You will need to download this package from CTAN first. See <http://www.tex.ac.uk/tex-archive/macros/latex/contrib/supported/ms/> or one of the other CTAN hosts.

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## 1 Description

`textblock` The environment is used as follows

```
\begin{textblock}{hsize}(hpos),(vpos)
text...
\end{textblock}
```

The `hsize` and `hpos` arguments are given in units of a module `\TPHorizModule`, and `vpos` is given in units of a module `\TPVertModule`. You set these using the command `\setlength{\TPHorizModule}{dimen}`, and similarly for `\TPVertModule`. The arguments may be any dimension, and you may use the modules as units elsewhere in your document if you wish to, for example in `\makebox[2\TPHorizModule]{gnus}`. The text in the environment will be set in a box `hsize` modules wide, and placed on the page with its upper left corner at the position (`hpos`, `vpos`)

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You will often wish to set up a grid on your page. Rather than calculate and specify the two modules explicitly, you can set up the grid with a command `\TPGrid{ $\langle nhoriz \rangle$ }{ $\langle nvert \rangle$ }`, which sets `\TPHorizModule` to be  $\langle paper\ width \rangle / \langle nhoriz \rangle$ , and `\TPVertModule` to be  $\langle paper\ height \rangle / \langle nvert \rangle$ . This takes an optional pair of arguments, which specify a coordinate, as follows.

```
\TPGrid[ $\langle x \rangle$ , $\langle y \rangle$ ]{ $\langle nhoriz \rangle$ }{ $\langle nvert \rangle$ }
```

If these are present, then the modules are set up to leave a border of the appropriate size around the grid. That is, `\TPHorizModule` is set to be  $(\langle paper\ width \rangle - \langle x \rangle) / \langle nhoriz \rangle$ , and similarly for `\TPVertModule`. Further, if the package was given the ‘absolute’ option, then the text origin is set to be  $(\langle x \rangle, \langle y \rangle)$  through a call to `\textblockorigin` (see below).

You may give a further argument, specifying which point in the box is to be placed at the specified point:

```
\begin{textblock}{ $\langle hsize \rangle$ }[ $\langle ho \rangle$ , $\langle vo \rangle$ ]( $\langle hpos \rangle$ , $\langle vpos \rangle$ )
text...
\end{textblock}
```

The coordinates  $\langle ho \rangle$  and  $\langle vo \rangle$  are fractions of the width and height of the text box, respectively, and state that the box is to be placed so that the point  $(\langle ho \rangle, \langle vo \rangle)$  within the box is to be placed at the point  $(\langle hpos \rangle, \langle vpos \rangle)$  on the page. The default specification is  $[0,0]$ , the top left of the box:  $[0,1]$  would be the bottom left, and  $[0.5,0.5]$  the middle.

Each `textblock` environment takes up zero space on the page (which means, by the way, that it cannot detect that it’s overprinting or being overprinted), so you can (and typically will) use several of the environments in a row to scatter text all over the page.

This package works in two modes, relative and absolute. In the first one, the default, the block-positioning parameters in the `textblock` environment are taken to be relative to the current position on the page. This will be appropriate if you are laying out text within a `figure` environment or the like. In this mode, you will typically give several `textblock` environments one after the other, so that they are all relative to the same point.

If, however, your entire document is to be laid out piece by piece (which is the case in the canonical use of the package, to lay out a poster), then you might want to be more sure of where the origin is. In this case, you make the package work in its absolute mode, by invoking it with the ‘absolute’ option: `\usepackage[absolute]{textpos}`. In this mode, all the block-positioning parameters are given relative to a single origin on the page. By default, this is the top-left corner of the page, but you may change it with the command `\textblockorigin{ $\langle hpos \rangle$ }{ $\langle vpos \rangle$ }`. Here  $\langle hpos \rangle$  and  $\langle vpos \rangle$  are dimensions such as ‘10mm’, relative to the top-left corner of the paper. You may use this command only if the package was invoked with the ‘absolute’ option.

## 1.1 Package options

There are three package options:

**showboxes** When you are laying things out, it can be useful to have the boxes drawn in for you. This option draws a box fitting closely round the set text.

**noshowtext** This suppresses the display of the text in each block (so it's not really usable without the `showboxes` option). The resulting box will be the correct size, but empty, unless the `\textblocklabel` command has been given. This can be useful when you are previewing a document.

**absolute** If this is present, then the positions on the `textblock` environment are taken to be absolute positions on the page. See above.

**overlay** When using the absolute-position mode, the textblocks are placed under any other text on the page. This is normally what you want, but if you have page contents, and they have something which *obscures* the textblocks (for example, a block of opaque colour), then the positioned textboxes disappear. In this case, specify the option `overlay`, to request that the positioned blocks of text overlay any other page contents, rather than being overlaid.

## 1.2 Package parameters

<code>\TPHorizModule</code>	<code>\TPHorizModule</code> The length unit which is used for the horizontal positioning and size parameters of the <code>textblock</code> environment. Set it using the command <code>\setlength{\TPHorizModule}{\langle dimen \rangle}</code> (or indeed <code>\addtolength</code> ). The default is one sixteenth of the paper width.
<code>\TPVertModule</code>	<code>\TPVertModule</code> The length unit which is used for the vertical positioning and size parameters of the <code>textblock</code> environment. Set it using the command <code>\setlength{\TPVertModule}{\langle dimen \rangle}</code> (or indeed <code>\addtolength</code> ). The default is one sixteenth of the paper height.
<code>\TPboxrulesize</code>	<code>\TPboxrulesize</code> When you use the <code>showboxes</code> option, the lines drawn are of this width. If this too small to show up when you are previewing your document, you may adjust the size using <code>\setlength</code> or <code>\addtolength</code> . The default is 0.4pt.
<code>\textblocklabel</code>	<code>\textblocklabel</code> This may be used within any <code>textblock</code> environment. It is ignored, unless the <code>noshowtext</code> option has been specified, when it will be used to label the <code>textblock</code> it is inside. Use: <code>\textblocklabel{Identifying text}</code> .
<code>\showtextsize</code>	<code>\showtextsize</code> When <code>\textblocklabel</code> is being shown, the text appears in size <code>\showtextsize</code> , which is defined by default to be <code>\normalsize</code> . If this is too small, you may adjust it using <code>\newcommand{\showtextsize}{\large}</code> , or whatever size you prefer.
<code>\textblockorigin</code>	<code>\textblockorigin</code> Sets the position of the top-left of the printable area. See above.

## 1.3 Suggestions: Producing large-format posters

If you are producing a large-format poster, such as A0 size, you might want to use Gerlinde Kettl and Matthias Weiser's `a0poster` class, which painlessly deals with the miscellaneous hassles of printing to a large-format postscript printer.

The text on a large poster will typically use a very large font. It can be a hassle to create (or have `dvips` create) these fonts, and they take up a good deal of

space on your disk. You might want to investigate the BaKoMa fonts (available at CTAN), which are postscript versions of the Computer Modern fonts, and which can therefore be scaled arbitrarily.

## 2 Credits

Olaf Maibaum, [Olaf.Maibaum@informatik.uni-oldenburg.de](mailto:Olaf.Maibaum@informatik.uni-oldenburg.de), made an elegant improvement to an earlier version of this package, by producing the code which I've incorporated here as the 'absolute mode' (I'd had something like this before, but it was *very* kludgy).

Bjoern Pedersen, [bjoern@poseidon.org.chemie.tu-muenchen.de](mailto:bjoern@poseidon.org.chemie.tu-muenchen.de), made the excellent suggestion that the horizontal and vertical modules should be independent. He also provided working code!

## 3 Example

Here is a short example file.

```
1 (*example)
2 \documentclass{article}
3
4 \usepackage[absolute]{textpos}
5
6 \setlength{\TPHorizModule}{30mm}
7 \setlength{\TPVertModule}{\TPHorizModule}
8 \textblockorigin{10mm}{10mm} % start everything near the top-left corner
9
10 \begin{document}
11
12 \begin{textblock}{3}(0,0)
13 This block is 3 modules wide, and is placed with its top left corner
14 at the 'origin' on the page. Note that the length of the block is not
15 specified in the arguments -- the box will be as long as necessary to
16 accomodate the text inside it. You need to examine the output of the
17 text to adjust the positioning of the blocks on the page.
18 \end{textblock}
19
20 \begin{textblock}{2}(2,1)
21 \textblocklabel{block two}
22 Here is another, slightly narrower, block, at position (2,1) on the page.
23 \end{textblock}
24
25 \begin{textblock}{3}[0.5,0.5](1,3)
26 This block is at position (1,3), but because the optional argument
27 [0.5,0.5] has been given, it is the centre of the block which is
28 located at that point, rather than the top-left corner.
29 \end{textblock}
30
31 \end{document}
32 \end{example}
```