

pst-blur package

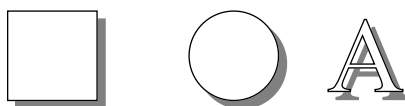
version 1.0

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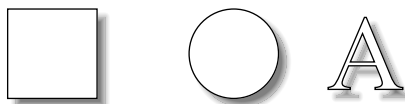
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1 Introduction

The ability to paint shadows on arbitrary shapes is a standard feature of PSTricks. However, these shadows are always ‘hard’:



The `pst-blur` package provides blurred shadows for closed shapes drawn with PSTricks:



It also provides a new box command `\psblurbox`, which is similar to `\psshadowbox`, but gives the box a blurred shadow.

The new graphics parameters and macros provided by the package are described in section 2 of this document. Section 3, if present, documents the implementation consisting of a generic `TEX` file and a PostScript header for the `dvi-to-PostScript` converter. You can get section 3 by calling `LATEX` as follows on most relevant systems:

```
latex 'AtBeginDocument{\AlsoImplementation}\input{pst-blur.dtx}'
```

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2 Package Usage

To use `pst-blur`, you have to say

```
\usepackage{pst-blur}
```

in the document prologue for L^AT_EX, and

```
\input pst-blur.tex
```

in “plain” T_EX.

`blur` To paint shapes with blurred shadows, set the graphics parameters `shadow` and `blur` to `true`, eg

```
\psset{unit=1cm}
\pscircle[shadow=true,blur=true](0,0){0.5}
```

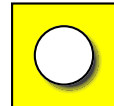


for a circle with a blurred shadow. The parameter `blur` has no influence if `shadow` is `false`.

`shadowsize` The rendering of blurred shadows is controlled by a number of additional graphics parameters. The offset of the shadow is controlled by the parameters `shadowsize` and `shadowangle`, which are the same as for ordinary shadows.¹
`shadowangle`
`blurradius` The size of the blurring effect is controlled by the parameter `blurradius`, see Fig 1. The default value for `blurradius` is 1.5pt, which fits nicely with the default `shadowsize` of 3pt.

`shadowcolor` The inner, usually darkest part of the shadow is painted in the colour defined by `shadowcolor`. In the range defined by `blurradius`, the colour gradually fades to the background colour set by `blurbg`. The default value for `blurbg` is white. You should change this parameter when you want to paint shapes over a coloured background, ie

```
\psframe[fillstyle=solid,fillcolor=yellow](-.7,-.7)(.7,.7)
\pscircle[shadow=true,blur=true,blurbg=yellow](0,0){0.4}
```

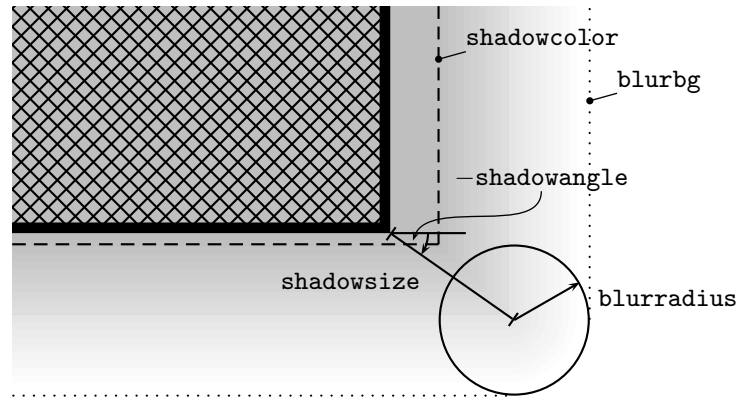


`blursteps` The number of distinct colour steps painted between `shadowcolor` and `blurbg` is controlled by the parameter `blursteps`. The default value for `blursteps` is 20, which is usually more than sufficient. Note, that higher values for `blursteps` result in proportionally slower rendering. This can be very tiresome with complex shapes.

`\psblurbox` Using a `\psframebox` with a blurred shadow in the middle of some text produces poor results, because T_EX does not know about the extra space taken

¹In particular, `shadowangle` has to be negative for the usual placement of shadows below and to the right of shapes.

Figure 1: Parameters for blurred shadows



by the shadow. For normal shadows, this problem is solved by the `\psshadowbox` macro, which adds the extra space around the box for the shadow. For blurred shadows, this is not sufficient: an extra `\blurradius` has to be added. This is done by the macro `\psblurbox`, which is otherwise identical to `\psshadowbox`. Note, that `\psblurbox` shares a deficiency of `\psshadowbox`: It only works correctly with `shadowangle = -45`, because `TEX` does not provide trigonometric operations.