

The shadethm package

Shaded theorem environments in L^AT_EX,
with `\newshadetheorem` in addition to `\newtheorem`

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1 Usage

Used as a L^AT_EX 2_ε style, with `\usepackage{shadethm}`, it allows declarations of the form `\newshadetheorem{theorem}{Theorem}`, so that

```
\begin{theorem}  $E=mc^2$  \end{theorem}
```

will produce the usual theorem, only placed in a shaded box.

Options.

Two come in this file:

bodymargin (default) The body of the shaded text lines up with the margins. Just as though you called `newtheorem`, then colored later. Shading falls outside the margin.

shademargin The shading lines up with the margins, so the body of shaded text comes out a little thinner.

If you call it with an option not on that list then it will look for a file `<Option-Name>.sth` and take the parameters from there. See the included files `shadein.sth` and `colored.sth`, the first of which gives theorems that are (like L^AT_EX quotations) indented left and right and the second of which gives color shading.

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2 Remarks

- (1) You can of course have non-shaded environments, also. The `\newtheorem` command still works.
- (2) Numbering within: An prior version of this style required that you number within like this:

```
\newshadetheorem{thm}{Theorem}
\newshadetheorem{note}[shadethm]{Note} % No longer needed!
```

but this one drops that requirement. If you didn't use the old version, forget about it.

- (3) Uses the `graphics` package. Look for it in the CTAN T_EX-archive nearest you, for instance at tug.ctan.org.
- (4) Works with `amsthm.sty`.
- (5) Notice that if you say

```
\newshadetheorem{theorem}{Theorem}
```

and then

```
\newtheorem{theorem}{Theorem}
```

then you will get an error message since the first allows you to say `\begin{theorem} . . .`, as does the second.

3 Installation

Put this where your T_EX looks for `.sty` files. There are some parameters you could set the default for (try them as is, first).

- (i) **shadethmcolor** The shading color of the background. See the documentation for the `color` package, but with a 'gray' model, I find `.97` looks good out of my printer, while a darker shade like `.92` is needed to make it copy well. (Black is 0, white is 1.)
- (i*) **shaderulecolor** The shading color of the border of the shaded box. See (i). If `\shadeboxrule` is set to 0pt then this won't print anyway.

- (i**) `\shadeboxrule` The width of the border around the shading. Set it to 0pt (not just 0) to make it disappear.
- (i***) `\shadeboxsep` The length by which the shade box surrounds the text.
 - (ii) `\shadesetinsidemini` The theorems are set inside a `minipage` to get line breaks, but some things, like paragraph indents, are messed with there, so I have a hook to reset them. Probably you can just leave this alone.
 - (iii) The default option. Change the `\ExecuteOptions{...}` right before the `\ProcessOptions`.

Comment:

If you get an error about ‘undefined color model’ then you need to create the file `color.cfg` in the same place as `color.sty`, and put in it the line

```
\ExecuteOptions{dvips}
```

(or whatever is the name of your driver). See the documentation for the `graphics` package. I needed this in the distant past under `NTEX`.

4 Bugs

- (1) Page breaks are a problem since it sets the theorem before it is shaded. The theorem is put into a `minipage` in order to have the right line breaks put in, but then can’t be broken across pages. I’d be interested in any fixes for this. DA?

5 License

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6 History

99XI23 jh Redid the parsing to stick to `\newcommand`-style calls. Needed to put in some oppressive `\expandafter` strings.

99VII09 jh tex@joshua.smcvt.edu Fixed the number within situation. LPPL added.

97I07 jh Changed the interior of the `\DeclareOptions` to `\AtBeginDocument` for cases where the `\textwidth` is changed.

95VI19 jh Adapted for $\text{\LaTeX} 2_{\epsilon}$. Now uses the `graphics` package, and all the neat $\text{\LaTeX} 2_{\epsilon}$ package stuff. Still haven't rewritten the parsing code to use the new optional arguments to `\newcommand`, though. Ah well.

94VII11 jim hefferon hefferon@smcvax.smcvt.edu. First written (after lots of sporadic tries, over months; I couldn't get any of the extant shading macros to work with theorems) from a hint in TvZ's `Fancybox` writeup. It's all so easy once you know how.