The shadethm package

Shaded theorem environments in \LaTeX, with \texttt{\newshadetheorem} in addition to \texttt{\newtheorem}

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1 Usage

Used as a \LaTeX\,2ε style, with \texttt{\usepackage{shadethm}}, it allows declarations of the form \texttt{\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:

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

\texttt{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 \texttt{"Option-Name".sth} and take the parameters from there. See the included files \texttt{shadein.sth} and \texttt{colored.sth}, the first of which gives theorems that are (like \LaTeX\ 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 \texttt{newtheorem} command still works.

(2) Numbering within: An prior version of this style required that you number within like this:

\begin{shadetheorem}{thm}{Theorem}
\end{shadetheorem}
\begin{shadetheorem}{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 \texttt{graphics} package. Look for it in the CTAN TeX-archive nearest you, for instance at \url{tug.ctan.org}.

(4) Works with \texttt{amsthm.sty}.

(5) Notice that if you say

\begin{shadetheorem}{theorem}{Theorem}
\end{shadetheorem}
\begin{theorem}{Theorem}

and then

\begin{theorem}{Theorem}

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

3 Installation

Put this where your TeX looks for .\texttt{sty} files. There are some parameters you could set the default for (try them as is, first).

(i) \texttt{shadethmcolor} The shading color of the background. See the documentation for the \texttt{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.)

(ii) \texttt{shaderulecolor} The shading color of the border of the shaded box. See [i]. If \texttt{shadeboxrule} is set to 0 pt then this won’t print anyway.
\shadeboxrule The width of the border around the shading. Set it to 0 pt (not just 0) to make it disappear.

\shadeboxsep The length by which the shade box surrounds the text.

\shadesetinsideminipage 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 \TeX.

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 oppresive `\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 \TeX\ 2\varepsilon. Now uses the `\graphics' package, and all the neat \TeX\ 2\varepsilon 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 TzV’s Fancybox writeup. It’s all so easy once you know how.