TikZ in readthedocs.org

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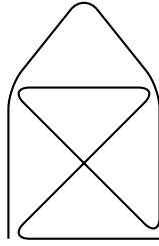
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Fig. 1: A beautiful TikZ drawing which works in readthedocs.org.

CHAPTER 1

TikZ extension for Sphinx

Sphinx is a document generator, which can output, for instance, PDF and HTML. Often, the documentation contains some illustration. It would be nice to have the code of the figures in your documentation source files, so it is easy to edit the graphics and you don't need to manually generate any external image files. Also, it's good to have the graphics automatically in a proper format for both PDF and HTML outputs. For this purpose, TikZ is a great LaTeX package for drawing vector graphics. With a TikZ extension for Sphinx, you can use TikZ syntax directly in the documentation source files to generate graphics. The output is native in PDF output and PNG images in HTML output.

The TikZ extension for Sphinx can be installed as:

```
pip install sphinxcontrib-tikz
```

Note that Sphinx and its extensions must be installed to the same virtual environment. If Sphinx is installed to the system directories, it won't find extensions that are in virtual environments.

In your *conf.py*, add the TikZ extension to the list of enabled extensions:

```
extensions = ['sphinxcontrib.tikz']
```

Also, add the following lines to support TikZ in PDF output:

```
latex_elements = {
'preamble': '\usepackage{tikz}',
}
```

Now you should be able to build your documentation to PDF and HTML using Sphinx and the TikZ graphics should show nicely.

Making it work at Read the Docs

Readthedocs.org is a free service for sharing your documentation in various formats. If you are using GitHub for your projects, it is easy to share up-to-date documentation automatically in readthedocs.org.

However, if you try to build your documentation using TikZ in readthedocs.org, it builds PDF successfully but fails to build HTML. It complains about a missing file:

```
WARNING: pdftoppm command cannot be run
```

This package provides a fix for that. Just add *rtd-tikz* to your requirements file that is used by Read the Docs, and everything should work (if it worked locally).

GitHub repository: https://github.com/jluttine/tikz-in-readthedocs