

# Interactive TeX training and support

Jonathan Fine

Website <http://jonathanfine.wordpress.com/>

Address J.Fine@pytex.org

Abstract It is today practical and helpful to provide TeX as a web service. This allows us a new approach to learning TeX.

The website <http://www.mathtran.org> (developed by the author, with funding from the UK's JISC and Open University) runs TeX as a daemon and provides translation of TeX-notation mathematical formulas into bitmap graphics as a web service. It takes less than 10 milliseconds per image to do this translation (not including time take to serve the image), which is quicker than looking it up on an average hard drive. At present, this site is serving about 30,000 images a day, out of a potential capacity of perhaps 2,000,000.

Troy Henderson's L<sup>A</sup>T<sub>E</sub>X previewer <http://www.tlhiv.org/LaTeXpreviewer/> and the SITMO equation editor <http://www.sitmo.com/latex/> both offer L<sup>A</sup>T<sub>E</sub>X as a web service. Here, they run L<sup>A</sup>T<sub>E</sub>X once for each request. Although not quick enough to support a public service for web page graphic, they are easily quick enough to process individual user generated requests.

Recently, one of the TeX users I support asked a question about breaking an equation over two lines. Previously it was set page width, and she had to reformat it for double column. The original equation used \left and \right to give variable size delimiters. When she, in the usual way, used align to break the equation, she found that \left and \right no longer worked.

The solution is to use one of the \big family of commands. I looked for a web page that explained this. To my surprise, I did not find one. Worse, there was no easy way I could create one. So instead of doing that, and sending my user a newly created TeX-support URL, I sent an email.

The Django website <http://www.djangosnippets.org/> is a modern example of how to store and serve user-contributed content. The code for the site (but not the design) is open-source, and so can be copied. We can follow this example.

It is now time to integrate T<sub>E</sub>X as a web service into web pages that provide T<sub>E</sub>X support and training, and to allow users to edit these pages.