

The second day of the TUG 2012 conference in Boston was just as exciting as the first. As both breakfast and lunch was provided to participants during the conference this meant that there was added value to the conference fee. Breakfast was served on the mezzanine level at 7:00am. The nine o'clock conference start time meant some time to talk with the other participants during breakfast.

The second's days proceedings differed slightly in theme from the first. Where most of the presentations from the first day seemed to focus on using the TeX engine to do some amazing things with other languages, the second day's talks seemed to focus on the more practical aspects of LaTeX. My talk was also scheduled before lunch.

## The Presentations

The first talk of the day was by Troy Henderson on some of the web based utilities he had created to generate and plot functions in MetaPost: "[User-friendly web utilities for generating LaTeX output and MetaPost graphics](#)". As I haven't paid too much attention in the past as far as using MetaPost or PSTricks in favor of TikZ, Troy's talk may have me reevaluating that position. If anything it will make it somewhat easier to learn as I can use his online utilities to plot the various graphs and dissect the generated code. This is definitely something I have to look into.

The next talk was on installing TeX on the Mac using the MacTeX install package by Richard Koch: "[The MacTeX install package](#)". The key feature of this package, like everything Mac, is its ease of use - LaTeX can be installed with a single click of the button. Richard demonstrated a full installation during the course of his talk and assured us that an actual installation took place and no trickery was involved.

If you are an iPad owner then Bill Cheswick's talk on iTeX should be of interest. The iTeX app is a LaTeX reader for the iPad and shouldn't be confused with Donald Knut's proposed XML-based successor to TeX. When typesetting a book, or a page or any document, it is generally assumed that the final page size will be known down to the nanometer. TeX then uses some clever algorithms to optimize the presentation for a high standard of quality output.

Unfortunately, this poses some problems for ebook readers. As there are varying screen sizes as well as the ways one can hold a reader, such as the iPad, it would be impossible to run TeX over a document every-time a reader shifts position.

The iTeX application solves this by running TeX to create precomputed images for portrait and landscape layouts in both standard and large type versions. These images are then stored in a container file. Besides being a reader, the app also converts text into LaTeX typeset output. Bill demonstrated this by importing and converting text from Project Gutenberg and arXiv.org. The app is free on Apple's app store for anyone interested to try. After Bill's talk we all took a break.

## LaTeX and Thesis Talks

The next two presentations after the break focused on theses and dissertations. While my talk, "[Preparing your thesis in LaTeX](#)" dealt with the various packages a student can use to make life easier, Peter Flynn's talk, "[A university thesis class: Automation and its pitfalls](#)", focused on the creation of a LaTeX class file for the University College Cork. Given the number of thesis class files on CTAN server, of which we can assume there are even more unofficial class files, the question we must ask is, do we really need another thesis class file? According to Peter, we do.

Generally speaking, a thesis class file is supposed to meet the formatting requirements of a particular university. But ensuring proper page dimensions and margins are not the only requirement. Students are required to enter the formal names of their departments and colleges they belong to. Given that a university might have a complex departmental infrastructure and strange naming standards, the best way to ensure that students entered this correctly was by entering these as options to the documentclass command rather than allow authors to enter this information themselves.

The Cork class file was tested in January 2010 over the course of 18 months and the response has been favorable. So favorable, in fact, that other institutions are looking to adopt or base their class file on Cork's.

Like most university class files in my experience, the University College Cork class file was designed to be minimalist in nature but at the same time meet the needs of as many students as possible. Any package that is added must be done carefully and must be done to meet the

needs of as many students as possible. Unfortunately, with the number of disciplines and in some cases, cross-disciplines, this means that all the needs of all students can not be built into a single class file. Students will need to add packages as they see fit. This was the subject of my talk.

Typically, when a student looks for a LaTeX consultant they are pretty desperate and under a lot of stress. Generally, any attempts to compile a document freezes and ends up with hundreds of errors. Part of my job as a consultant isn't to just fix these problems and get the document compiling again but to offer solutions to make lives easier. Once a project is concluded, students still need to make edits before the final submission.

LaTeX has a multitude of packages and a quick glance it almost seems as if you can do anything. By knowing a student's discipline, a consultant can often give advice on the best package to optimize the writing process. Students in engineering or the sciences may find it easy to take advantage of the siunitx package, for example, which will allow them to enter mathematical units easier than having to enter mathmode and enter a confusing list of symbols. Science students who deal with chemical equations may also take advantage of the mhchem package for the same reason. I talked about some of my past projects and how proper package use helped my clients.

After my talk, the conference broke for lunch.

### Post Lunch Talks

The next talk by Boris Veytsman was on using TeX on the iPad: "[TeX and friends on a Pad](#)". Though I can't imagine actually typing LaTeX code on a flat screen I am, none the less, excited at the possibility. Maybe I work too much and need to get out once in a while. Who knows? But bottom line, it is possible to have LaTeX on an iPad.

The next talk by Bart Childs, "[LaTeX source from word processors](#)", focused on the problems of converting text from word processors into LaTeX and automating the process as much as possible. The problems of some converters is that it usually attempts to make the final output look like the original document as much as possible which, if anyone has attempted, introduces complex (and terrible) LaTeX code. Bart Child's goal was to find a conversion process that would produce code that was accurate, clean and maintainable.

Bart used a hybrid process based on the Writer2LaTeX plugin for the Open Office Writer package as well as macros written in elisp. Bart talked about his tests on converting a book on rotodynamics (which was heavy on the mathematical side), a C++ programming text, a memoir written by a friend that contained portions of the Czech language as well as a novel.

After Bart's talk we took the second break for the day before hearing the day's final two talks.

### Final Talks

Frederico Garcia's talk, "[Documentation in TeXnicolor](#)" focused on his colordoc package. This package based on Frank Mittelbach's docstrip package highlights braces and other code delimiters in the same color and makes for slightly more readable code. This package is sure to come in handy if you have ever needed to troubleshoot code and aren't sure if you added an extra brace or bracket or properly delimited something or the other.

The final talk for the day by Jim Hefferon & Michael Doob focused on the Asymptote graphics program: "[Reaching for the stars with Asymptote](#)". Hefferon and Doob showed some of the features of the package and its ease of use in generating graphics.

### Roundtable Discussion

The day concluded with a roundtable panel discussion moderated by Dave Walden with some of the TeX consultants in TUG of which I took part. The other consultants included Peter Flynn, Amy Hendrickson, Christina Thiele, Steve Peter and Boris Veytsman. Some of the members represented on the panel have been involved in TeX for close to thirty years. Questions asked by the audience focused on the business aspects of TeX consulting; how consultants got business; how they dealt with problem clients to name a few.

After the roundtable discussion, proceedings concluded for the day. Participants then met for a banquet at the Oceanaire Seafood Room for dinner. Day two had ended and I was looking forward to the third and final day of the conference.

Previous day: [TUG 2012 - Day One](#) .

## TUG 2012 - Day Two

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Next day: [TUG 2012 - Day Three](#) .