

## TUG 2012 - Day One

Written by David Latchman  
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On July 16-18, 2012, I attended the 33rd annual meeting of the TeX Users Group (TUG) conference in Boston, MA. For me, it was special as this was my first TUG conference and my first time presenting. I will admit to being a little nervous as I didn't quite know what to expect or what would be expected of me as a presenter.

As I live in California, traveling to Boston was relatively easy and just a plane ride away – I took a red-eye flight from LA to Boston. While these are among the worst flights to take they are better than multiple layovers. At Boston, the conference was held at the Omni Parker House.

Getting there from the airport was made by Dave Walden's clear travel instructions on the TUG website. At the airport I took the Silver Line bus to South station. At South Station, I took the Red Line subway (the T) to the Park Street Station which was a short walk to the hotel. There were many options available for public transportation to the hotel, including taking a taxi cab. The major plus to the route I took was it was free.

### The Omni Parker House and Downtown Boston



From what I gather, the Omni Parker House is one of the top hotels in Boston and one that, like the city itself, is rich in history. Some well known people have worked in the Parker House (the original name before Onmi Hotels brought it) including Hô Chí Minh and Malcom X. The Omni Parker House was also situated (approximately) in the middle of Boston, something I would learn in Dave Walden's presentation later in the day, and thus in the center of action of Downtown Boston.

### The Attendees and the Presenters

There were 61 participants and 23 presenters (of which I was one) listed in the TUG program. As best as I could tell and from the people I have spoken to, most were from the US with participants from Canada, UK, Germany and Egypt. As a lowly LaTeX user and consultant, it was a little surreal to meet so many of the people who are actively involved in TeX and its development. I hope in time I can also make my own contribution.

### The Presentations

There were approximately nine presentations for each of the three days of the conference. As a first time attendee I found the presentations to be of high quality typically found in an academic conference. Unlike most academic conferences where everyone is of the same specialty, the TUG conference saw an eclectic mix of specialties; there was a range of people in academia, sciences and the humanities.

The conference started with an opening from the TUG president, Steve Peter. Steve's opening was followed by a presentation of one of the other LaTeX consultants, Amy Hendrickson of TeXnology Inc. The focus of Amy's talk, "[The wonders of \csname](#)", was on the use of csname to create LaTeX macros, something I found very useful and could potentially use in the future as I develop my own LaTeX document class files.

After a break, the conference resumed with a presentation by Frank Mittelbach, "[E-TeX: Guidelines for future TeX extensions, revisited](#)", on the LaTeX3 project. Frank's talk focused on the direction of the TeX typesetting engine from when it first started over two decades ago. Though the output produced by TeX is far better than any computer based typesetting system presently used (isn't that why we love it?) the computing power available back then was much more limited compared to what is available today. To overcome some of these limitations, Donald Knuth announced TeX 3.0.

Frank compared the limitations of TeX's algorithms and how they were overcome, to what degree and what still needs to be done. Given the increase in computing power and the work that has been done in recent years, the present system could be a viable one and remain so for some time.

Frank's talk was followed by a presentation on font design by Steve Peter, "[Metafont as a design tool](#)". Steve is a linguist and font designer and showed how font design can be done using the Metafont package.

Steve's talk was followed by Will Robertson's presentation, "[The lineage and progeny of fontspec and unicode-math](#)" on the fontspec package and uni-code math. Will's talk focused on his experiences in developing these packages while at the same time learning how to program, one of the consequences of which was contributing code to the LaTeX3 project.

Will's talk was followed by a lunch and group photo of the conference attendees.

The next group of talks focused on using the TeX typesetting engine in foreign languages. Unfortunately, the talk on using LaTeX to typeset Mayan hieroglyphics by Bruno Delprat and Stepan Orevkov was canceled: "[MayaPS: Typing Maya hieroglyphics with \(La\)TeX](#)". It was a little disappointed as I have always found it interesting how TeX typesetting engine can be used in so many ways from typesetting chess boards to creating Sudoku puzzles. Fortunately, the next talk by Sherif Mansour on typesetting Arabic proved just as exciting.

Sherif's presentation, "[Experience with Arabic and LuaTeX](#)" could be considered one of the academic presentations. Sherif is a graduate student from Cairo University and his graduate research is on improving Arabic typesetting using the AlQalam font in LuaTeX. One of the problems faced by Sherif is typesetting right-to-left fonts in LuaTeX. What I didn't know but found very interesting about the Arabic language was that each line in a page is about the same length. This makes line breaking difficult. As the shapes can also change in subtle ways for the same characters, this makes for a difficult problem to solve. Though I don't envy Sherif I am interested in his future work.

Sherif's presentation was followed by Norbert Preining on the problems of typesetting in Japanese: "[Typesetting with Kanji—Japanese typography](#)". Japanese typesetting differs from

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English in that there are four different writing systems: Kanji, Hiragana, Katakana and Roman letters. To further compound difficulties, Japanese employ both vertical and horizontal typesetting styles. His work has been implemented in TeX Live 2011 and TeX Live 2012.

The following talk was on music typesetting by Federico Garcia: "[TeX and Music](#)". As a developer working on writing a professional music typesetting system in TeX, Federico highlighted some of the problems he had with typesetting music. Though I am not a musician, I appreciated some of the problems he faced. One of the problems is getting the TeX engine to automatically (and correctly) place the bars when creating a sheet of music. Federico compared his system with other music typesetting systems. While he faces many problems that need to be solved before he has a fully functional system, he believes they can be solved.

Though my stay in Boston has been brief so far, I am impressed with the city's history and the role it played in American independence. A quick walk through the city and you can find many tours that focus on Boston's rich history. So it is fitting that Dave Walden, one of the TUG board members and transplanted Boston natives, chose a talk on Boston's printing and publishing history: "[My Boston: Some printing and publishing history](#)". At one time in America's history, print publishing was an important part in the dissemination of information during the Colonial and Revolutionary period. Given that TeX is a typesetting system, I can't imagine that anyone didn't find this talk fascinating.

### End of Day

And that concluded the end of a fascinating day. Of course, this means that Day 2 of TUG 2012 is upon me and my first ever presentation at a TUG conference. Given the high quality of presentations I have seen, I wonder how my talk will be received.

Continue reading about the next day: [TUG 2012 - Day Two](#).