Amy Hendrickson

Amy Hendrickson has made her living for over twenty years as a TeX/LaTeX macro writer for publishing companies and academic societies; she also does book production and teaches LaTeX.

[Interview completed 14 September 2008.]

Dave Walden, interviewer: Please tell me a bit about your personal history independent of TeX.

Amy Hendrickson, interviewee: I have an undergrad degree in music composition from the University of Wisconsin, Madison, and a master's degree in music composition from the New England Conservatory. After graduating from NEC, I took a job as an office assistant at MIT in the VLSI office, partly because I liked MIT and partly because I hoped to pick up a computer skill that would support me since my chosen profession, writing contemporary classical music, seemed very unlikely to do so.

DW: When and how did you first come in contact with TeX?

AH: TeX was the computer skill I developed during my time at MIT — a fortuitous choice which has had the effect of not only employing me over the succeeding years, but which has put me in touch with a very interesting and pleasant clientele, scientific authors and publishers.

Within a year I left the MIT job and set off on my new career using and teaching TeX and later LaTeX. This was in the early 1980's. I initially worked for MIT professors, typesetting their books, then learned enough about macro writing that I was able to write macro packages for many publishing companies and academic associations. I imagine this seems an unusual development, since I don't have formal computer science education, but perhaps my engineer father lent a genetic predisposition to my doing technical work, while my creative impulse found some outlet in coming up with solutions for knotty macro writing problems. I still find it enjoyable to come up with novel solutions, most recently using TeX to parse the output of Acrobat forms to be used for automated report generation, or to choose the input for database publishing.

I go into this background in a little more detail at `http://www.texnology.com/who.htm` and `http://www.texnology.com/innov.htm`.

DW: You talk about "using TeX to parse the output of Acrobat forms". How does that work?

AH: PDF forms produce a text file, `*.fdf`.

This file may be parsed by inputting the `*.fdf` file into a prepared `.tex` file which calls a parsing style file which I've written. When LaTeX is run on this file, new definitions are written to another file, called `*.inf`. These new definitions are formed by interpreting the information in the `.fdf` file, and are sent out using `\write` and `\csname ... \endcsname`.

Since we supplied the original form, and are looking for answers to specific questions

that were asked in this PDF form, we can build a `.tex` file that expects and uses these newly defined commands, by inputting the new `*.inf` file at the top of a prepared `.tex` template file.

Then, when LaTeX is run on the template file it will expand the new LaTeX definitions to produce results that reflect the responses to the original PDF form.

This new document can be used in any number of ways, including automated report generation, where a specific data set is represented in text and even with customized graphics. The possibilities for using LaTeX/PostScript in this way for data visualization seem almost unlimited. Particularly in the area of bioinformatics, I could imagine that there might be many useful applications.

The new document could also be used to build a customized report by including specific parts of an existing database of text or graphic information, the PDF form in this case serving the purpose of choosing the specific bits that are wanted for a particular report, out of the much greater set of existing text/graphic files.

If there was a good reason to start with an HTML form, rather than a PDF form, a similar set of steps could be followed, with the same flexibility of possible applications.

DW: You write macro packages, you teach LaTeX, you do book production, among other things. Do you do all of these functions and all of this work yourself, or do you have other people to whom you sometimes subcontract part of the work?

AH: I subcontract very infrequently. I rather enjoy doing book production myself, although not more than 10 books a year. The authors are often enjoyable and the topics interesting even if my level of understanding is hindered by my lack of a real science/ math background. Occasionally I will work in partnership with one or more people, but I don't usually subcontract.

DW: What do you see as the continuing prospects for TeX et al. in the face of the continuing evolution of programs in the commercial world, e.g., InDesign, PDFs, new standards for how fonts are specified, etc.?

AH: I see the growth area in LaTeX being web-based automated production of custom PDF, in response to either PDF forms or HTML forms, and using databases of some sort. The programmability of LaTeX combined with the possibility of including PostScript code seems unique to me, and the value-added features that can be included in a PDF file that starts with a TeX file leaves much room for exploration.

Beyond these areas, there is the mostly unrealized potential for LaTeX to be used in truly aesthetic book production. This is not due to any shortcoming in the capabilities of LaTeX combined with PostScript, but only due to the fact that it is usually thought of as a "techie" tool.

DW: What software tools do you use?

AH: I use a simple Emacs-type editor, usually with the dvipsone package developed by Berthold Horn and distributed by the now defunct Y&Y company. I usually work on a PC, though I own a Mac. (Heresy I expect for Mac enthusiasts!)

DW: Please tell me a bit more about yourself.

AH: I have spent a good part of the last seven years doing very active political organizing, as part of the antiwar movement. Part of this work has been organizing peace concerts held at MIT and Harvard, a MLK concert at Mass Art, and recently a benefit concert for the Children of Gaza. I have also helped organize demonstrations locally in the Boston area, and helped get people to New York City or Washington, DC, for national

demonstrations. And I've hosted innumerable speakers, shown films, and met lots of concerned and humane people that are terribly saddened by our government's actions.

One of my most satisfying efforts was organizing an international demonstration before the onset of the Iraq invasion, hoping to stop the war before it started. This involved finding collaborative organizations to co-sign an invitation email and sending the email out to overseas organizations whose contact info I found on the web, inviting people to demonstrate with us in the USA in October of 2002. Organizations like Greenpeace and Global Exchange and more, also used their international email lists to contact people world wide. On the given day people in 17 cities demonstrated in front of their local American Consulates, including Nepal, many places in Europe, Japan, and other countries at the same time as we were demonstrating in NYC. It was thrilling, and leads me to think that people-to-people international antiwar communication and cooperation may have some potential to stop wars in the future. We've only begun to explore the wonders of the Internet and Web as organizing tools, but it is obvious that we are in a new paradigm now that people can communicate directly over national borders unmediated by their governments.

As for music, I do hope to resume composing some time in the future — meanwhile I have become a grandmother of two lovely grandchildren who are growing up in Dublin, Ireland, with their American father, my son, and Irish mother, my daughter-in-law.

DW: Do you ever use TeX as part of those activities?

AH: Not specifically. I've written many hundreds of flyers, which I started producing in TeX, but soon learned that Word, flawed though it is, seems a faster protyping and production tool for a one or two page flyer. I did use TeX for making lawn signs for a candidate for the Senate whose campaign I was involved in, and I used it also for producing some newspaper ads.

My TeX work and political work are perhaps related, in that the TeX community with its international reach and its democratic nature surely shares the same global outlook, as does the science world in general, that nationalism is only a impediment to pure truth seeking and exploring the nature of reality, and where the ideal products are useful to all people everywhere.

I'd like to add that I also am most grateful to Donald Knuth for building the solid and open-ended programming language that I've worked with on a daily basis for the last twenty plus years. His kind spirit set the tone and example for the generous TeX users who have shared thousands of their `.sty` files, fonts, and ideas, in a worldwide collaborative effort, allowing all of us to be part of a welcoming, humane, and international community.

DW: Thank you for participating in this interview. Since we both live in the Boston area, perhaps we will meet in person at some point.

AH: I'd like that! Thanks for the interview, Dave.