Gerben Wierda

Gerben Wierda is well known for his tools for installing TEX and other capabilities on Mac OS X systems.

[Interview completed 28 November 2006.]

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

Gerben Wierda, interviewee: I live together with my wife (Renée) and two kids: Renske, a 6 year old girl, and Mark Douwe, a 3 year old boy. I have had many various jobs; my day job currently is that I am the IT Lead Architect of the Judiciary in The Netherlands, that is all the courts in The Netherlands, roughly 10,000 employees. My wife, by the way, is service level manager for an IT service organisation of the Dutch Ministry of Justice. Both our careers originally started in the private sector.

I hold an M.Sc. in Physics from Groningen University (`http://www.rug.nl/`) and I hold an MBA from RSM Erasmus Rotterdam (`http://www.rsm.nl/`). Renée also holds an M.Sc. in Physics from Groningen University.

With two careers, two kids, and two Physics majors, you can understand that our kids do not have it easy ;-).

DW: When and how did you first get involved with TEX and friends?

GW: Before using TEX I have used amongst other things typewriters and for instance the IBM Visitext when I was editor of the University magazine for math/CS/physics/astrophysics departments and WordMarc at the university. I wrote my Master's dissertation ("A search for resonant Bhabha-scattering in the MeV-region") with TEX. I got hooked because of the nice math, nice typesetting and I think above all because of the logical way of writing with LATEX. TEX was available for my Atari 1040ST, my first personal computer. Since that time, I have written my letters with LATEX and some other things. I did typeset a political party local election program with plain TEX once, on the basis of a design by an artist. That was done on a NeXT Cube. That was the first time I had to compile and install TEX myself. The TEX environment on the NeXT was unsurpassed at the time, mostly thanks to Tom Rokicki's TeXView.app.

DW: Please tell me a little more about TeXView.app and what made it useful or unique for its time.

GW: In a time of PK fonts, it presented a very nice integrated handling of screen and print output and it had very good custom anti-aliasing, so it also looked gorgeous on screen. And it used the signalling function of TEX to display the first page of a multi-paged document immediately after it had been produced, long before the DVI file was complete. This made it almost lightning quick in your experience on hardware that did not have a fraction of today's processing power. I understand that this kind of a linear setup is hard to do with PDF.

DW: You are well known for enabling TEX's installation on the Mac; what did you actually create — a distribution or a way to install an existing distribution?

GW: This one is difficult to answer in black and white. It all started with a shell script that installed teTEX for you. The shell script came with patches for the code to make it compile and run. This script was also the input for the first fink teTEX redistribution.

But such a system required installing the Developer Environment and running shell commands, something pretty alien to most Mac users.

Soon thereafter I produced a very simple GUI front end application that installed (or uninstalled) TEX and Ghostscript and let you set the paper size. I think it was at that time I started to extend the teTEX distribution with stuff I thought could be part of it. This resulted in a second `texmf` tree with my personal additions to teTEX, mostly based on user requests for missing stuff. One could say that at that point it became a separate distribution of sorts. The tree with my additions is called `texmf.gwtex` and the gwTEX name was later proposed by people as a name for my (re)distribution.

A while after that I switched to TEX Live for the binaries and programs and used teTEX for the main `texmf` tree and it has been like that until I recently moved from teTEX to a subset of TEX Live because of the demise of teTEX. There is still some stuff in `texmf.gwtex` that is not available in TEX Live, but it is not much. So, slowly, it has become more a redistribution again.

Apart from *what* is installed there also is *how* it is installed. There, I have done the most work, but also there, it has been a lot of interfacing with standard tools in TEX, like fmtutil and updmap. The interfacing in itself is complex and extended. Keeping all of this operation on my own (and supporting users via email) in my spare time has required very strict philosophies on how to maintain redistributions.

DW: Can you give an example of a "strict philosophy"?

GW: I almost never patch anything myself. If something is broken, I spend my time in trying to get the original authors to repair or extend something. That takes more time initially, but it prevents an explosion of work later. If I patch something and a new release arrives, you can probably imagine the number of combinatorial problems you can run into. I only patch stuff that is not maintained anymore by someone else.

It is also a matter of discipline. Investing time in as painless as possible (for the user, that is) scripts, pays itself in fewer calls for help later. The quick solution is seldom the best solution in terms of time needed.

DW: You mentioned that you started with teTEX; do you know Thomas Esser well (he was interviewed earlier this year as part of this series)?

GW: I may have seen him once. We had e-mail contact at a semi-regular basis during the early years. He was very helpful in adapting his scripts and configuration files so they were usable by my scripts. Because he was willing to extend his scripts and change layout of his configuration files, I was able to present the user with a GUI for some TEX settings. Without his changes, it would have been possible, but it would have been very difficult. His work eased my work enormously.

DW: I used a Mac for eight years before I switched to MS Windows (a conscious decision to be in the mainstream of computer use even if such use wasn't as much fun). One of my fondest memories of the Mac in comparison to Windows was that I could do installations on the Mac by dragged the program to a directory, while Windows required "installation": can you tell me a little more about why "installation" is now necessary on a Mac?

GW: For one, because Mac OS X is in fact a Unix system, which to the administrator looks a lot like BSD Unix. Installing for multiple users requires writing in system-wide areas, areas which are generally protected.

But even then, drag-and-drop installs are still preferred. This is even true for software that has to install stuff in system locations. It is possible to make a drag-and-drop install (say for the TeXShop application) and let it come with its own internal TEX setup. It

is also possible to let that application notice at first startup that some stuff has to be installed, give the user an authentication panel and then run some specific install script with administrator rights. This solution is however not generic, but specific. If you want to be able to install all kinds of software, not just TEX as part of your particular front end, but TEX, Ghostscript, ImageMagick, etc. as back end to be used for many front ends (TeXShop, iTEXMac, etc.), system-wide installs are the norm and drag-and-drop is too specific and a lot of work for those Unix-type tools.

TEX itself does not need administrator rights and can be installed anywhere. But other tools like ImageMagick for image format conversion or Ghostscript do, mainly because they often require very fixed locations for supporting libraries and data. On a multi-user system like Mac OS X, this means a system-wide protected area. Enabling TEX use on the command line for all users also requires sysadmin access.

DW: What was your motivation or goal that "dragged" you into doing so much detailed development work on TEX?

GW: I want to use TEX. This means I want it available on the systems I use. That meant that when I got an Apple PowerBook with Rhapsody (Mac OS X precursor), I wanted to install and run TEX on it. I moved to Apple when they released Mac OS X, as for me, Mac OS X is the logical next step after NeXTStep. I do have a project to write a book and it is written with TEX. But as others have found before me, TEX itself is able to distract you from the contents of your work.

What dragged me into all the support work is the simple fact that people asked me for help, and I tend to help people if I am asked. E.g., after I had publicized my script and patches to install teTEX on Mac OS X, people asked me (I think it was Dick Koch, a mathematician at the University of Oregon and author of the popular TeXShop front end) if I could not create a binary installation without the need for users to install the Developer environment and use the command line. That was TeXGSInstaller.app.

It was also a matter of available expertise. I have been involved in porting a lot in the past, e.g., you may find my name in the Squid annals as contact person for running Squid on NeXTStep. Together with a friend (and technically these projects were mostly his work) I was active in getting to run stuff like CNews, Taylor UUCP and Perl on NeXTStep. For me, this has also been a way to keep involved in the technical side of IT as I moved more into management. With skills, it is "use it or lose it". And I believe firmly that you need to have feeling for the things you manage if you want to manage it well. You need to be *able* to connect to the content of the people you manage even if you should not do their content in their place. It also helps to have such skills if you want to select the right people for the job. There are also downsides to this philosophy. Anyway, I do need to do some technical things as a hobby to be able to do my less technical job well. As I recently have moved back more to technical content in my work as I have changed focus from strategy and policy to architecture, it becomes less imperative to keep on doing these technical hobbies privately. And there is still enough left besides TEX and friends.

DW: What are the "downsides to this philosophy"?

GW: I think the downsides are outside the scope of this interview, but let me give you one: if you manage professionals you are in a position of power over them. For a professional, this power by the manager can be balanced by the fact that the professional has skills and knowledge the manager does not have. This balance makes many professionals feel better (and less uncertain). Having a manager who also can be considered a (near) technical equal may make some employees uncertain and afraid, not states of mind that are good for the organisation or anyone involved.

DW: Let me get all these names and functions straight in my own mind. Your TeXGSInstaller.app can help install gwTEX on a Mac, but that is somehow different than your i-Installer? (Described in "i-Installer: The evolution of a TEX install on Mac OS X" (`http://tug.org/TUGboat/Contents/contents26-3.html`), *TUGboat* volume 26, number 3.) And where does TeXShop, which you apparently did with Dick Koch and Dirk Olmes (`http://cc.uoregon.edu/cnews/summer2002/koch.html`), fit into this set of tools?

GW: TeXGSInstaller.app was a simple front end for a script that could install and uninstall TEX and Ghostscript. i-Installer is a generic software installer, like Apple's own Installer.app.

TeXShop is a front end, in fact it is at first a text editor where you edit your TEX source. When the TEX source needs to be compiled into PDF, it runs pdfTEX in the background and when the result is ready, it displays this. So, TeXShop is an editor/runner/viewer, but leaves the TEX compilation job to a command line tool at the Unix level. You still need a TEX to do the work. i-Installer is an application that can install software on a Mac and one of the i-Packages available for it has a TEX.

I did almost nothing on TeXShop, by the way. It was all the other guys.

Someone trying to understand the details of these distinctions could read the *TUGboat* article you mentioned or maybe visit `http://www.rna.nl/tex.html`, although that will not be maintained in the future.

DW: At the end of the presentation of your paper ("TEX Live — Life with TEX", co-authored with Renée M. E. van Roode) at TUG 2006 in Marrakesh, you announced you were going to stop public support and maintenance of all this installation support software. Why are you stopping, is there any connection to Thomas Esser stopping his efforts with teTEX, and how do you see things going forward without you? Also, what about your on-going support for the other tools we have mentioned?

GW: It is partly a direct consequence of Thomas Esser stopping. For the rest, I also need to write this up in detail for the article that comes with the talk and that is to appear in *TUGboat* later: in general it has to do with the way TEX Live is maintained. I expect an increase in the support work because it is larger and less strictly edited than teTEX was. For examples, if the file `rohyph.tex` is renamed to `rohyphen.tex` (which happened recently), the existing user `language.dat` files in `TEXMFLOCAL` or `TEXMFHOME` are suddenly broken because they have a wrong file name. Imagine the surprise of a user who selects Romanian in the TEX i-Package configuration phase and time and again he ends up with a TEX format without Romanian. Either my scripting would have to become even more extended, or my direct user support would increase manyfold with changes like these.

Note that I have not announced the complete end of maintenance. What I have announced is that I will not support the users anymore and only do maintenance if I need it myself. So, it is a slower death.

I have no idea on going forward, but if someone or a group with the right skills steps up, I will gladly help in an advisory role during a transition period. I intend to leave everything in a state which has enough documentation, etc. However, that is uncertain as the deadline of January 1 is fixed and there are limits on what I can do.

DW: I presume your co-author Renée M. E. van Roode is the same person as your wife Renée, an IT person herself. Is she also a TEX user, and has how has she been involved with your various TEX and Mac support projects?

GW: She has been instrumental in the availability of my work, but not technically. We

had a deal: she supported my putting money and time into this; I bored her to sleep with technical stories.

DW: I remember your paper "Mac OS X Fonts in pdfTEX" (`http://tug.org/pracjourn/2006-1/wierda/`), TPJ 2006-1, with Thomas A. Schmitz and Adam T. Lindsay. Is there any connection between your work with font installation (or any of your other work) and XETEX?

GW: Thomas and Adam were the TEX and font gurus and I am the packager. I know relatively little of TEX ;-). The paper is theirs almost entirely; they forced me to be the co-author. XETEX is a great development, but there is no connection.

DW: I believe some of your work was supported by the TEX Development Fund. Which work was that and was the support enough to matter?

GW: A few years ago, before I could get DSL in my neighbourhood, I was doing the uploads and stuff on an ISDN line. At one point, I got bills of $400 a month for communication. 99% of that was TEX support. I needed to buy hardware, of course, and software. I can afford all of this, but I felt that it was crazy to spend all this time *and* all the money. If I would not have had financial support, I would not have been in financial trouble, but it would have been hard to convince myself to go on with something that in fact was me paying a considerable amount of money so I could spend too much time on helping others. Without the support and donations, I would probably have quit years ago. The donations and support were never enough to balance the cost, though, but enough to minimize it somewhat. The largest donation I ever got was from Dick Koch, who graciously split the winnings from the Apple Design Award he won with TeXShop.

DW: Do you typically work in "Unix mode" on the Mac or do your work via a GUI IDE; in other words, does Mac OS X being based on Unix made a difference to you? Also, do you have any strong biases on the question of free software tools versus Apple-provided tools and other commercial tools?

GW: The i-Package maintenance, building TEX and trees and such is mostly Unix command line work. Make, shell and Perl are the most important tools. The README is RTF done in a GUI text editor. i-Installer itself is developed in Cocoa, and I develop using the nice Apple XCode IDE which comes with the Developer environment. Typically I work in mail, anyway ;-).

If Mac OS X had not been based on Unix, I would never have used a Mac. When I bought my first NeXT Cube, I was looking for a good Unix with a GUI. Believe it or not, the NeXT was by far the cheapest option in a time as I recall you had to pay $250 for TCP/IP, $250 for NFS, $250 for X11, $500 for Motif, etc. when you were trying to build an SCO Unix system on x86 hardware. It was even cheaper for me because I bought mine second hand (but never used) from some US university when the dollar was at a historical low. I also have been a proponent of object-oriented design, and NeXTStep had all of this. The NeXT was so well engineered in many ways, that I have been using it as my main machine for almost 10 years and only at the end some things became a bit slow. I plan to de-mothball my NeXT later and maybe try to compile TEX Live on it ;-).

I have no bias for either royalty-free or commercial software. My own stuff is free (BSD license) and available from SourceForge.

DW: The biographical note on your fonts paper with Thomas A. Schmitz and Adam Lindsay says, "Gerben Wierda has been working on a book since 1995 but has been sidetracked by typesetting . . . Having used mainly LATEX since 1986, he recently switched

his book project to ConTEXt." Given your extensive history of succumbing to user's cries for help with complex systems, are you taking any precautions to avoid being "dragged into" the very active world of ConTEXt support?

GW: I switched to ConTEXt because I dislike the typical "LATEX style". I liked memoir, but at first glance, ConTEXt looked better organised and set up. I have mixed feelings about ConTEXt. Especially, it is less conceptual writing than LATEX. ConTEXt itself is visually oriented more than logically oriented. I understand that the conceptual orientation is more a task for XML and other stuff where ConTEXt is only a typesetter. I can understand that, but I'm certainly not going to write XML instead of TEX. As support for ConTEXt goes, I will be a user, nothing else. I have pretty poor TEX skills.

DW: Thank you very much for participating in this interview. As someone who previously did not know anything about the world of TEX on the Mac, I found our conversation very educational and I can see why the Mac TEX world holds you in such high regard and is working hard to find ways to replace the support you have provided.