A TUG Postcard or, The Trials of a Letterpress Printer

Peter Wilson

To become a rich printer you must start as a very rich printer.

<div align="right">Traditional</div>

This is the tale of how and why I came to letterpress print a postcard for TUG.

Background

I have been a LaTeX user since 1985, using it at work to typeset and print a range of technical documents, from reports through code documentation and culminating in several thousand of pages of an ISO International Standard. It is only since I retired that I became involved in traditional letterpress printing. This involves manually selecting pieces of lead type to make up words, sentences, pages and books, putting ink on the type so carefully arranged and pressing a sheet of paper onto the inked type to get a final printed page. You produce quite a few sheets like this, proudly show them to your wife who, after a mere glance, announces that she can see several typos! Back to cleaning up the type, making the necessary replacements and/or additions, and then starting the ink-print-review cycle again.

I got into letterpress work after going on a bookbinding course where one of the participants said that her husband was looking for volunteers to help with traditional printing at the local Highline Community College in a Seattle suburb. He took me on, though I knew nothing about it, gave me perhaps three hours of show and tell and let me get on with it. Most of the shop was devoted to teaching commercial printing; the biggest press that they had was a 4-colour Heidelberg offset press some 30 feet in length, with all text and pictures being set up on a Mac beforehand. The students also had to take a two-day letterpress session in my small corner of the shop. Most were desperate to get back to their Macs but one or two liked the constraints forced by having to use fixed sizes of lead type. There we printed on two Chandler & Price platen presses dating back to the early 20th century. In a platen press the type is put in vertically and if not locked up tightly will scatter itself all over the floor; the students really did not like this as they had to pick it all up, put it back in the correct places in the typecases and start all over again, but you only do it once.

To my surprise I managed to win some awards for my printing, the most prestigious being a Gold Award at the 2009 IAHPC International Gallery of

Figure 1: Operating a Chandler & Price Old Style Press

Excellence where there were participants from some 15 different countries. It was for a production called 'Twelve Chinese Great Scholars' done with giclée illustrations and letterpress printing with an accompanying booklet via LaTeX all enclosed in an Oriental style box.

In 2010, after 27 years in the USA, I moved back to the UK and managed eventually to set up a printing and bookbinding workshop in my garage (in the UK it is very rare that a car is kept in a garage).

A partial view of the shop is shown in Figure 2. In the foreground is a nipping press for bookbinding and there are two large type cabinets in the background with each holding twenty typecases and in turn each typecase holds one fount of lead type. There is also a much smaller cabinet holding various founts of brass type for gold tooling the titles on books.

I was fortunate to be able to get a Vandercook SP15 proofing press at a very reasonable price, although it cost nearly as much to have it professionally moved from where it was 200 miles away from my home. This is a horizontal press as opposed to the vertical platen presses which has, for me, the great

Figure 2: Type cabinets and bookbinding equipment

advantage that once you have the type on the press it will not fall onto the floor. The essential part of this is shown on the next page in Figure 6. It is possible to print sheets as large as 15 by 18 inches (381 by 457 mm), while printing on anything smaller than A5 paper (5.8 by 8.25 inches) tends to be problematic.

The postcard

Karl Berry is very persuasive and in a moment of weakness I agreed to print a few postcards for TUG to be given away as a thank-you for members who persuaded others to become members.[1] I imagined 25 or so but was hooked into producing a hundred. It was left to me to create a design which then Karl, Barbara Beeton and some unnamed reviewers[2] would critique.

The first of my draft layouts, done with LaTeX of course, and shown in Figure 3, consisted of a Knuthian quote flanked by two cuts of a nineteenth century type compositor and of a printing press — these were reproduced using carbon paper, then scanned, and inserted into the LaTeX source as `jpg`'s.[3] The grid pattern was to help me with the final arrangement of the type.

I decided to use Caslon for the printing for two reasons; firstly I am rather fond of it and secondly,

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[1] Editor's note: Our membership campaign is detailed at `http://tug.org/membership`; it runs throughout 2015, please take a look!

[2] Editor's note: The other unnamed reviewers were the folks who have volunteered to be on the current incarnation of the TUG membership committee: Kaja Christiansen, Jim Hefferon, Klaus Höppner, Robin Laakso, Steve Peter, Boris Veytsman, and Dave Walden. Peter was remarkably patient and gracious in the face of our ignorant ideas!

[3] 'Cut' is a somewhat generic term for an engraved illustration of some kind mounted on a wooden block to bring it up to typeheight so that it can be printed along with the regular type.
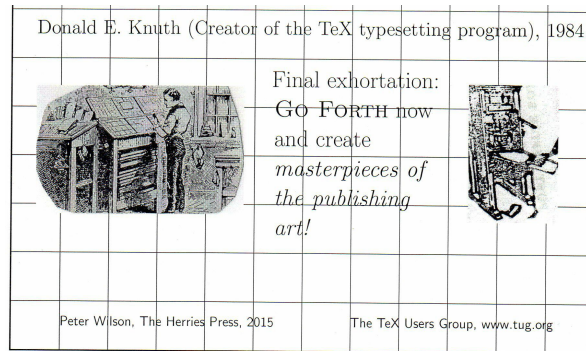
Figure 3: First draft design (in LaTeX)

and more importantly, I happened to have it in a range of sizes and also in Roman, italic and small caps to match Knuth's original setting. I used 14pt for the Knuth introductory line and 18pt, leaded 6pt, for the quotation itself. I selected 10pt Gill Sans for the imprint at the bottom of the card and the printers flowers were 18pt. I have some 60 founts but none of them span the entire range of sizes and possible styles. Among these are Baskerville, Bembo, Bernhard Cursive, Blado, Caslon, Casteller Titling, Fournier, Gill Sans, Old English, and Times.

But compare this motley selection with Knuth's Computer Modern with the Roman in sizes 5, 6, 7, 8, 9, 10, 12, and 17pt, the bold in 5 to 12pt, small caps in 8, 9, 10, 12 and 17pt, the italic in 8, 9, 10, 12 and 17 pt, which would take up 25 typecases, not to mention the slanted roman, Greek, the typewriter font and others. And then maths fonts are a completely different ballgame! In essence, there is an unlimited supply of characters in digital typesetting. In letterpress, you have to make do with what you have physically got. In my early letterpress printing days I almost completed setting the type for a two page document but ran out of 'h' sorts on the penultimate line of the first page.[4] The text was composed of many sentences like 'Whither art thou going, when, and with whom?' and I had to redesign the whole work to accommodate my limited 'h' supply.

The reviewers asked me to liven up my proposal by adding some sort of decoration to highlight Knuth. There wasn't room for that so I added a top and bottom line of printers flowers. I was also asked to change the lowercase 'e' in 'TeX' to a dropped 'E' as in TeX.

Well, kerning in LaTeX is easy as you just make judicious use of the `\kern` and `\raisebox` command to add or subtract horizontal or vertical space. In

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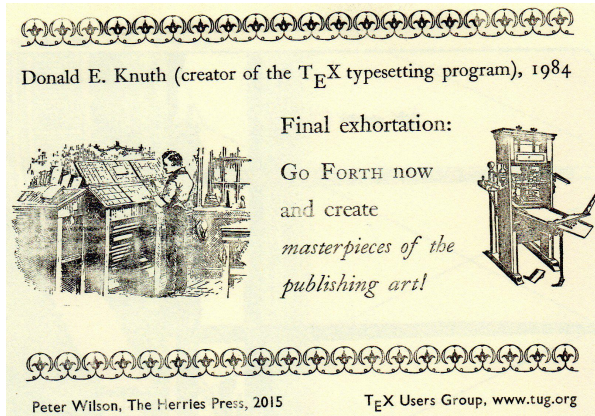
[4] 'Sort' is the generic term for a single piece of lead type.

Figure 4: Second draft printed design

Figure 5: The final type locked up in the forme

Figure 6: The forme on the press

letterpress printing when you are dealing with fixed sizes of lead type it is not so simple. For a positive horizontal kern you can add some extra spacing between the adjacent sorts, ranging from a slip of cigarette paper through copper and brass shims to lead spacers. Any other kerning requires trimming pieces of lead, either above or below or before a sort; not easy. However, I did my best to meet their requests with the result as in Figure 4 (the card got a bit askew when I scanned it originally and I have since disposed of the original).

I was not happy with my attempts to kern the 'E' and fortunately the reviewers were of the same opinion so I reverted back to the regular 'e'. I then spent some time making minor adjustments to the positions of all the elements on the card — a process of adding and subtracting bits of lead until it all looked right. The final positioning of the type, cuts, and spacers in the forme is shown in Figure 5. The forme consists of a rectangular cast-iron frame, called a chase, enclosing the type to be printed, which must be firmly locked up in the chase so that the whole lot can be picked up and moved around without anything falling out.

A US postcard is about the same size as an A6 sheet, and as I mentioned, printing for me on anything smaller than A5 is not so easy. As it happened I couldn't find any suitable A6 paper so I used A5 instead. As I had only one copy of each of the cuts I could only print one postcard at a time, so I printed on one half of the A5, waited two or more days for the ink to dry and then printed on the other half of the sheets, one of which is shown in Figure 7.

I was limited in the amount of drying space that I had, about enough for twenty-five sheets, so the whole process became somewhat protracted.

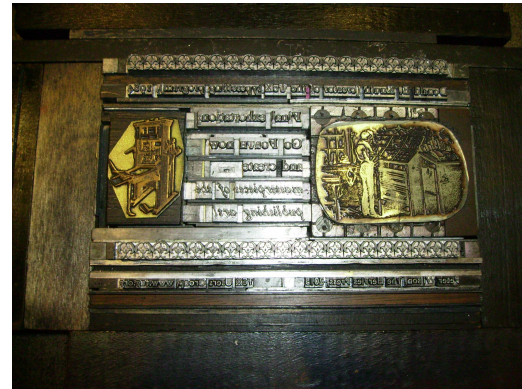For one reason or another I managed a high failure rate of about 10%, which just lengthened the

Figure 7: Final printing

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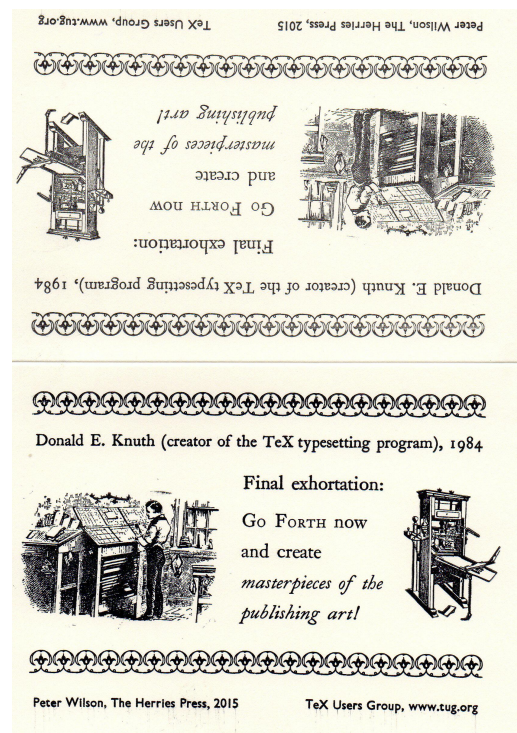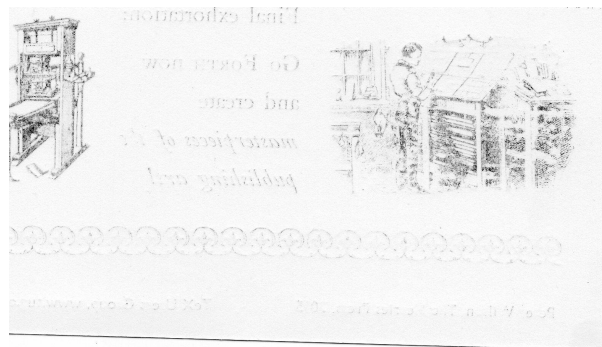
Figure 8: Ink on the back

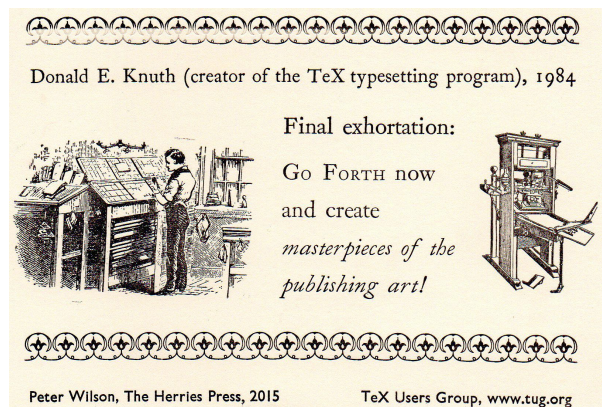**Figure 9**: Missing ink

Figure 10: A postcard in its deliverable state

time. Apart from the usual occasional smudging of ink when taking a sheet out of the press and the odd misfeed of the paper I had two major problems. The first is illustrated in Figure 8 where somehow I managed to get ink on both the front and the back of the cards. A good cleaning of everything solved that one.

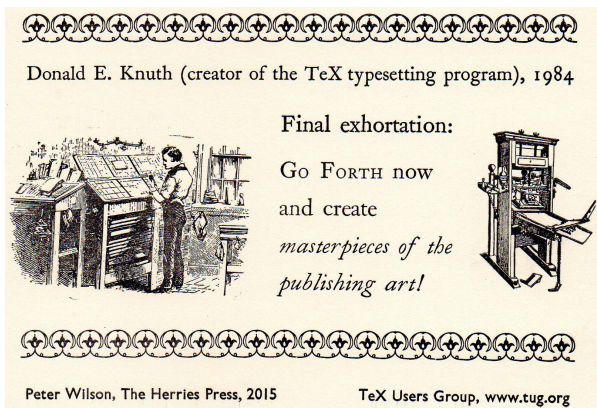The more troublesome difficulty is shown in Figure 9 where there is not enough ink on the top row of printers flowers. I spent a long time putting slips of paper under the sorts that were not fully printing to raise them up so that the ink rollers would be sure to touch them. This didn't work. Eventually I found that I was moving the ink rollers too fast across the type and they were partially bouncing over the top row of type. I reduced my printing rate from about four to three per minute and all seemed well after that.

The end

Perhaps the surprising thing after all this is that I did manage to produce the hundred postcards that Karl requested. A deliverable card is shown in Figure 10. And then, almost to add insult to injury, Karl asked me to write something up about the whole process for *TUGboat*, hence this rather long-winded piece — just don't blame me.

⬦ Peter Wilson
  12 Sovereign Close
  Kenilworth, CV8 1SQ
  UK
  herries dot press (at)
     earthlink dot net