Site Reports

News From the TeX Project

David Fuchs

Not too much to say this time around; all the exciting news will come next time. We do have a fairly stable version of Metafont now being distributed (0.3), and various folks have it running on Vax/VMS, Tops-10, etc. The big problem is lack of documentation; as I write this, Prof. Knuth is working on chapter 4 of The Metafontbook. Along with the new Metafont comes a "trap" test and a set of "plain.mf" macros (akin to TeX's "trip" test and "plain.tex" macros, respectively). There's also the GFtype program that deals with Metafont's "generic font" output format, and the GFtoPXL program (based on GFtype) that converts Metafont output to PXL format. For proof-mode output, there's the GFtoDVI program that produces DVI files that use the large pixels in the GRAY font to create blown-up images of characters under development. The Metafont sources to the GRAY font, plus the sources for FONT1 (the first font created with the new Metafont, one or two letters by each student in last summer's Metafont class) are also included.

Keep an eye out for the second printing of The TeXbook. It corrects all known errors in the first printing (well, *almost* all).

TeX Users' Activity in Germany

Bernd Schulze reported in late September that he expected about 100 people to attend a meeting in Mannheim on October 5, the third of a series of meetings for "TeX-Interessenten" in Germany. He enclosed a copy of his mailing list, which contains information on about 70 sites where TeX is either in operation, in the process of being installed, or under serious consideration.

He also identified the German coordinators for the following hardware and operating systems:

BS 2000	Michael Schrapp, Univ. Karlsruhe*
BS 3000	Georg Heygster, Univ. Bremen
IBM/MVS	Ferdinand Hommes, GMD, Bonn*
IBM/VM-CMS	Bernd Schulze, Univ. Bonn*
VAX/VMS	Peter Kobe, Univ. Bonn
CDC	Jochen Roderburg, Univ. Köln*

(Asterisks indicate TUG members.)

Persons in Germany who wish to be added to the mailing list are invited to contact Bernd Schulze Institute for Applied Mathematics Wegeler Str. 6 D-5300 Bonn, W. Germany

Prime Site Report

John Crawford
Ohio State University

TeX 1.0 is now running on Prime computers.

The conversion provided a very enjoyable exercise in program development and testing. TeX and the various TeX tools were compiled using the University of Sheffield's Pascal compiler. A TeX development system was designed to take the TeX Web and Primos change files, ultimately producing TeX, IniTeX, and TripTeX program modules. The tangled TeX file demanded some automated postprocessing in order to conveniently divide the Pascal program into a few tasty subprograms. Trip validation was performed as the final step in this system.

I have sent my port down to Bart Childs and Riley Rainey at Texas A&M, where Riley reports a successful Prime to QMS Lasergrafix 1200 interface. Locally, I hope to have a laser printer on hand soon. I have been rather frustrated in not having any suitable output drivers for my currently available printing machines. (The thrill of reading DVItype output has long since vanished.) When time allows, I hope to write (or obtain) DVI drivers for the TI855 matrix and Diablo 630 printers, and possibly the Printronix 300 printer. On the other end of the scale, Linda Woessner reports some early interfacing success with an Autologic APS Micro-5 phototypesetter at her site. More on this and other device news later.

I hope to get the new TeX generic tape soon, and expect to have TeX 1.1 available shortly afterwards. With luck, the latest version of Metafont will be quickly ported and available as well.

UNIX TEX SITE REPORT

Richard Furuta
Department of Computer Science
University of Washington

The most significant change to the Unix-TEX distribution since our last report in these pages has been the arrival of TEX version 1.1 and LATEX version 2.06a. Both were added to the distribution tape in late July. A faster version of the Versatec device driver was contributed by Chris Torek of the University of Maryland and was added to the distribution in early May. A DVI previewer for the Sun II workstation (version 1.0), a modification of the BBN BitGraph previewer described in the previous *TUGboat*, was created by Norm Hutchinson of the University of Washington and was included in the distribution in early July. In early August, Mike Urban of TRW sent along some changes to the Imagen driver to support the recently declared TEX standard page origin of one inch from the upper and left hand edges of the physical page.

In addition, we made a number of smaller organizational changes to the distribution, inclusing many which are intended to make it easier to find those parts of the distribution which differ between 4.1 and 4.2 bsd. Parenthetically, the VAX that serves as host to the Unix-TEX distribution has converted from 4.1 bsd to 4.2 bsd and so we are no longer able to provide TEX binaries for 4.1 bsd.

We expect that there will be more major changes to the distribution in the upcoming weeks and months. Most significantly, the WEB META-FONT is just becoming available. As the existing fonts are translated from the old Metafont into the new METAFONT, we expect to replace the .PXL files currently in the distribution with the corresponding Metafont descriptions. This will allow Unix-TEX sites to generate directly those font magnifications that they need. Also of significance will be David Fuchs' port of TEX to the C programming language, which may provide a much appreciated speed-up.

We also hope to provide a Sun-TEX version soon. Steven Correll of the Lawrence Livermore National Lab, Rusty Wright of the University of California at San Diego, and Charles Perkins and Mike Harrison of the University of California at Berkeley have all succeeded in porting Unix-TEX to the Sun II. We are currently merging their changes and expect to have them on the distribution tape by the time this report appears in print. Perkins and Harrison have also modified the Sun DVI previewer

mentioned above to work within the Sun's window package (under version 1.1) and we also expect to be able to make this available within the Unix-TEX distribution.

Finally, if this is your first issue of *TUGboat*, welcome! We provide TEX for Berkeley Unix—4.1 bsd and 4.2 bsd—running on the VAX. To get a copy, send me a check for $75, made to the University of Washington (we cannot accept purchase orders), and a copy of your 4.1 or 4.2 bsd source license (the one from Berkeley, *not* any of the AT&T licenses). Please note that we recently increased the price of the tape to cover a previously undiscovered University surcharge. If you need further information, drop me a line and I'll mail you an information sheet.

VAX/VMS Site Report

Barry Smith

Well, we've been busy —

- The new VAX/VMS TEX, version 1.1, is packaged and available from Kellerman and Smith; the tape includes the LATEX, $\mathcal{A}_{\mathcal{M}}\mathcal{S}$-TEX, and HP-TEX macro packages.

- We think we've located the compressed-raster driver for the Versatec (it's "in the mail" at press time); this will allow the VERTEX DVI to Versatec driver to share a spooled printer with other uses. (The new VERTEX should be available about the time you read this.)

- Our Compugraphic 8600 driver produced its first pages of TEX output last week; let us know if you're interested. David has mechanized the translation from Compugraphic font width information to TFM files, so building our font library goes quickly. (Kerning information must be added by hand and eye, though.) We'll be joining the queue asking Compugraphic to add Computer Modern to their catalog.

— and the Macintosh implementation of TEX (MacTEX? Oh, please ...) continues.

Feedback from TeX Users at Lockheed

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As of this writing, TeX82 is used at the Lockheed Palo Alto Laboratory by 24 scientists, of which about 8 qualify as heavy users. It has been an underground penetration, first scorned and eventually tolerated by management. Dissatisfied with our technical typing support, late in 1981 I brought the old TeX80 (distributed by Oregon Software) in house to run under VAX/VMS and wrote a Versatec spooler. Soon I was joined by several colleagues, which now constitute the "hard core" of TeX users. Usage picked up further when TeX82 was made available on September 1983; and even more when a QMS laser printer was installed early this year and we were able to say goodbye to the foul smelling Versatec paper.

The overwhelming local use of TeX82 is for internal documents, software manuals, technical papers, memos and letters. If our experience is typical of other industrial groups (and I have no reason to think otherwise) then only a small minority of present TeX users are composing books and care (or should care) about matters of book design.

For casual users who may call on TeX perhaps once or twice a month, *language consistency* is a more important issue than artistic quality. Such users are surprised at the strange results (or lack thereof) they get. The following list has been compiled from my experience and users' feedback over the past year, and is offered in the hope that it will spotlight areas of TeX maintenance and documentation that need short-term attention. (When I mentioned some of these at the last TUG meeting, I was laughed at by the wizards, but most users are *not* wizards).

Emit blank page. There is no consistent way of getting a numbered blank page. Beginners invariably try, sensibly enough, \eject\eject at first; then \vfill\eject\vfill\eject. Since nothing happens, I got a bug report. After some experimentation, one can find that \ \vfill\eject does produce a blank page, but without a page number! In the old TeX80 an \eject always produced a page eject, which is correct from the standpoint of consistency.

That mysterious \vglue. Several users were baffled by the fact that a \vskip did not perform as expected after an explicit \eject. I told them to use \vglue, which I discovered by chance in a TeXbook Appendix (it is not mentioned in the main Chapters). Why the inconsistency, they asked. I could not explain. Incidentally, \vglue has curious side effects. If you type \beginsection after a \vglue you get an extra blank page.

Black hole footnotes. Footnotes inside a \centerline are quite common in paper headings that state authors' affiliations. Sometimes the footnote(s) vanished into thin air. For example, some authors typed something like

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\smallskin\centerline{ B. C. Dull\footnote*{Token Scientist} and ...  }
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where \smallskin is a local abbreviation for \smallskip\noindent and were taken aback when the footnote text vanished without warning. Another bug report. Experimentation showed that \noindent was responsible and that if \smallskin is changed to \smallskip the footnote reappears. The explanation is given in page 117 of the TEXbook, but how many users understand such doubly-dangerous "modal" subtleties? I believe that at least an explanatory warning message should be given.

Incorrect \tt *spacing.* "Verbatim listing" macros are frequently used in our documents to list input data files, insert source code fragments, etc. These macros use typewriter fonts so in theory uniform spacing should be achieved and all columns ought to align properly, right? Wrong. Distortion effects are quite noticeable on the right hand side of the page when there are character runs, *e.g.* ************* matched against a run of blanks. Any suggestions?

Extra space after periods. The TEX rules confuse experienced typists used to inserting a double space after end of sentences but not after abbreviations. The following rule (stolen from SCRIBE) is therefore proposed: insert extra space after periods only if two or more spaces follow. For the purposes of this rule, a carriage return should count as two spaces.

Italic correction. From perusing other people's TEX sources, I believe that I am the only user here that bothers with italic corrections. Mention the subject and you get blank stares. If TEX can use dynamic programming to break up a paragraph into lines, why can't it figure out the italic correction by itself?

The \eqalign *surprises.* Occassionally all equations in an \eqalign{...} are placed flush with the left margin although plenty of space remains for centering. If this happens, I tell users to insert left spacers, for example \qquad, in one equation. Any thoughts on how to avoid this problem?

I would like to invite users that work in similar environments to report their TEXperiences, as well as to comment on the preceding points, in the TUGboat forum.