

the font tables promised to us by I. J. Zabala of Stanford.

Luis and his staff have broken TeX into parts so that it is easier to compile, although the binary will still be very large, I believe. The parts are:

1. the system-dependent user library,
2. the rest of the TeX program,
3. tables and font files.

We are working on the input and output from several different points.

A. We have upgraded a Decwriter II (LA36) with a SELANAR Graphics II circuit board which allows us to have 4 character sets online at a time—standard, APL, Math-Greek as defined by SELANAR Corp., and any set we wish to down-load from a Cyber or from a Terak. We have encountered a few difficulties in the Terak-Decwriter interaction and will continue to work on these.

B. Presently, we can produce text with special characters as follows: enter and edit the text on a Terak (176 characters online and displayable on the screen), send the file asynchronously to a Cyber for formatting with Purdue's TXTFORM, send back the file for re-editing on the Terak, return final version to the Cyber where TXTPLOT generates the codes to produce medium-quality hard copy on the Varian printer-plotter (200 dots/inch). We are also working on a program in CDC Fortran 77 to translate a TROFF or TeX output file for the Varian.

C. We are working in the University's printing department, driving the Mergenthaler Linotron 202 with a Terak microcomputer. We have with partial success typeset a page of a textbook. We write a TROFF file to an 8-inch floppy on a PDP-11/40 and use this file on a Terak to drive the Linotron.

Throughout this memo I have used "we" as a collective pronoun for all of us involved in this project. In fact, this project is made up of many small projects. The important names are Michael Frisch, Prof. Steven Bruell, Peter Zechmeister, Mark Everett, and Jeffrey Woolsey. I will be happy to forward any questions you may have to the appropriate person.

I would like to hear from all CDC users about what you are doing in text processing. In particular, I want to hear about and would be glad to distribute information about your efforts and achievements in the area of I/O. If you know of other interested people at CDC sites, I would be glad to add their names to my TeX-related mailing list.

* * * * *

Warnings & Limitations

* * * * *

Troubles with Traces, and Other Oddities

One of the options of `\trace` (manual page 147), $z = 2$, is not available under TOPS-20 (DECSYSTEM 20); if that option is used, input lines are displayed on your terminal, but a carriage return flushes them into oblivion instead of delivering them to TeX for processing.

Another thing to be careful of is that such commands as `\baselineskip`, if invoked within an `\hbox` par, have no effect whatever on the boxed text; they must be given prior to the box command to be effective. This is actually documented (manual page 128, `(glueparam)(glue)`, and perhaps on other pages), but it is easy to overlook.

Ligatures "ff", "ffi", "ffl", etc. interact with hyphenation in the following manner. Hyphenation never occurs between characters of a ligature in a word, even though such a word ("differential") might legitimately be hyphenated, and in fact might require hyphenation to avoid an overlong line. The solution for an overlong line is to use a discretionary hyphen, `\-`, but there's a catch: if other changes in the paragraph cause the forcibly hyphenated word to move from the end of a line, neither a hyphen nor a ligature will result (compare: "differential", "differential"), and the discretionary hyphen should be removed for most elegant results.

Barbara Beeton

* * * * *

Macros

* * * * *

There are two reports on macro packages in this issue. One appears above: see Michael Spivak's "AMS-TeX—A Very Friendly Product" under General Delivery. (An order form for the "pre-preliminary" edition of the AMS-TeX manual is included in the package with this issue.) The second report, "An Indexing Facility for TeX", was submitted by Terry Winograd and Bill Paxton, and is attached as Appendix A.