

129) in BACKUP format. Be sure to specify that you are on a VAX/VMS system. Hopefully, the .PXL files will also soon be available in BACKUP format.

Anyone with a spooler for T_EX82 who is willing to have it put on the distribution tape, please call me. The interfaces listed in the table on page 71 are not on the distribution tape; information should be obtained from the sites listed.

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REVISED VARIAN OUTPUT DRIVER IN VAX/VMS FORTRAN

Jim Mooney
West Virginia University

The VAX output driver for the Varian Plotter, written in VMS FORTRAN, has been updated to process Version 1 DVI files, and has received some other improvements as well. The first version of this program was reported in TUGboat, V2 No. 3, pp. 14-15.

The revised package was developed as a consulting project for Science Applications, Inc., McLean, VA, with the assistance of Buff Miner.

The new system consists of two programs, DVITOVAR and OUTTOVAR. DVITOVAR can produce raster files like its predecessor, which can be plotted separately by OUTTOVAR; alternately, it can drive the plotter directly.

Other improvements include better use of VMS logical names and command line parsing; an option to rotate the output 90 degrees; and control of magnification and page margins.

DVITOVAR accepts Version 1 DVI files. Alas, the stability of this version has been somewhat less than originally predicted. T_EX has moved on to Version 2. A DVITOVAR for Version 2 is a possibility for the future.

The set of files comprising the DVITOVAR package has been provided to Oregon Software and will be included on future releases of their VAX/VMS T_EX tapes.

A document describing the package is available from me on request. Technical questions may be addressed to me at:

Dept. of Statistics and Computer Science
West Virginia University
Morgantown, WV 26506
(304) 293-3607

Note: I cannot supply copies of the programs themselves, as I have no facility for making tapes. We do not even have a system capable of running T_EX available to us at the present time.

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Fonts

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T_EX FOR ARABIC SCRIPT

Pierre MacKay
University of Washington

The principal focus of our work with T_EX at the University of Washington is the development of a capacity to typeset Arabic Script texts. For this we must extend and modify the basic program, but we are making every effort to ensure that our Arabic Script version of T_EX will be an enhancement, and will leave all the basic features of T_EX82 intact. The TRIP.TEX file will give us a good test of our success in this regard.

Nevertheless, our eventual DVI output will be distinct from that produced by other sites in the following ways:

1. The ID number will be 102. Our special driver programs will be set so that a driver for DVI102 will accept DVI2 files, but a standard driver will complain about an Arabic Script file. On the UNIX distribution tapes, incidentally, you will always get the standard DVI2 drivers unless you specifically ask for a DVI102 driver.
2. DVI codes 250 and 251, which are unimplemented in "vanilla" T_EX, will be used to mark off right-to-left text in a horizontal list. These codes will be balanced at any completed level of `\hbox{}` before the surrounding `\vbox{}` is built. Code 250 marks the beginning or right-to-left text and code 251 marks the return to a normal T_EX environment.
3. The " (double-quote) character is activated as a new primitive in T_EX text input. It operates as a toggle in the way the \$ (dollar-sign) math-mode toggle works. The environment between balanced pairs of " toggles is known as "reversed text mode" and may be useful for Hebrew text as well as for Arabic. Math-mode may be nested within reversed text mode and will be governed by the normal rules of math mode. A double quote character in math mode retains its normal T_EX significance. If you want Arabic Script text inside math mode, you will have to `\hbox{}` it separately and to `\unhbox{}` it at the desired place.

None of this actually works yet, but we are getting very close. The T_EX for Arabic Script project is supported in part by grants from Northern Telecom and BNR Inc.