Output Devices

TEX Output Devices

Don Hosek

The device tables on the following pages list all the TEX device drivers currently known to TUG. Some of the drivers indicated in the tables are considered proprietary. Most are not on the standard distribution tapes; those drivers which are on the distribution tapes are indicated in the listing of sources below. To obtain information regarding an interface, if it is supposed to be included in a standard distribution, first try the appropriate site coordinator or distributor; otherwise request information directly from the sites listed.

The codes used in the charts are interpreted below, with a person's name given for a site when that information could be obtained and verified. If a contact's name appears in the current TUG membership list, only a phone number or network address is given. If the contact is not a current TUG member, the full address and its source are shown. When information on the drivers is available, it is included below.

Screen previewers for multi-user computers are listed in the section entitled "Screen Previewers". If a source has been listed previously under "Sources", then a reference is made to that section for names of contacts.

Corrections, updates, and new information for the list are welcome; send them to Don Hosek, Bitnet `Dhosek@Hmcvax` (postal address, page 115).

Sources

ACC Advanced Computer Communications, Diane Cast, 720 Santa Barbara Street, Santa Barbara, CA 93101, 805-963-9431 (DECUS, May '85)

Adelaide Adelaide University, Australia

The programs listed under Adelaide have been submitted to the standard distributions for the appropriate computers. The PostScript driver permits inclusion of PostScript files in a TEX file. The driver is described in *TUGboat, Vol. 8, No. 1.*

AMS American Mathematical Society, Barbara Beeton, 401-272-9500 Arpanet: `BNB@Seed.AMS.com`

Arbor ArborText, Inc., Bruce Baker, 313-996-3566, Arpanet: `Bwb@Arbortext.Com`

ArborText's software is proprietary and ranges in price from $150 to $3000. The drivers for PostScript printers, the HP LaserJet Plus, the QMS Lasergrafix, and Imagen printers are part of their DVILASER series. The drivers all support graphics and include other special features such as use of resident fonts or landscape printing when supported by the individual printers.

Printing on the Autologic APS-5 and μ-5 phototypesetters with DVIAPS includes support of Autologic standard library fonts and logo processing.

Bochum Ruhr Universität Bochum, Norbert Schwarz, 49 234 700-4014

Caltech California Institute of Technology, Chuck Lane, Bitnet: `CEL@CITHEX`

Canon Canon Tokyo, Masaaki Nagashima, (03)758-2111

Carleton Carleton University, Neil Holtz, 613-231-7145

CMU Carnegie-Mellon University, Howard Gayle, 412-578-3042

Columb. Columbia University, Frank da Cruz, 212-280-5126

COS COS Information, Gilbert Gingras, 514-738-2191

DEC Digital Equipment Corporation, John Sauter, 603-881-2301

The LN03 driver is on the VAX/VMS distribution tape.

ENS Ecole Normale Superieure, Chantal Durand, Centre de Calcul, Ecole Normale Superieure, 45 rue d'Ulm, 75005 Paris, France

GA Tech GA Technologies

GMD1 Gesellschaft für Mathematik und Datenverarbeitung, Federal Republic of Germany, Ferdinand Hommes, Bitnet: `Grztex@Dbngmd21`, 0228-303221

GMD2 Gesellschaft für Mathematik und Datenverarbeitung, Federal Republic of Germany, Dr. Wolfgang Appelt, uucp: `seismo!unido!gmdzi!zi.gmd.dbp.de!appelt`

Heidelb'g University of Heidelberg, Federal Republic of Germany, Joachim Lammarsch, Bitnet: `Rz92@Dhdurdz1`

HMC Harvey Mudd College, Don Hosek, Bitnet: `Dhosek@Ymir`

HP Hewlett-Packard, Stuart Beatty, 303-226-3800

INFN INFN/CNAF, Bologna, Italy, Maria Luisa Luvisetto, 51-498286, Bitnet: `MiLtex@Iboinfn`

The CNAF device drivers are on the VAX/VMS distribution tape.

Interg'ph Intergraph, Mike Cunningham, 205-772-2000

JDJW JDJ Wordware, John D. Johnson, 415-965-3245, Arpanet: `M.John@Sierra.Stanford.Edu`

Kettler Kettler EDV Consulting, P. O. Box 1345, D-8172 Lenggries, Federal Republic Germany, +49 8042 8081

The LaserJet driver supports graphics inclusion in device dependent format. PK font files are used. This program is proprietary. Contact Kettler for further information.

LaserPrint LaserPrint, P. O. Box 35, D-6101 Fränkisch Crumbach, Federal Republic Germany, +49 6164 4044

The driver supports graphics inclusion in device dependent format. PK font files are used. This program is proprietary. Contact LaserPrint for further information.

LLL Lawrence Livermore Laboratory

LSU Louisiana State University, Neal Stoltzfus, 504-388-1570

Milan1 Università Degli Studi Milan, Italy, Dario Lucarella, 02/23.62.441

Milan2 Università Degli Studi Milan, Italy, Giovanni Canzii, 02/23.52.93

MIT Massachusetts Institute of Technology, Chris Lindblad, MIT AI Laboratory, 617-253-8828

The drivers for Symbolics Lisp machines use the Symbolics Generic Hardcopy interface as a back end, so it should work on any printer that has a driver written for it. The printers listed in the table indicate drivers the program has been tested on.

The UNIX drivers for PostScript and QMS printers both support landscape printing and graphics inclusion via specials.

MPAE Max-Planck-Institut für Aeronomie, H. Kopka, (49) 556-41451, Bitnet: `Mio40L@D606wd01`

MR Math Reviews, Dan Latterner, 313-996-5266

NLS Northlake Software, David Kellerman, 503-228-3383

The VAX/VMS Imagen driver supports graphics.

OCLC OCLC, Thom Hickey, 6565 Frantz Road, Dublin, OH 43017, 616-764-6075

OSU1 Ohio State University, John M. Crawford, 614-292-1741, Bitnet: `Ts0135@Ohstvma`, Internet: `Crawford-j@Ohio-state.Edu`

OSU2 Ohio State University, Ms. Marty Marlatt, Department of Computer and Information Science, 2036 Neil Avenue, Columbus, OH 43210

The drivers are distributed on either ANSI or TOPS-20 DUMPER tapes, with hardcopy documentation. There is a $125 service charge (payable to Ohio State University) to cover postage, handling, photocopying, etc.

Pers Personal TEX, Inc., Lance Carnes, 415-388-8853

Graphics output is supported on Imagen, PostScript, and QMS printers.

Philips Philips Kommunikations Industrie AG, TEKADE Fernmeldeanlagen, Attn. Dr. J. Lenzer, Thurn-und-Taxis-Str., D-8500 Nürnberg, Federal Republic Germany, +49 911 5262019

PPC Princeton Plasma Physics Lab, Charles Karney, Arpanet: `Karney%PPC.MFENET@NMFECC.ARPA`

Versatec output from TEXspool is produced via the NETPLOT program. TEXspool also produces output for the FR80 camera. Color and graphics primitives are supported through specials.

Procyon Procyon Informatics, Dublin, Ireland, John Roden, 353-1-791323

RTI Research Triangle Institute, Randy Buckland, Arpanet: `rcb@rti.rti.org`

The program is available in the `comp.sources.misc` archives on Arpanet and Usenet.

Saar Universität des Saarlandes, Saarbrücken, Federal Republic of Germany, Prof. Dr. Reinhard Wilhelm, uucp: `wilhelm@sbsvax.UUCP`

SARA Stichting Acad Rechenzentrum Amsterdam, Han Noot, Stichting Math Centrum, Tweede Boerhaavestraat 49, 1091 AL Amsterdam (see *TUGboat, Vol. 5, No. 1*)

Scan Scan Laser, England, John Escott, +1 638 0536

Sci Ap Science Applications, San Diego, CA, 619-458-2616

SEP Systemhaus für Elektronisches Publizieren, Robert Schöninger, Arndtstrasse 12, 5000 Köln, Federal Republic of Germany

DVIP400 uses PXL files. Landscape printing is supported in all versions and graphics inclusion in all but the IBM PC version. Source is available on request. Cost varies from 300–1848DM.

Stanford Stanford University

The Imagen driver from Stanford is present on most distributions as the file `DVIIMP.WEB`. It provides limited graphics ability.

Sun Sun, Inc.

Sydney University of Sydney, Alec Dunn, (02) 692 2014, ACSnet: `alecd@facet.ee.su.oz`

Talaris Talaris, Rick Brown, 619-587-0787

All of the Talaris drivers support graphics.

T A&M1 Texas A&M, Bart Childs, 409-845-5470, CSnet: `Childs@TAMU`

Graphics is supported on the Data General drivers for the Printronix, Toshiba, and Versatec on the Data General MV. On the TI PC, graphics is supported on the Printronix and Texas Instruments 855 printers. There are also previewers available for both the Data General and the TI.

T A&M2 Texas A&M, Ken Marsh, 409-845-4940, Bitnet: `KMarsh@TAMNIL`

T A&M3 Texas A&M, Norman Naugle, 409-845-3104

The QMS driver supports inclusion of QUIC graphics commands via specials as well as landscape printing.

T A&M4 Texas A&M, Thomas Reid, 409-845-8459, Bitnet: `X066TR@TAMVM1`

The TEXrox package includes a GF/PK/PXL to Xerox font converter (PXLrox2), and utility to build TFM files from licensed Xerox fonts (Xetrix). The programs are all written in C. Fonts not present on the Xerox printers can be printed as bitmaps on printers with the graphics handling option (GHO).

At present the TEXrox package is being distributed on a twelve-month trial basis; the trial is free for U.S. educational and government institutions, $100 for foreign or commercial institutions. Licensing agreements will be available when the trial offer expires.

THD Technische Hochschule Darmstadt, Klaus Guntermann, Bitnet: XITIKGUN@DDATHD21

The program uses PK fonts. The Philips Elpho driver is not public domain. Contact Klaus Guntermann for information on obtaining the program.

Tools Tools GmbH Bonn, Edgar Fuß, Kessenicher Straße 108, D-5300 Bonn 1, Federal Republic of Germany

The Tools implementation of TEX and the drivers listed are described in *TUGboat, Vol. 8, No. 1.*

TRC Finl'd Technical Research Centre of Finland, Tor Lillqvist, +358 0 4566132, Bitnet: tml@fingate

UBC University of British Columbia, Afton Cayford, 604-228-3045

UCB University of California, Berkeley, Michael Harrison, Arpanet: vortex@berkeley.arpa

UCIrv1 University of California, Irvine, David Benjamin

UCIrv2 University of California, Irvine, Tim Morgan, Arpanet: Morgan@UCI.ARPA

U Del University of Delaware, Daniel Grim, 302-451-1990, Arpanet: grim@huey.udel.edu

The distribution includes a program to convert font files generated by METAFONT to Xerox font format.

U Ill University of Illinois, Dirk Grunwald, Arpanet: Grunwald@M.Cs.Uiuc.Edu

The previewers are available via anonymous FTP in the directory pub/iptex.tar.Z on a.cs.uiuc.edu.

U Köln Univ of Köln, Federal Republic of Germany, Jochen Roderburg, 0221-/478-5372, Bitnet: A0045@Dk0rrzk0

U Mass University of Massachusetts, Amherst, Gary Wallace, 413-545-4296

U MD University of Maryland, Chris Torek, 301-454-7690, Arpanet: chris@mimsy.umd.edu

The UNIX Imagen driver is on the UNIX distribution tape. The drivers may be obtained via anonymous FTP from a.cs.uiuc.edu in the directory pub/iptex.tar.Z or from mimsy.umd.edu in the directory tex.

U Mich University of Michigan, Kari Gluski, 313-763-6069

UNI.C Aarhus University, Regional Computer Center, Denmark

U Shef University of Sheffield, England, Ewart North, (0742)-78555, ext. 4307

Utah University of Utah, Nelson H. F. Beebe, 801-581-5254, Arpanet: Beebe@Science.Utah.edu

All of the Beebe drivers are distributed together. They are available on IBM PC-DOS floppy disks (about 6), or 1600bpi 9-track tape in TOPS-10/20 BACKUP/DUMPER format, VAX/VMS BACKUP format, Unix tar format, and ANSI D-format. Send tape or disks for a copy. The programs are available for anonymous FTP from SCIENCE.UTAH.EDU on the internet; information is in the file PS:<ANONYMOUS>00README.TXT. A VAX/VMS binary distribution is available for anonymous FTP (password guest) from CTRSCI.UTAH.EDU. 00README.TXT in the login directory gives details. On JANET, the programs may be obtained from the directory aston.kirk::[public.texdvi210]. The drivers are available from Listserv on EARN to European Bitnet users. Sending the command GET DRIVER FILELIST (in an interactive message, or as the first line of a mail message) to LISTSERV@DHDURZ1. Files are obtained with the command GET *filename filetype*. Graphics is supported only in the DVIALW (PostScript) driver.

U Wash1 University of Washington, Pierre MacKay, 206-543-6259, Arpanet: MacKay@June.CS.Washington.edu

The programs listed under U Wash1 are all on the standard UNIX distribution tape.

U Wash2 University of Washington, Jim Fox, 206-543-4320, Bitnet: fox7632@uwacdc

The QMS driver for the CDC Cyber was written under NOS 2.2 and supports graphics.

Vander Vanderbilt University, H. Denson Burnum, 615-322-2357

Wash St Washington State University, Dean Guenther, 509-335-0411, Bitnet: Guenther@Wsuvm1

Wash U Washington University, Stanley Sawyer, 314-889-6703

The IBM PC LN03 driver is a modified version of Flavio Rose's DVI2LN3. Graphics support is provided through inclusion of LN03 plotfiles and line drawing specials. All three PXL formats on the PC are supported. The program is available free of charge with the receipt of a blank disk and return mailer.

W'mann Weizmann Institute, Rehovot, Israel, Malka Cymbalista, 08-482443, Bitnet: Vumalki@Weizmann

Xerox Xerox, Margaret Nelligan, Xerox Printing Systems Division, 880 Apollo Street, El Segundo, CA 90245, 213-333-6058

Yale Yale University, Jerry Leichter, Arpanet: Leichter-jerry@Cs.Yale.Edu, Bitnet: Leichter@Yalevms

DVIDIS is available for anonymous FTP from Venus.Ycc.Yale.Edu. Log in as anonymous and do a CD [.DVIDIS]. That directory contains the three required

files needed to run the previewer. The image *must* be transferred using BINARY mode.

Screen Previewers — Multi User Systems

▪ **Data General MV**

T A&M1

▪ **DEC-20**

OSU2 ASCII Output

Utah BBN Bitgraph terminal

▪ **HP9000/500**

Utah BBN Bitgraph terminal

▪ **IBM MVS**

GMD GDDM supported devices: IBM 3179, 3192, 3193, and 3279

Milan1 Tektronix 4014

▪ **IBM VM/CMS**

HMC Terminals connected through 7171 Protocol converters: Tektronix compatible, VT-640 compatible, GDDM driven IBM 3179 and 3279 terminals, GDDM driven Tektronix 816

DVIview may be obtained by sending $30 (to defray duplication costs), a blank tape, and a return mailer to Don Hosek. The program is still in the developmental stages, and enhancements will be made in the future. The program uses PK files.

Wash St GDDM driven IBM 3179 and 3279 terminals

Uses PXL files at 120dpi. Allows viewing of the page in eight parts normal size or three parts compressed.

W'mann IBM 3279, 3179-G

Previewing is provided by DVI82, the Weizmann driver for the Versatec plotter. The program uses PXL files.

▪ **UNIX**

Talaris Talaris 7800

Utah BBN Bitgraph

U Wash1 DMD5620

Uses GF, PK, or PXL files at 118dpi. `tpic` output is supported. The program consists of two parts: a program running on the host computer and another that is downloaded to the terminal.

▪ **VAX VMS**

Adelaide AED 512, ANSI-compatible, DEC ReGIS, DEC VT100, DEC VT220, Tektronix 4014, Visual 500, 550

Uses PK or PXL files.

INFN DEC ReGIS

Uses PXL files.

Talaris Talaris 7800

Utah BBN Bitgraph

Screen Previewers — Microcomputers and Workstations

▪ **Apollo**

Arbor

Uses GF, PK, and PXL files. Preview is available for $500.

U Ill X-11 Windows System

▪ **Atari ST**

Kettler

Tools

▪ **Cadmus 9200**

U Köln

▪ **IBM PC**

Arbor, Pers EGA, MCGA, UGA, Hercules, Olivetti, Tecmar, Genius full page, ETAP Neftis, Toshiba 3100, AT&T 6300

Uses GF, PK, and PXL files as well as tuned PostScript fonts (the base set available with PostScript printers). Preview of integrated bit map graphics is supported. Preview is available for $175.

T A&M3 EGA, CGA, Hercules

The `cdvi` program is available for $175.

▪ **IBM PC/RT**

U Ill X-11 Windows

▪ **Integrated Solutions**

UCIrv1

Utah BBN Bitgraph

▪ **SUN**

Arbor

Uses GF, PK, and PXL files. Preview is available for $500.

UCB

UCIrv2

U Ill X-11 Windows, Sunview Window System

Uses GF, PK, and PXL files.

▪ **Vaxstation/Unix**

U Ill X-11 Windows

Uses GF, PK, and PXL files.

▪ **Vaxstation/VMS**

Arbor GPX(UIS)

Uses GF, PK, and PXL files. Preview is available for $500.

INFN GPX(UIS)

Uses PXL files.

Philips GPX(UIS)

RTI GPX(UIS)

Uses PK files at 78, 94 and 112dpi. Written in ADA. Source is included.

Yale GPX(UIS)

Uses PK files at 300dpi.

Low-Resolution Printers on Multi-User Systems — Laser Xerographic, Electro-Erosion Printers

	Amdahl (MTS)	CDC Cyber	Data General MV	DEC-10	DEC-20	HP9000 500	IBM MVS	IBM VM/CMS	IBM VM/UTS	Prime	Siemens BS2000	Sym-bolics Lisp	UNIX	VAX VMS
Agfa P400							SEP	SEP			Saar		Saar SEP	SEP
Canon					Utah	Utah							Canon Utah	Utah
DEC LN03					Utah	Utah							Utah	DEC NLS Procyon Utah
Golden Laser 100					Utah	Utah							Utah	Utah
HP LaserJet Plus					Utah	T A&M2 Utah				OSU1			Arbor Utah	Arbor Utah
IBM 38xx, 4250, Sherpa							GMD1 Heidelb'g	GMD1 Wash St						
Imagen	Arbor UBC		T A&M1	Stanford Vander	Columb. Utah	Utah	Arbor	Arbor W'mann				MIT	Arbor U Md Utah	Arbor NLS Utah
Philips Elpho														THD
PostScript printers					Utah	Arbor Utah		Arbor		OSU1		MIT	Arbor Carleton MIT Utah	Arbor Sydney Utah
QMS Lasergrafix	Arbor	U Wash2	T A&M1			T A&M2	Arbor GMD1	Arbor GMD1		OSU1 T A&M3	GMD1	MIT	Arbor MIT U Wash1	Arbor GA Tech T A&M3
Talaris							Talaris	Talaris					Talaris	Talaris
Xerox Dover					CMU								Stanford	
Xerox 2700II		Bochum			OSU2 Xerox			ENS					Xerox	
Xerox 9700	Arbor U Mich						Arbor T A&M4	Arbor T A&M4	T A&M4				U Del	ACC Arbor T A&M4

Low-Resolution Printers on Multi-User Systems — Impact and Electrostatic Printers

	CDC Cyber	Cray	Data General MV	DEC-10	DEC-20	HP9000 500	IBM MVS	IBM VM	Prime	UNIX	VAX VMS
Apple ImageWriter					Utah	Utah				Utah	LSU Utah
DEC LA75, LP100					OSU2 Utah	Utah				Utah	Utah
Epson					Utah	Utah				Utah	Utah
Facit 4542											INFN
Florida Data					MR						
MPI Sprinter					Utah	Utah				Utah	Utah
Okidata					Utah	Utah				Utah	Utah
Printronix			T A&M1		Utah	Utah				Utah	Utah
Toshiba			T A&M1		Utah	Utah				Utah	Procyon Utah
Varian											Sci Ap
Versatec	U Köln	PPC	T A&M1	GA Tech Vander	U Wash1		GMD1 U Milan2	W'mann	LLL	U Wash1	Caltech NLS

Low-Resolution Printers on Microcomputers and Workstations — Laser Xerographic, Electro-Erosion Printers

	Apollo	Atari ST	HP1000	HP3000	HP9000 200	IBM PC	Integrated Solutions	SUN
Agfa P400						SEP		
Canon		Utah				Utah	Utah	Utah
Cordata LP300						Pers		
DEC LN03		Utah				Utah Wash U	Utah	Utah
Golden Laser 100		Utah				Utah	Utah	Utah
HP 2680			JDJW	Pers				
HP 2688A			JDJW		HP			
HP LaserJet Plus	Arbor	Kettler Tools	TRC Finl'd		MPAE	Arbor Kettler Utah	Utah	Utah
Imagen	Arbor OCLC	Utah				Arbor Pers Utah	Utah	Arbor Sun U Md Utah
Kyocera		LaserPrint				LaserPrint		
Philips Elpho		Kettler						
PostScript printers	Arbor				Arbor	Arbor Pers Utah	Utah	Arbor MIT Utah
QMS Lasergrafix	Arbor Scan					Arbor Pers		Arbor MIT U Del
Talaris						Talaris		Talaris
Xerox 9700	COS Scan							T A&M4

Low-Resolution Printers on Microcomputers and Workstations — Impact and Electrostatic Printers

	Apollo	Atari ST	Cadmus 9200	HP1000	HP3000	IBM PC	Integrated Solutions	SUN
Apple ImageWriter		Utah				MR Utah	Utah	Utah
DEC LA75, LP100		Utah				Utah	Utah	Utah
Diablo					Pers			
Epson		Tools Utah		JDJW	U Shef	Milan1 Pers U Shef Utah	Utah	Utah
Fujitsu		Kettler	U Köln					
GE 3000	COS							
MPI Sprinter		Utah				Utah	Utah	Utah
NEC		Kettler						
Printronix		Utah				T A&M1 Utah	Utah	Utah
Star		Kettler						
Texas Instruments 855						T A&M1		
Toshiba		Utah				Pers Utah	Utah	Utah
Versatec								U Md

Typesetters

	Apollo	CDC Cyber	HP3000	IBM MVS	IBM PC	IBM VM/CMS	Siemens BS2000	Sperry 1100	SUN	UNIX	VAX VMS
Allied Linotype CRTronic											Procyon
Allied Linotype L100, L300P					Pers						
Allied Linotype L202					Pers						Procyon
Autologic APS-5, Micro-5	COS Scan				Arbor Pers				Arbor	Arbor	Arbor Interg'ph
Compugraphic 8400			U Shef		Arbor Pers						NLS
Compugraphic 8600		UNI.C			Arbor Pers	Wash St		U Wisc			NLS
Compugraphic 8800					Arbor						
Harris 7500										SARA	
Hell Digiset				GMD2			GMD2				