

## Report from the DVI Driver Standards Committee

Don Hosek

Attendees of the Texas A&M T<sub>E</sub>X Users Group Conference will doubtless be disappointed to see the lack of the full and final version of the Level 0 Driver Standard on these pages. The public exposure of the text revealed many unforeseen difficulties in some of the aspects of the standard which have detained completion of the standard unavoidably.

However, by the time that you read this the standard should be available in its final form. For those with net access, the files will be made available from `yimir.claremont.edu` for FTP and mail server access. FTP users should get the file `level0-standard-final.tex` from the directory `[anonymous.tex.dvi-standard]`. Those without FTP access should send the command  
`send [tex.dvi-standard]level0-standard-final.tex`  
to `mailserv@ymir.claremont.edu`. This file will also be available on MS-DOS floppy disks from Jon Radcliff (see address on 483). The file will be a self-contained L<sup>A</sup>T<sub>E</sub>X file. There also will be a file in that directory called `standard-news.txt` which will have the status of the standards development by that time.

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## Resources

### Updates from All Over

Barbara Beeton

### The Aston Archive

Some very general information: The top-level directory at Aston is `TEX-ARCHIVE`, username `PUBLIC`, password `PUBLIC`. It contains files named `000DIRECTORY.LIST`, `000DIRECTORY.SIZE` and `000LAST30DAYS.FILES`, which are respectively short and long form directory listings, and the names of any files that have changed in the past month. All these files are updated every day, at

about 0130 local time. Note that these names all start with *three zeroes*, unlike those mentioned below, which have deliberately kept to a length compatible with the lowest common denominator of computers, namely IBM.

In addition, every directory in the tree contains a `OOFILES.TXT` which gives a reverse chronological list of all the files in the current directory. These files are only updated whenever anything changes; the programs and batch job to perform these daily updates was written by Niel Kempson. Note that the action of changing one of these files results in that for the level above noticing that the directory itself has changed, so the date of a `OOFILES.TXT` in any of the first level directories `TEX-ARCHIVE.*` will reveal when anything in that branch of the tree was last added/updated.

A small request to T<sub>E</sub>Xserver

`<TeXserver@uk.ac.aston.tex>`

or (in the U.S.)

`<TeXserver%uk.ac.aston.tex`

`@nsfnnet-relay.ac.uk>`

as follows could collect all such first-level listings in one go: they'll all arrive separately, unless you care to append the `/DCLAR` qualifier to the files command, to have it send you a batch job that will reconstitute all the files:

`FILES`

`[TEX-ARCHIVE.*]OOFILES.TXT`

Your address will be extracted from the headers arriving at Aston. If you wish to use a different return address for the information to be mailed back to you (perhaps avoiding certain gateways which mangle ASCII during a conversion to/from EBCDIC), then you may specify the return address (including the necessary gateway) on the line preceding the T<sub>E</sub>Xserver command; prefix any such alternate address with the directive `PATH`, followed by a space. Also, if you are on a system in which the case of letters in usernames is significant, you may always wish to provide a `PATH` directive, as the incoming mailer at Aston always upcases usernames (a bug of which the supplier is aware).

Other valid T<sub>E</sub>Xserver commands may be given in the first non-blank line: `HELP`, `DIRECTORY`, `FILES`, `WHEREIS`, or `SEARCH`.

The above information was provided by Brian {Hamilton Kelly}. (Thanks, Brian, and I love your bow tie.)

### OzTeX 1.3

I have received a letter from Andrew Trevorrow, in Hyderabad, India. As of the middle of August he was nearly ready to release the OzTeX implementation of TeX 3.0.

In the letter, Andrew described one change that should prove both useful and popular: "All of TeX's large arrays are dynamically allocated according to sizes appearing in a configuration file, so users can easily change *mem\_max*, *font\_max*, *font\_mem\_size*, *hash\_size*, *pool\_size*, etc., without having to recompile TeX."

OzTeX 1.3 should be at the usual archives by the time you read this.

### Public Domain TeX on PCs

The following information was forwarded by D. Monk, of the University of Colorado, Boulder. Note that the reference for emTeX corrects an error in *TUGboat* 11, no. 2; thanks to everyone who pointed that out.

**Note:** The systems mentioned below can be obtained from sources other than those indicated. Some of the internet numbers and directories may change without notice. Access method for subdirectories varies; go down one directory at a time.

1. *AMS-TeX*. Complete, with .mf sources for the fonts. ftp 134.173.4.23, directory `tex/mf/ams` and, for Russian fonts, `tex/babel/russian/fonts-uwash`. (Claremont)
2. *DosTeX*. TeX, LaTeX, driver and fonts for Epson FX. Obtainable in SimTel archives, 26.2.0.74 or `listserv@ndsumv` or, in Europe, via EARN trickle servers. Files are `pd1:<msdos.tex>dostex1.arc` through `...dostex6.arc`.
3. *EmTeX*. A complete TeX with TeX, LaTeX, METAFONT, many drivers and fonts (Epson FX, HPLJ, Apple LaserWriter, etc.). In Europe ftp to 129.69.1.12, directory `soft/tex/emtex`. In USA ftp to `terminator.cc.umich.edu`, directory `msdos/text-mgmt/TeX/emtex`.
4. *SbTeX*. TeX only. Obtainable in SimTel archives, 26.2.0.74 or `listserv@ndsumv` or, in Europe, via EARN trickle servers. File `pd1:<msdos.tex>sb30tex.zip`

By ordinary mail, most of the above for PCs can be obtained for mailing costs from Jon Radcliff, P.O. Box 2276, Reston, VA 22090, USA. Send self-addressed envelope with 45 cents postage (4

International Reply Coupons outside USA) for his latest catalog.

### The LaTeX help service

Max Hailperin informs us that "The LaTeX-help volunteer question-answering round-robin service has moved. Although the previously published address at `sumex-aim` will continue to work for the foreseeable future, greater reliability and speed will be achieved by instead mailing to:

`LaTeX-help@cs.Stanford.edu`

In related news, I have passed on the coordinatorship to Ed Sznyter; many thanks to him for volunteering."

### TeXware from the networks

An article from Peter Flynn giving an exhaustive list of network sources for public domain and shareware implementations of TeX, METAFONT, macros, and everything related, will appear in the next regular issue (*TUGboat* 12, no. 2).

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### Eplain

Karl Berry

I developed the `eplain` macros as part of producing the book *TeX for the Impatient*. Unlike the book, however, they are free.

`eplain` stands for "extended plain" (or "expanded", if you like). I attempted to provide macros that would be useful to most documents, as the macros in plain TeX are, rather than ones for high-level, "intensional", typesetting (such as a `\chapter` command).

Specifically, I wrote macros implementing these features (in no particular order):

- left-justified displays
- double column output
- producing tables of contents
- `\hrule` and `\vrule` with a different default than 0.4 pt
- producing the time of day
- listing files verbatim
- generalized footnotes
- blank and black boxes
- citations using `BIBTeX`, à la LaTeX

Oren Patashnik took the macros implementing the last of these, citations à la L<sup>A</sup>T<sub>E</sub>X, and put them into a separate file, 'bt<sub>x</sub>mac.tex'. (He modified them a bit at the same time.) 'eplain.tex' \inputs 'bt<sub>x</sub>mac.tex', naturally.

The eplain distribution includes a 20-odd page user manual. Besides the features above, it describes some other definitions that may be useful to people writing their own macros. The user manual is written in Texinfo format, and therefore can be translated to a form readable by GNU Emacs, as well as printed.

You can get the eplain distribution via anonymous ftp from the hosts

ics.uci.edu  
labrea.stanford.edu

and

ftp.cs.umb.edu

It is available as a compressed tar file and, on the latter two, also as straight text files. The file 'bt<sub>x</sub>mac.tex' is also available on its own from labrea.stanford.edu. I encourage other archives to redistribute eplain. I am also willing to send it via electronic mail to people who cannot get it any other way.

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## New Books on T<sub>E</sub>X

Victor Eijkhout

One of the aspects of T<sub>E</sub>X that sets it apart from other text processors is the fact that there exists an ultimate reference: *The T<sub>E</sub>Xbook*. As its introduction states, this book is both for people who have never used T<sub>E</sub>X before and for the experienced hackers alike. *T<sub>E</sub>X for the Impatient* makes a similar claim: Paul Abrahams, the senior author, asked himself "What kind of book would have made it easier for me to learn T<sub>E</sub>X? What kind of book would I need now, as a more experienced user, to locate commands or functions that I never learned or only half remember?" In my opinion he, and co-authors Karl Berry and Kathryn Hargreaves, have given a

successful answer to the first question. My thoughts on the second question follow below.

*T<sub>E</sub>X for the Impatient* has a very appealing front cover: the white rabbit from *Alice in Wonderland* (the one that exclaims "Oh dear, I shall be too late!") is sitting, looking at his watch, very impatiently. The inside of the book looks good. Computer Modern is used for the text, with a surprising but very satisfactory choice of Optima bold for headings. Thirteen chapters and an index make up the approximately 360 pages of the book.

After two inevitable chapters 'Using this book' and 'Using T<sub>E</sub>X', follows an interesting third chapter: 'Examples'. Ten page-long examples with the input on the facing page give a good impression of T<sub>E</sub>X's capabilities, and give the novice a source of commands and constructs to study (and copy).

Chapter four 'Concepts' starts the reference part of the book. Instead of merging the list of concepts treated here into the table of contents, the authors decided to print it separately on the inside of the back cover. An unusual idea, but I like it. The list is some 90 terms long, and the chapter spans 55 pages. Individual concepts are therefore treated briefly but the explanations are clear and well-written, and there are many references to the subsequent chapters which treat individual commands. In this chapter I appreciated especially the fact that the authors use the anatomical analogy for T<sub>E</sub>X's workings, and refer to it repeatedly.

Although the authors suggest that novices, after having read chapters 1-3, start looking up commands and concepts as needed from the summary of commands (chapter 13), I feel that chapter 4 is really also part of the introduction to T<sub>E</sub>X. Call it a higher introduction.

The following chapters, 5-9, treat T<sub>E</sub>X commands, grouped by subject. Here too the explanations are clear, but they are less complete than I would like them. It was a wise decision not to treat each command separately, but to tackle a few commands at a time, for instance \hss and \vss, or \unskip, \unkern, and \unpenalty.

Chapters 10-12 are probably a good selling point for this book: let it suffice that the titles are 'Tips and techniques', 'Making sense of error messages', and 'A compendium of useful macros'. This last chapter contains an 'extended plain format' (see also p. 571), defining valuable macros, such as those for cross references and left-aligned display equations. Explanations of these macros limit themselves to explanations of the way to use them. A 'Capsule summary of commands' and an index complete the book.

On the whole, I find this book very clearly written, and all its information is readily accessible. However, I was perturbed by the small errors that I found. For instance, the delimiters around `\.withdelims` commands don't grow as the authors claim; they are determined by font parameters 20 and 21 of the symbol font. Also, the remarks about the depth (height) of a `\vbox` (`\vtop`) on pages 52 and 161/2 are at odds; in most cases this dimension is the depth (height) of the last (first) box or rule. On page 52 it is stated that this value is zero if the last (first) item is kern or glue, but on page 161/2 it is stated that the value is zero if the last (first) item is not a box or rule. The first statement is incomplete for the `\vtop`, because `\vtop{\write\file{...}...}` also has a zero height; the second statement is wrong for the `\vbox`, because `\vbox{... \write\file{...}}` need not have zero depth.

As I mentioned above, the question underlying this second part of the book was "What kind of book would I need now, as a more experienced user, ...". By 'experienced user' the authors apparently do not mean an aspiring `TeX` hacker, since this book explains the effects of commands, but little of the large scale mechanisms connecting them.

For instance, one technique in chapter 10, 'Leaving space at the top of page', is treated in a mere five lines: the reader is told that `\vskip` does not work, but that `\topglue` does. I was particularly struck by this, since I didn't know the latter command, which is a late addition to `TeX` version 3. Neither here, nor in the systematic reference chapters is it mentioned whether this is a macro or a primitive. That information can only be found in the command summary; it is not even in the index, as it is in *The TeXbook*.

Another example: page 86 states that "When `TeX` breaks a page, it discards any sequence of glue, kerns, and penalty items that follows the break". This is rather a simplification of what really happens; one might even say that this is just not true. However, it is a convenient way of looking at things, and as long as you stick to the plain `TeX` output routine you never notice the difference.

The most obvious sign that the authors do not aim at `TeX` hackers is of course the fact that they repeatedly refer to *The TeXbook* for the details. On page 167 they say "if you want to get adventurous you can learn all about it from pages [...] of *The TeXbook*".

In general, this book gives good factual information, and the information is very easy to find.

What it lacks are the explanations, not of commands but of mechanisms.

But, since some very handy macros are given in chapter 12, this book can be useful for people wanting to understand and modify or extend existing macros. And as an introduction, it is simply a good book.

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### A Proto-TUG Bibliography: Installment Three

Barbara Beeton

Two installments of a TUG bibliography have appeared in previous issues. The list below continues with references to books and articles about `TeX`, `LATEX`, `WEB` and related topics, or prepared using one of these tools. Thanks to the many readers who have added to the file, and especially to Nelson Beebe, whose core bibliographies have given us a model to follow in our additions and a permanent place to file the information so that it will be accessible to all electronically.

Please continue to send in your suggestions. The elements that we want to include are detailed with the last installment (*TUGboat* 11, no. 2, p. 208).

#### Publications about `TeX`

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- Cahiers GUTenberg, 1988–. Journal of Groupe des Utilisateurs de `TeX` Francophones, (group of French-speaking `TeX` Users).
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- Jacques Dešarmenien. How to run T<sub>E</sub>X in French. Technical Report STAN-CS-84-1013, Stanford University, August 1984.
  - Victor Eijkhout and Nico Poppelier. Wat is T<sub>E</sub>X. *TWIOscoop*, 8(2):44–48, 1990.
  - Paul M. English. Using METAFONT for original font design. August 1987 (unpublished).
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  - Donald E. Knuth and Joe Weening. New T<sub>E</sub>X/METAFONT sources available on Stanford's master archive. *T<sub>E</sub>Xhax*, 90(13), January 1990.
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  - T<sub>E</sub>XEuro, 1989–. This is an unmoderated discussion list for T<sub>E</sub>X with emphasis on European issues. To subscribe, send a request with the text subscribe tex-euro to listserv@dhdurz1.bitnet.
  - T<sub>E</sub>Xhax, 1987–. This is a TUG-supported moderated electronic mailing list. To subscribe, send a request to texhax-request@june.cs.washington.edu.
  - T<sub>E</sub>Xline, Malcolm Clark, editor, 1987–. This is an informal newsletter of the T<sub>E</sub>X community.
  - T<sub>E</sub>Xmag, 1988–. This is an electronic magazine with articles about T<sub>E</sub>X. To subscribe, send a request with the text subscribe texmag-1 to listserv@vm.byu.edu.
  - UKTeX, 1987–. This is an electronic discussion list for T<sub>E</sub>X issues in the United Kingdom.
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  - Paul J. Ellis and Y. C. Tang, editors. *Trends in Theoretical Physics*. Addison-Wesley, 1990. ISBN 0-201-50393-X.
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  - Stephen A. Fulling. *Aspects of Quantum Field Theory in Curved Space-Time*. London Mathematical Society Student Texts, 17. Cambridge University Press, Cambridge, 1989. ISBN 0-521-34400-X (hardcover), 0-521-37768-4 (paperback). This book was prepared with PCT<sub>E</sub>X; the figures were prepared with P<sub>I</sub>CT<sub>E</sub>X.
  - Rosalind S. Gibson. *Principles of Nutritional Assessment*. Oxford University Press, 1990. ISBN 0-19-505838-0. Set by L<sup>A</sup>T<sub>E</sub>X, with graphics from Harvard Graphics and Adobe Illustrator; designed by Ian L. Gibson and Philip Taylor with the assistance of the publisher. The book is typeset in Adobe Times Roman 10.5/12 and 8.5/10.5, with figure annotation in Adobe Helvetica. The reasons for the unusual font size are described in Philip Taylor's T<sub>E</sub>X90 conference paper, to appear in TUGboat 12, no. 1, 1991.
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- John Sutherland. *Mrs Humphry Ward: Eminent Victorian, Pre-eminent Edwardian*. Oxford University Press, Oxford, 1990. ISBN 0-19-818587-1.
- Tommaso Toffoli and Norman Margolus. *Cellular Automata Machines*. MIT Press, Cambridge, MA, 1987. ISBN 0-262-20060-0.
- Ib Troen and Erik Lundtang Petersen. *El Atlas Eólico Europeo*. Risø National Laboratory, Roskilde, Denmark, 1990. ISBN 87-550-1638-3. Typeset on a Canon Series III 300-dpi laser printer, with extensive graphics and data tables; the data files are available on IBM PC diskettes.
- TV Guide magazine, 1987. Portions of this magazine (20 million issues weekly) are set with T<sub>E</sub>X.
- Robert Ulichney. *Digital Halftoning*. MIT Press, 1987. ISBN 0-262-21009-6.
- VAX VMS version 4.x and 5.x manuals. Digital Equipment Corporation, 1988. The complete VMS manuals sets are produced with T<sub>E</sub>X, but authors actually prepare input in a form suitable for an earlier in-house system, which is then automatically translated to T<sub>E</sub>X form.
- Bruce S. Weir. *Genetic Data Analysis*. Sinauer, Sunderland, Mass., 1990.
- Herbert S. Wilf. *Algorithms and Complexity*. Prentice-Hall, 1986.

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### The 1990 DECUS T<sub>E</sub>X Collection

Ted Nieland

The DECUS Languages and Tools SIG Public Domain Working Group and the Electronic Publishing SIG T<sub>E</sub>X/L<sup>A</sup>T<sub>E</sub>X/WEB Working Group are proud to announce the 1990 DECUS T<sub>E</sub>X Collection. This collection offers nearly everything a T<sub>E</sub>X User would want on their system for T<sub>E</sub>X.

The master tapes for the collection have been sent to DECUS Library and to the top of the DECUS LUG distribution tree. The new collection will be available to all shortly through their channel for procuring DECUS Software.

This collection is an extensive rework of the previous collection with nearly all of the material being updated or new. More DVI drivers have been added and many of the VMS programs now sport a CLD interface.

Also, an extensive effort on documentation has taken place resulting in a DECUS T<sub>E</sub>X Help Library.

The following items are included in the DECUS T<sub>E</sub>X Collection 1990:

- WEB (Tangle 4.0 / Weave 4.1)
- T<sub>E</sub>X Version 3.0

- METAFONT Version 2.0
- L<sup>A</sup>T<sub>E</sub>X Macro Package 2.09 (7 Dec 1989) (with mod for T<sub>E</sub>X 3.0)
- S<sub>L</sub>T<sub>E</sub>X Macro Package 2.09 (7 Dec 1989) (with mod for T<sub>E</sub>X 3.0)
- B<sub>I</sub>B<sub>T</sub>E<sub>X</sub> Version 0.99c
- T<sub>E</sub>Xsis Macro Package Version 2.13
- DVIOUT Version 1.2
- DVIPS for VMS, Version 5.35
- DVItOVDU Version 3.2
- DVItOLN03 Version 3.1-4
- XDVI (with support for DecWindows)
- T<sub>E</sub>Xx (with support for DecWindows)
- Vassar Spell Version 2.2
- FWEB (including support for VMS)
- CWEB (including support for VMS)
- MWEB
- TIB
- CRUDETYPE
- DVIDIS (for VAXstations Running VWS)
- GPLOT 4.23
- RNOTOTEX
- IDXT<sub>E</sub>X
- GloT<sub>E</sub>X
- DVIDVI
- MAKEINDEX
- P<sub>l</sub>CT<sub>E</sub>X
- T<sub>E</sub>XTYL
- DVI2TTY
- LSE Templates for L<sup>A</sup>T<sub>E</sub>X and B<sub>I</sub>B<sub>T</sub>E<sub>X</sub>
- MFWARE (GFtoPK, GFtoPX, etc)
- PICMODE
- TR2TEX
- WS2LATEX
- A<sub>M</sub>S-T<sub>E</sub>X Macro Package
- AMS-L<sup>A</sup>T<sub>E</sub>X Macro Package
- PHYZZX Macro Package
- PHYSE Macro Package
- ScriptT<sub>E</sub>X Macro Package
- MuT<sub>E</sub>X Package (including METAFONT files)
- Clarkson L<sup>A</sup>T<sub>E</sub>X & B<sub>I</sub>B<sub>T</sub>E<sub>X</sub> Style Collections
- DECUS T<sub>E</sub>X Help Library
- Beebe Utah DVI Driver Collection with additional submissions
- DVI2PS
- Many Font Additions (Concrete, Dürer, Chess, DECUSLOGO, among others)
- Support for foreign languages including Dutch, French, German, Greek, Hebrew, Icelandic, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Thai, Turkish, and Vietnamese
- T<sub>E</sub>X for the Amiga with some DVI Drivers and the L<sup>A</sup>T<sub>E</sub>X Picture Editor (LPE)

- T<sub>E</sub>X for the Macintosh (OzT<sub>E</sub>X), along with B<sub>I</sub>B<sub>T</sub>E<sub>X</sub>, and DVI drivers
- T<sub>E</sub>X for MS-DOS, plus previewers and DVI drivers
- Various T<sub>E</sub>Xware for UNIX, including WEB2C and XT<sub>E</sub>X (for DECstations)

The following output devices are supported:

- DEC LN03 (requires a RAM Cartridge) [DVI<sub>T</sub>OLN03]
- DEC LN03 Plus (uses bitmaps) [DVI<sub>L</sub>3P]
- DEC LA75 [DVI175]
- PostScript (LPS40, Apple LaserWriter, LN03S) [DVI<sub>A</sub>LW, DVIPS, DVIOUT, GTEX]
- Hewlett Packard Laserjet [DVI<sub>J</sub>ET]
- Hewlett Packard Laserjet Plus [DVI<sub>J</sub>EP]
- Cannon Engine Laserprinter [DVI<sub>C</sub>AN]
- EPSON Printer [DVI<sub>E</sub>PS]
- Printronix Printer [DVI<sub>P</sub>RX]
- Okidata Pacemark 2410 (72 or 144 DPI) [DVI<sub>O</sub>KI]
- VT terminals, ReGIS Terminals, Tektronix Terminals [DVI<sub>T</sub>OVDU]
- VAXstations running VWS [DVIDIS]
- DECWindows [XDVI, T<sub>E</sub>XX]
- Version 3.10 BBN BitGraph Terminal [DVI<sub>B</sub>IT]
- Golden Dawn Golden Laser 100 printer [DVI<sub>G</sub>D]
- Imagen imPRESS-language laser printer family [DVI<sub>I</sub>MP]
- Apple Imagewriter 72 or 144 dpi printers [DVI<sub>M</sub>72 or DVI<sub>M</sub>AC]
- MPI Sprinter 72 dpi printer [DVI<sub>M</sub>PI]
- Toshiba P-1351 180 dpi printer [DVI<sub>T</sub>OS]
- Generic Output [DVI<sub>2</sub>TTY]
- QMS Laser Printers [GTEX]

The collection includes numerous example files including *A Gentle Introduction to T<sub>E</sub>X* by Michael Doob and *Essential L<sup>A</sup>T<sub>E</sub>X* by Jon Warbrick.

For more information on getting a copy of the DECUS T<sub>E</sub>X Collection, contact your DECUS Local User Group or the DECUS Library at:

DECUS Library (BP02)  
219 Boston Post Road  
Marlboro, MA 01752-1850  
(508) 480-3418/3659/3446

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## The IVRITEX Mailing List

Don Hosek

IVRITEX is a discussion list primarily for those using  $\TeX$  to typeset Hebrew. The forum, like  $\TeX$ hax, is intended for both users and implementors. The primary focus is on the use of the  $\TeX$ - $\XeT$  program for typesetting Hebrew text and the font problem, but discussion of issues regarding other  $\TeX$  add-ons for handling R-L text and/or issues regarding other R-L languages (e.g., Arabic, Aramaic, etc.) is encouraged. An informational message summarizing the state of Hebrew  $\TeX$  is posted to the list on a bi-weekly basis.

Users may subscribe to the list by sending the following command as the first line of a mail message to the Bitnet address `LISTSERV@TAUNIVM`:

```
SUBS IVRITEX your full name
```

(Your name is *not* your net-address.) Non-Bitnet subscribers may need to explicitly route all messages to `TAUNIVM` through an appropriate mail gateway, e.g.,

```
LISTSERV%TAUNIVM.BITNET@CUNYVM.CUNY.EDU
```

If the attempt is successful, you will receive a mail message from the listserver notifying you that you are added to the list.

There is also an archive of files for Hebrew  $\TeX$  available from `LISTSERV@TAUNIVM`. To get a list of files available from the listserver, send the command `INDEX IVRITEX` to `LISTSERV@TAUNIVM`. For help on accessing files from the listserver, send the command `HELP`.

◊ Don Hosek  
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Claremont, CA 91711  
`dhosek@ymir.claremont.edu`

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## VM/CMS Site Report

Joachim Lammarsch

The new changes for  $\TeX$  3.1 et al. are finished and will be available on the next distribution tape which can be ordered from Maria Code next January. Peter Breitenlohner, who has written all the new changefiles, has developed a new program named `DVICOPY` which reads a `dvi`-file containing virtual fonts and writes a `dvi`-file containing real fonts.

To make the changefiles and the new program available, I have created a new filelist at `LISTSERV@DHDURZ1.BITNET` named `VM-CMS` which contains the new files.

To get an index send the command

```
GET VM-CMS FILELIST
```

to the server. To get a file send the command

```
GET filename filetype VM-CMS
```

Further news will be announced in the discussion list `TEX-IBM`. To subscribe to this list send the command

```
SUB TEX-IBM firstname familyname
```

to your nearest listserv.

Dean Guenther has made available the whole distribution tape via FTP from

```
WSUVM1.CSC.WSU.EDU
```

(134.121.1.39). Login with the account `TEX`, password is `GUEST`.

◊ Joachim Lammarsch  
Computing Center  
University of Heidelberg  
Im Neuenheimer Feld 293  
6900 Heidelberg 1  
Germany  
Bitnet: `X92@DHDURZ1`

## Typesettings on PCs

### $\TeX$ Implementations for IBM PCs: Comparative Timings

Erich Neuwirth

Timing tests were performed on several implementations of  $\TeX$  for IBM PCs (and compatibles). These were the tested versions:

<code>PCT<math>\TeX</math></code>	2.93 (2.9b)
<code>PubliC<math>\TeX</math></code>	2.99
<code>SB<math>\TeX</math></code>	2.9
<code>SB<math>\TeX</math></code>	3.0
<code><math>\mu</math><math>\TeX</math></code>	2.96.2
<code>DOST<math>\TeX</math></code>	2.93a
<code>em<math>\TeX</math></code>	2.99 [2g]
<code>em<math>\TeX</math></code>	3.0 [2h]

The files used for testing: