Calendar

1990

May 21 – 25   Intensive Beginning/Intermed. TeX, University of Houston/Clear Lake, Houston, Texas

TUG90 Conference
Texas A & M University
College Station, Texas

Jun   11 – 15   Intensive Beginning/Intermed. TeX
Jun   11 – 15   Advanced TeX/Macro Writing
Jun   11 – 15   Intensive LaTeX
Jun   11 – 15   LaTeX Style Files
Jun   12 – 15   METAFONT
Jun   13 – 15   Output Routines
Jun   13 – 15   PostScript
Jun   14 – 16   SGML
Jun   18 – 20   **TUG's 11ᵗʰ Annual Meeting**
Jun   21 – 22   Macro Writing
Jun   21 – 23   Graphics in TeX

Jul   15   Papers from TUG Annual Meeting: Deadline for receipt of camera copy for *TUGboat* Proceedings issue.

Providence College,
Providence, Rhode Island

Jul   16 – 20   Intensive Beginning/Intermed. TeX
Jul   17 – 20   Beginning TeX
Jul   23 – 27   Advanced TeX/Macro Writing
Jul   24 – 27   Intermediate TeX

Vanderbilt University, Nashville, Tennessee

Jul   23 – 27   Intensive Beginning/Intermed. TeX
Jul   30 –   Advanced TeX/Macro Writing
  Aug 3

McGill University, Montréal, Québec

Aug   6 – 10   Intensive Beginning/Intermed. TeX
Aug   13 – 17   Advanced TeX/Macro Writing

Rutgers University, Busch Campus,
Piscataway, New Jersey

Aug   6 – 10   LaTeX Style Files
Aug   13 – 17   Advanced TeX/Macro Writing

University of Illinois, Chicago, Illinois

Aug   13 – 17   Intensive Beginning/Intermed. TeX
Aug   14 – 17   Beginning TeX
Aug   20 – 24   Intensive LaTeX
Aug   21 – 24   Intermediate TeX

California State University,
Northridge, California

Aug   20 – 24   Intensive Beginning/Intermed. TeX
Aug   21 – 24   Beginning TeX
Aug   27 – 31   Advanced TeX/Macro Writing
Aug   28 – 31   Intermediate TeX

University of Maryland,
College Park, Maryland

Aug   20 – 24   Intensive Beginning/Intermed. TeX
Aug   27 – 31   Intensive LaTeX
Sep   4 – 7   METAFONT

Aug   31   NTG-SGML Holland meeting Groningen, The Netherlands. For information, contact Kees van der Laan (Bitnet: CGL@RC.RUG.NL)

TeX90 Conference
University College
Cork, Ireland

Sep   3 – 7   Intensive Beginning/Intermed. TeX
Sep   3 – 5   Intensive LaTeX
Sep   3 – 7   Intensive METAFONT
Sep   5 – 7   SGML/TeX
Sep   7 – 8   Advanced TeX
Sep   10 – 13   **TUG's 1ˢᵗ Conference in Europe**
Sep   14 – 15   Macro Writing
Sep   14 – 15   LaTeX Style Files
Sep   14 – 15   Graphics in TeX

Sep 11   **TUGboat Volume 11,**
          3rd regular issue:
          Deadline for receipt of manuscripts
          (tentative).

Sep 18–20 EP'90
          National Institute of Standards
          and Technology, Gaithersburg,
          Maryland. For information,
          contact Richard Furuta
          (furuta@brillig.umd.edu).

Oct 3–5   Seybold Computer Publishing
          Conference, San Jose Convention
          Center, San Jose, California.
          For information, contact Seybold
          Publications, West Coast Office
          (213-457-5850).

Oct 10–12 9th annual meeting, "Deutsch-
          sprachige TEX-Interessenten";
          DANTE e.V.: 3rd meeting, GWD,
          Göttingen. For information, contact
          Dr. Peter Scherber (Bitnet:
          PSCHERB@DGOGWDG1) or DANTE e.V.
          (Bitnet: DANTE@DHDURZ1)

Dec 6–8   European Publishing Conference,
          Netherlands Congress Centre,
          The Hague, Holland.
          For information, contact Seybold
          Publications, U. K. Office
          ({44} 323 410561).

1991

Jan 15   **TUGboat Volume 12,**
          1st regular issue:
          Deadline for receipt of manuscripts
          (tentative).

Feb 20–22 10th annual meeting, "Deutsch-
          sprachige TEX-Interessenten";
          DANTE e.V.: 4th meeting,
          Technical University of Vienna.
          For information, contact
          Dr. Hubert Partl (Bitnet:
          Z3000PA@AWITUW01) or DANTE e.V.
          (Bitnet: DANTE@DHDURZ1)

Apr 9   **TUGboat Volume 12,**
          2nd regular issue:
          Deadline for receipt of manuscripts
          (tentative).

Sep 10   **TUGboat Volume 12,**
          3rd regular issue:
          Deadline for receipt of manuscripts
          (tentative).

For additional information on the events listed
above, contact the TUG office (401-751-7760) unless
otherwise noted.

Production Notes

Barbara Beeton

Input and input processing

Electronic input for articles in this issue was received
by mail and on floppy disk.

Authors who had written articles previously for
TUGboat typically submitted files that were fully
tagged and ready for processing with the *TUG-
boat* macros — tugboat.sty for plain-based files
and ltugboat.sty for *those using* LATEX. (The
macros — see the Authors' Guide, *TUGboat* 10,
no. 3, pages 378–385 — have been installed at
labrea.stanford.edu and the other archives, and
should be retrieved by prospective authors before
preparing articles; for authors who do not have
network access, the TUG office can provide the
macros on diskette.)

Almost two-thirds of the articles, and about
half the pages in this issue are LATEX. For conve-
nience in processing, plain or LATEX articles were
grouped whenever possible. Articles in which no,
or limited, TEX coding was present were tagged
according to the conventions of tugboat.sty or
ltugboat.sty as convenient. Most articles tagged
according to the author's own schemes were modi-
fied sufficiently to permit them to be merged with
the rest of the stream. Especial care was taken
to try to identify macro definitions that conflicted
with ones already defined for *TUGboat.*

Several articles required extra-special handling.
The article by Mittelbach and Schöpf (p. 297)
was set using a preliminary version of the new
LATEX font access technique which it describes.
And the articles by Ha (p. 250) and Salomon
(p. 212) used an experimental enhancement of the
plain *TUGboat* macros that permits changing the
number of columns in mid-page.

Test runs of articles were made separately and in groups to determine the arrangement and page numbers (to satisfy any possible cross references). A file containing all starting page numbers, needed in any case for the table of contents, was compiled before the final run. Final processing was done in 7 runs of TeX and 9 of LaTeX, using the page number file for reference.

The following articles were *not* prepared using LaTeX.

- Barbara Beeton, *Editorial comments*, page 153.
- Elizabeth Barnhart, *TeX in the production environment — questionnaire responses*, page 154.
- Donald Knuth, *Exercises for TeX: The Program*, page 165.
- Alan Hoenig, *Circular reasoning: typesetting on a circle, and related issues*, page 183.
- Bart Childs, *Data General site report*, page 206.
- Barbara Beeton, *Resources available to TeX users*, page 207.
- Ted Nieland, *DECUS TeX collection — submissions wanted*, page 211.
- Alan Hoenig, `Just plain Q&A`, page 212.

- David Salomon, *Output routines: Examples and techniques. Part II:* OTR *techniques*, page 212.
- Khanh Ha, *Easy Table*, page 250.
- Philip Taylor, *A nestable verbatim mode*, page 245.
- Kees van der Laan, *Typesetting bridge via TeX*, page 265.

Output

The bulk of this issue was prepared on an IBM PC-compatible 386 using PC TeX and output on an APS-μ5 at the American Mathematical Society using resident CM fonts and additional downloadable fonts for special purposes.

The article by Lee S. Pickrell (cited above) required output to be prepared on an HP LaserJet II.

Only one item (other than advertisements) was received as camera copy: the figures for the *Output routines* tutorial by David Salomon (p. 212), which were prepared on a 300 dpi Apple LaserWriter.

The output devices used to prepare the advertisements were not usually identified; anyone interested in determining how a particular ad was prepared should inquire of the advertiser.

New Publications and Software
Available through the TeX Users Group, June 1990

(These product descriptions were taken, for the most part, from the publishers' announcements.)

TeX for the Impatient
by Paul W. Abrahams, with Karl Berry and Kathryn A. Hargreaves

If you're eager to find fast answers to common TeX questions, your wait will soon be over. *TeX for the Impatient*, a practical handbook for TeX, will be available this July. Clear, concise, and accessible, this book is organized for easy retrieval of information. It's thoroughly indexed and carefully designed so you can learn by example. Plus, it is packed with explicit instructions, useful tips and techniques, and a wealth of lightly humorous and very illuminating examples. Features include:

- complete descriptions of TeX commands, arranged for lookup either by function or alphabetically;

- clear definitions of essential TeX concepts, collected in a separate chapter so that the command descriptions remain brief and accessible;
- explanations of common error messages and advice on solving problems that frequently arise;
- collection of useful macros (also available in electronic form).

Addison-Wesley Publishing Co., Reading, Mass., 1990, 384 pp.

LaTeX for Engineers and Scientists
by David J. Buerger

Your comprehensible guide to LaTeX: Coping with even the most complex multiline equations — well beyond the scope of most computerized publishing systems — is a simple matter when you combine the high-powered functionality of LaTeX with this guide. With LaTeX, scientists, engineers, and other professionals can produce technical documents to the highest professional typeset standards. This

fast, easy-to-use primer quickly brings newcomers to LaTeX up to complete mastery of this powerful new software tool's most sophisticated features. A pleasure to use, this book clearly spells out how to:

- change fonts and type sizes at will for the most impressive, professional results;
- organize book-length documents with the highest levels of editorial integrity;
- create footnotes, cross-references, bibliographies, and indexes automatically;
- generate presentation-quality tables and figures with a publisher's precision;
- handle two-column documents in the style of professional proceedings and journals.

To further assist you, the author provides exercises (with answers), sample input files, a table of mathematical symbols, a convenient glossary of LaTeX forms, and special help with deciphering error messages.

McGraw-Hill, New York, 1990, xvii + 199 pp.

Proceedings
Third European TeX Conference
TeX88 — Exeter, August 1988
TeX: Applications, Uses, Methods
Malcolm Clark, editor

Table of Contents:
Peter Abbott: UKTeX and the Aston archive.
Graham Asher: Type and set: TeX as the engine of a friendly publishing system.
Anne Brüggemann-Klein and Derick Wood: Drawing trees nicely with TeX.
Lance Carnes and William S. Kaster: TeX device drivers today.
Francis J. Cave: The notation and structure of mathematical texts and their representation within electronic documentation systems.
Malcolm Clark and Cathy Booth: Whither TeX? Why has TeX not taken over the world ...?
Frank R. Drake, John Derrick, and Laurent Siebenmann: Sweet-teX, a report.
Roger Gawley: TeX in the mainframe world — the Durham experience.
Klaus Guntermann and Joachim Schrod: High quality DVI drivers.
Alois Heinz: Including pictures in TeX.
Alan Hoenig: An introduction to TeX for new users.
Alan Hoenig: Line-oriented layout with TeX.
Bogusław Jackowski, Tomasz Hołdys, and Marek Ryćko: With TeX to the Poles.
Susanne Lachmann: PROTeX: Integration of text, graphics and images.

Rod Mulvey: The Cambridge TeX-to-Type service.
Bill Noble and Rachel Ganz: TeX and good design — are they compatible?
A. C. Norris and A. L. Oakley: Electronic publishing and chemical text processing.
Peter J. Olivier: Publishing 'exotic' documents with ExoTeX.
Victor Ostromoukhov: METAFONT versus PostScript.
Hubert Partl: German TeX.
Gerlinde Petersen: LinoTeX: professional electronic publishing.
Sebastian P. Q. Rahtz: A survey of picture-drawing in LaTeX.
Michael Ramek: Chemical structure formulæ and x/y diagrams with TeX.
Rainer Rupprecht: Using menudriven TeX under MVS.
Richard O. Simpson: Nontraditional uses of METAFONT.
Thomas Stadler and Tibor Tscheke: An environment for TeX-output with original Monotype fonts.
Jan van Knippenberg: Quality printing of TeX DVI files.
Jörg Winckler: TeX-fonts in image generation software.

Ellis Horwood, Chichester, 1990, 271 pp.

1989 Conference Proceedings
TeX Users Group
Stanford University, August 1989
Ten Years of TeX and METAFONT
Christina Thiele, editor

Table of Contents:

Editor's Introduction

Keynote Address
Donald E. Knuth: The Errors of TeX

Font Forum
Doug Henderson: Introduction to METAFONT
Neenie Billawala: Opening Pandora's Box
Alan Hoenig: Fractal images with TeX
Don Hosek: Design of oriental characters with METAFONT
Bob Batzinger: Thai Languages and METAFONT
John D. Hobby: A METAFONT-like system with PostScript output
Ralph E. Youngen, Daniel C. Latterner, and William B. Woolf: Migration from Computer Modern fonts to Times fonts
Arvin C. Conrad: Fine typesetting with TeX using native Autologic fonts

TₑX Training

Michael Doob: Of the computer scientist, by the computer scientist, for the computer scientist

Hope Hamilton: Mastering TₑX with templates

Anita C. Hoover: Using WordPerfect 5.0 to create TₑX and IᴬTₑX documents

Robin L. Kubek: TₑX for the word processing operator

Jo Ann Rattey-Hicks: TₑX and its versatility in office production

General Applications

Max Díaz: TₑX in México

James Haskell, Wally Deschene and Alan Stolleis: TₑX for 30,000

Alan Wittbecker: TₑX enslaved

Graphics Applications

Tom Renfrow: Methodologies for preparing and integrating PostScript graphics

Rolf Olejniczak-Burkert: *texpic* — design and implementation of a picture graphics language in TₑX à la *pic*

Database Applications

William B. Woolf and Daniel C. Latterner: TₑX at *Mathematical Reviews*

Jörgen L. Pind: Lexicography with TₑX

General Information

Malcolm Clark: Olde Worlde TₑX

Peter Abbott: The UKTₑX Archive at University of Aston

TₑX Tools

Frank Mittelbach and Rainer Schöpf: With IᴬTₑX into the nineties

Andrew Marc Greene: TₑXreation — Playing games with TₑX's mind

Bill Cheswick: A permuted index for TₑX and IᴬTₑX

Steve Sydoriak: IᴬTₑX memos and letters

Gary Benson, Debi Erpenbeck and Janet Holmes: Inserts in a multiple-column format

Mary McClure: TₑX macros for COBOL syntax diagrams

Brad L. Halverson and Don L. Riley: Creating an efficient and workable PC interface for TₑX

TₑX Users Group, Providence, R.I., 1989 (published as *TUGboat* 10, no. 4).

VectorTₑX

retains all the advantages of TₑX plus:

- saves megabytes of storage — entire VTₑX fits on one floppy;
- instantly generate any font in any size and in any variation from 5 to 90 points;

- standard font effects include compression, slant, smallcaps, outline and shading. New: shadow;
- discover the universe of MicroPress professional typefaces: not available for any other TₑX.

Includes the VTₑX typesetter, 10 scalable typefaces, VVIEW (arbitrary magnification on EGA, CGA, VGA, Hercules, AT&T), VLASER (HP LaserJet), VPOST (PostScript), VDOT (Epson, Panasonic, NEC, Toshiba, Proprinter, Star, DeskJet) and manuals.

MicroPress, Inc., Forest Hills, N.Y.

AP-TₑX Fonts

provide the quality of Adobe PostScript fonts for your TₑX documents and non-PostScript printer. If you use any brand of TₑX with an HP LaserJet or DeskJet printer, the AP-TₑX fonts add a wealth of attractive typefaces identical to the popular PostScript extended font families. By de-crypting the Adobe coding it is possible to exactly translate the PostScript fonts into TₑX font bit map and metric files. These translated fonts include the renowned Adobe "hints," which render the smaller point sizes of the fonts with remarkable clarity on laser and ink-jet printers. The fonts use the TₑX character set encoding and font metrics, including full kerning and ligature programs. The AP-TₑX fonts, supplied on ten 360K 5-1/4" PC floppy disks, contain 35 typefaces in pk format (including TₑX font metric (tfm) files) for 300 dots/inch laser and ink-jet printers. The fonts included are identical to the Adobe PostScript implementations of the trade names and samples shown on page 147, *TUGboat* 11, no. 1 (1990). The point sizes for each typeface included are the TₑX sizes 5, 6, 7, 8, 9, 10, 11, 12, 14.4, 17.3 20.7, and 24.9 points. Headline styles (equal to Times Roman, Helvetica, and Palatino, all in bold) also are included at 29.9, 35.8, 43.0, 51.6, 61.9, and 74.3 points.

The Kinch Computer Co., Ithaca, New York

CAPTURE

is the graphics solution for PC-based TₑX. It places graphics in TₑX documents produced on IBM PC systems (and compatibles) with Hewlett-Packard LaserJet printers. It doesn't require PostScript.

CAPTURE is designed for TₑX. It carefully removes all 28 LaserJet control codes that disrupt TₑX. It has been tested with PCTₑX, μTₑX, and TₑXplus. It "captures" the graphics generated by any application program, including "paint" programs, circuit design, CAD, scientific data plotters, optic design, terminal emulators, clip art, spreadsheets, databases — anything that supports

the LaserJet. It supports PostScript. Graphics can be converted to the `pk/tfm` format of TeX and used with PostScript drivers. View your graphics on screen previewers. Graphics can be manipulated by TeX. Do anything with graphics you can do with type; graphics and text are handled the same.

Micro Programs, Inc., Syosset, N.Y.

texpic
by Rolf Olejniczak-Burkert

texpic is a TeX implementation of a graphics language similar to Kernighan's *troff* preprocessor *pic*. Many features of the orignal *pic* are supported,

including a variety of graphical objects (boxes, circles, ellipses, lines, arrows and others), directions of motion, controlling sizes of objects with variable and appropriate defaults, relative and absolute positioning of single objects or whole pictures (labels and corners are allowed), and much more. There are two significant enhancements. Objects adapt to the size of their contents; that is, a circle may contain a table with mathematical equations, a box may contain the circle, etc. *texpic* objects and TeX or LaTeX commands may be combined at will.

Micro Programs, Inc., Syosset, N.Y.

Russians Visit TUG Headquarters

From left to right: Ray Goucher and Karen Butler (TUG), Barbara Beeton (AMS/TUG), Irina Makhovaya, Irina Gorbunova and Andrei Smirnov (U.S.S.R.), Michael Downes (AMS) and Charlotte Laurendeau (TUG).

While on a 4-week visit to the American Mathematical Society in April to learn $\mathcal{AMS}$-TeX, Irina Makhovaya of Mir Publishers, Moscow, Irina Gorbunova of Nauka Publishers & Booksellers, Moscow, and Andrei Smirnov of Leningrad University, spent several hours visiting with staff members at the TUG office in Providence, R. I. Discussions evolved around products and services TUG had to offer, formation of a TeX user association in the U.S.S.R.

and ways in which TUG can help them disseminate TeX in the U.S.S.R.

They were taken to an Italian restaurant for lunch, which was a new experience for each of them. An invitation has been extended to them to attend TeX90, Cork, Ireland, in September, where a "TeX Summit" with representatives of TeX user associations in Eastern and Western Europe will be held.