## Calendar

### 1990

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 21-25</td>
<td>Intensive Beginning/Intermed. \TeX, University of Houston/Clear Lake, Houston, Texas</td>
</tr>
<tr>
<td>Jun 11-15</td>
<td>Intensive Beginning/Intermed. \TeX, University of Houston/Clear Lake, Houston, Texas</td>
</tr>
<tr>
<td>Jun 11-15</td>
<td>Intensive \LaTeX \text{\textit{Style Files}}</td>
</tr>
<tr>
<td>Jun 12-15</td>
<td>\LaTeX \text{Output Routines}</td>
</tr>
<tr>
<td>Jun 13-15</td>
<td>PostScript</td>
</tr>
<tr>
<td>Jun 14-16</td>
<td>SGML</td>
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<tr>
<td>Jun 18-20</td>
<td>\textbf{TUG's 11th Annual Meeting}</td>
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<tr>
<td>Jun 21-22</td>
<td>Macro Writing</td>
</tr>
<tr>
<td>Jun 21-23</td>
<td>Graphics in \TeX</td>
</tr>
<tr>
<td>Jul 15</td>
<td>Papers from TUG Annual Meeting; Deadline for receipt of camera copy for \textit{TUGboat} Proceedings issue.</td>
</tr>
<tr>
<td>Jul 16-20</td>
<td>Intensive Beginning/Intermed. \TeX</td>
</tr>
<tr>
<td>Jul 17-20</td>
<td>Beginning \TeX</td>
</tr>
<tr>
<td>Jul 23-27</td>
<td>Advanced \TeX/\textit{Macro Writing}</td>
</tr>
<tr>
<td>Jul 24-27</td>
<td>Intermediate \TeX</td>
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<tr>
<td>Aug 3</td>
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<tr>
<td>Aug 6-10</td>
<td>Intensive Beginning/Intermed. \TeX</td>
</tr>
<tr>
<td>Aug 13-17</td>
<td>Advanced \TeX/\textit{Macro Writing}</td>
</tr>
<tr>
<td>Aug 6-10</td>
<td>\LaTeX \text{Style Files}</td>
</tr>
<tr>
<td>Aug 13-17</td>
<td>Advanced \TeX/\textit{Macro Writing}</td>
</tr>
<tr>
<td>Aug 13-17</td>
<td>Advanced \TeX/\textit{Macro Writing}</td>
</tr>
<tr>
<td>Aug 20-24</td>
<td>Intensive \LaTeX</td>
</tr>
<tr>
<td>Aug 21-24</td>
<td>Beginning \TeX</td>
</tr>
<tr>
<td>Aug 27-31</td>
<td>Advanced \TeX/\textit{Macro Writing}</td>
</tr>
<tr>
<td>Aug 28-31</td>
<td>Intermediate \TeX</td>
</tr>
<tr>
<td>Aug 27-31</td>
<td>Intensive \LaTeX</td>
</tr>
<tr>
<td>Sep 4-7</td>
<td>\LaTeX \text{METAFONT}</td>
</tr>
<tr>
<td>Sep 3-7</td>
<td>Intensive Beginning/Intermed. \TeX</td>
</tr>
<tr>
<td>Sep 3-5</td>
<td>Intensive \LaTeX</td>
</tr>
<tr>
<td>Sep 3-7</td>
<td>Intensive \LaTeX \text{\textit{METAFONT}}</td>
</tr>
<tr>
<td>Sep 5-7</td>
<td>SGML/\TeX</td>
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<tr>
<td>Sep 7-8</td>
<td>Advanced \TeX</td>
</tr>
<tr>
<td>Sep 10-13</td>
<td>\textbf{TUG's 1st Conference in Europe}</td>
</tr>
<tr>
<td>Sep 14-15</td>
<td>Macro Writing</td>
</tr>
<tr>
<td>Sep 14-15</td>
<td>\LaTeX \text{Style Files}</td>
</tr>
<tr>
<td>Sep 14-15</td>
<td>Graphics in \TeX</td>
</tr>
</tbody>
</table>

### Rutgers University, Busch Campus, Piscataway, New Jersey

- Aug 6-10 \LaTeX \text{Style Files}
- Aug 13-17 Advanced \TeX/\textit{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 27-31 Advanced \TeX/\textit{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 \LaTeX \text{METAFONT}
- Aug 31 NTG-SGML Holland meeting Groningen, The Netherlands. For information, contact Kees van der Laan (Bitnet: CGL@SRC.RUG.NL)

### \TeX90 Conference

- University College
  - Cork, Ireland
  - Sep 3-7 Intensive Beginning/Intermed. \TeX
  - Sep 3-5 Intensive \LaTeX
  - Sep 3-7 Intensive \LaTeX \text{\textit{METAFONT}}
  - Sep 5-7 SGML/\TeX
  - Sep 7-8 Advanced \TeX
  - Sep 10-13 \textbf{TUG's 1st Conference in Europe}
  - Sep 14-15 Macro Writing
  - Sep 14-15 \LaTeX \text{Style Files}
  - Sep 14-15 Graphics in \TeX

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\textit{Status as of 1 May 1990}
TUGboat Volume 12, 3rd regular issue:
Deadline for receipt of manuscripts (tentative).

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 10–12  9th annual meeting, “Deutschsprachige TeX-Interessenten”; DANTE e.V.: 3rd meeting, GWD, Göttingen. For information, contact Dr. Peter Scherer (Bitnet: PSCHER@DGOGWDG1) or DANTE e.V. (Bitnet: DANTE@DHURZ1)


1991

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

Feb 20–22  10th annual meeting, “Deutschsprachige TeX-Interessenten”; DANTE e.V.: 4th meeting, Technical University of Vienna. For information, contact Dr. Hubert Partl (Bitnet: Z3000PAOAWINTUW01) or DANTE e.V. (Bitnet: DANTE@DHURZ1)

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 TUGboat macros—tugboat.sty for plain-based files and ltugboat.sty for those using I\TeX. (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 I\TeX. For convenience in processing, plain or I\TeX 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 modified 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 \\TeX 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{}:

- Elizabeth Barnhart, *\TeX{} in the production environment—questionnaire responses*, page 154.
- Donald Knuth, *Exercises for \TeX{}: The Program*, page 165.
- Barbara Beeton, *Resources available to \TeX{} users*, page 207.
- Ted Nieland, *DECUS \TeX{} collection—submissions wanted*, page 211.
- Khanh Ha, *Easy Table*, page 250.
- 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 PCTeX and output on an APS-p5 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.

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**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).


**\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.


**Proceedings**

*Third European \TeX{} Conference*  
*\TeX{}88 — Exeter, August 1988*  
\TeX{}: *Applications, Uses, Methods*  
Malcolm Clark, editor

Table of Contents:

Peter Abbott: \UK TeX 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{}.

Boguslaw Jackowski, Tomasz Holdys, and Marek Rycko: With \TeX{} to the Poles.

Susanne Lachmann: \PRO\TeX{}: 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 \Exo\TeX{}.

Victor Ostromoukhov: \METAFONT{} versus PostScript.

Hubert Parti: German \TeX{}.

Gerlinde Petersen: Lino\TeX{}: professional electronic publishing.

Sebastian P. Q. Raktz: A survey of picture-drawing in \LaTeX{}.

Michael Ramek: Chemical structure formulae and x/y diagrams with \TeX{}.

Rainer Rupprecht: Using menu-driven \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.


**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{}  
Neeine 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 \LaTeX \ 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: \texttt{texpic}---design and implementation of a picture graphics language in \TeX \ à la \texttt{pic}

**Database Applications**
William B. Woolf and Daniel C. Lattner: \TeX \ at Mathematical Reviews
Jörgen L. Pind: Lexicography with \TeX \

**General Information**
Malcolm Clark: Olde Worlde \TeX \nPeter Abbott: The UK\TeX \ Archive at University of Aston

**\TeX \ Tools**
Frank Mittelbach and Rainer Schönpf: With \LaTeX \ into the nineties
Andrew Marc Greene: \TeX \reation—Playing games with \TeX \’s mind
Bill Cheswick: A permuted index for \TeX \ and \LaTeX \nSteve Sydoriak: \LaTeX \ 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 \textit{TUGboat} 10, no. 4).

**Vector\TeX**
retains all the advantages of \TeX \ plus:
- 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 VT\TeX \ typesetter, 10 scalable typefaces, \texttt{VVIEW} (arbitrary magnification on EGA, CGA, VGA, Hercules, AT&T), \texttt{VLASER} (HP LaserJet), \texttt{VPOST} (PostScript), \texttt{VDOT} (Epson, Panasonic, NEC, Toshiba, Proprinter, Star, DeskJet) and manuals.

\textit{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 \texttt{pk} format (including \TeX \ font metric (\texttt{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, \textit{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.

\textit{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 \texttt{PCTeX}, \texttt{\mu\TeX}, and \texttt{\TeX} plus. 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 original 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.*

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**Russians Visit TUG Headquarters**

![Image of a group of people]

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 \AMSTeX,\ 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.