

All of these have resulted in limitations in  $\text{\TeX}$ 's design that *must* be removed in future systems. I believe that  $\text{\TeX}$  has many unique features, the most important of which are high quality mathematical typography, support for multiple languages and character sets, programmability, and public access to the source code.

The desktop publishing industry is responding to all of the above issues, and there is the very real risk that the benefits of  $\text{\TeX}$  will be lost to commercial systems which will once again produce captive markets and ultimately, throttle development.

## References

- [1] Dorothea Blostein and Lippold Haken. Justification of printed music. *Communications of the ACM*, 34(3):88–99, March 1991.
- [2] Eric Foxley. Music—a language for typesetting music scores. *Software—Practice and Experience*, 17(8):485–502, August 1987.
- [3] John S. Gourlay. A language for music printing. *Communications of the Association for Computing Machinery*, 29(3):388–401, 1986.
- [4] John L. Hennessy and David A. Patterson. *Computer Architecture—A Quantitative Approach*. Morgan Kaufmann Publishers, 1990.
- [5] Donald E. Knuth. On the translation of languages from left to right. *Information and Control*, 8(6):607–639, 1965.
- [6] Donald E. Knuth. A note on digitized angles. *Electronic Publishing—Origination, Dissemination, and Design*, 3(2):99–104, May 1990.
- [7] Timothy Murphy. PostScript, QuickDraw, and  $\text{\TeX}$ . *TUGboat*, 12(1):64–65, March 1991.
- [8] David Salomon. Output routines: Examples and techniques. Part I: Introduction and examples. *TUGboat*, 11(1):69–85, April 1990.
- [9] David Salomon. Output routines: Examples and techniques. Part II: OTR techniques. *TUGboat*, 11(2):212–236, June 1990.
- [10] Lisa M. C. Smith and Mansur H. Samadzadeh. An annotated bibliography of literate programming. *ACM SIGPLAN Notices*, 26(1):14–20, January 1991.
- [11] Daniel Taupin. Musique en  $\text{\TeX}$ : écriture de musique polyphonique ou instrumentale en “plain  $\text{\TeX}$ ”. *Cahiers GUTenberg*, (5):62–73, May 1990. An English-language translation is available from the author.

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## Editorial Comments

Barbara Beeton

### Newsletter news

The biggest piece of news to report here is the appearance of a new TUG publication — a newsletter. (You should probably have received your copy by now.) While the present incarnation is just a prototype, its usefulness will be examined in detail against the mechanics and cost of production.

A newsletter is presumed to be a timely publication, providing information about events, scheduled or spontaneous, and carrying questions and answers with a short turnaround. A newsletter is a suitable forum for reports on TUG activities and news from the Board of Directors. (A significant part of the prototype issue is devoted to such matters.) Therefore, it should appear more frequently than *TUGboat*, probably about six times a year.

If you have opinions on this subject that you wish to share, send them to the TUG Publications Committee, in care of the TUG office (the address is at the top of the list on page 203), or via e-mail to [TUG-Pubcomm@Math.AMS.com](mailto:TUG-Pubcomm@Math.AMS.com).

### *TUGboat* items in electronic archives

I have seen a number of inquiries about whether macros, style files, and similar items published in *TUGboat* are available from the various electronic archives. This is an old question, and the answer is also rather old, although it has unfortunately not yet been put into action. Several years ago, it was agreed in principle, and confirmed by the TUG board of directors, that such items should be made available electronically, one form of which is installation in the archives.

The fact that this hasn't actually happened to any great extent is due to the fact that the *TUGboat* production staff is very limited (it consists of Ron Whitney and myself) and overworked (I am employed full time by the American Mathematical Society, and *TUGboat* is my avocation; Ron is at present acting manager in charge of the TUG office).

The post-processing of items published in *TUGboat* is non-trivial. Use of such features as non-standard fonts or multiple files must be documented or changed. The author's address must be verified. The author should get questions on how to use the items, not the *TUGboat* staff. Other documentation and identifying material at the beginning of the file must be checked. Any special code added explicitly for *TUGboat* should be removed. Although we try very hard to avoid inserting explicit line and page breaks, that isn't always possible. And, unfortunately, we've never had time to write up guidelines for doing this, so it's hard to turn it over to someone else.

Nevertheless, we would like to try to do a better job of electronic distribution, and if you'd like to volunteer to help, please let us know. (Write to us at [TUGboat@Math.AMS.com](mailto:TUGboat@Math.AMS.com) on the Internet.) Because of the limits on our available time, we ask that you have a stable e-mail connection and be familiar with the use of the *TUGboat* styles; the current versions of `tugboat.sty`, `ltugboat.sty`, and `tugboat.com`, as well as the documentation file, `tubguide.tex`, can be found at `labrea.Stanford.edu` in the directory `/tex/tugboat` as well as at other archive sites.

### TUG Resource Directory

Accompanying this issue is a supplement; take a close look at it. Last year, the corresponding supplement was the annual membership list. The membership list is still there, but it has been joined by other useful information.

Short descriptions are given of other T<sub>E</sub>X user associations, including the areas covered, officers, how get in touch, and sometimes more. For several countries of eastern Europe, where formal associations are still in the process of being formed, the names of central contacts are given.

Sources of T<sub>E</sub>X-related software are listed in another section. This includes electronic sources accessible by ftp or servers, other sources of public-domain implementations of T<sub>E</sub>X, commercial vendors, and Don Hosek's list of output device drivers (formerly included in the body of *TUGboat*).

Another section provides information on electronic discussion and help lists.

The final section is the current contents of the T<sub>E</sub>X bibliography from the TUGlib archive.

Updates to these resource lists will appear in the "Resources" column of *TUGboat* as previously.

### (Mis)information about T<sub>E</sub>X in non-T<sub>E</sub>X publications

From time to time, I come across references to T<sub>E</sub>X in rather unexpected places, and also unexpected references in the more usual places. Many references are knowledgeable and informative, but sometimes, it's clear that whoever wrote the item didn't have the foggiest idea of what s/he was talking about. (It's been said that some publicity seekers welcome *any* reference, as long as their name is spelled correctly; well, sometimes in the case of T<sub>E</sub>X that isn't even true.)

T<sub>E</sub>X users can do a lot to improve this situation.

First, send a description (or, better still, a copy) of the reference to the T<sub>E</sub>X Users Group office. Be complete — include the name of the book or periodical, date of publication, the name and address of the publisher, and the numbers of the page or pages on which the (mis)information appeared. Include any comments or suggestions you think might be helpful in writing to the publisher. The e-mail address is [TUG@Math.AMS.com](mailto:TUG@Math.AMS.com), and the postal address can be found at the top of page 203. (If you happen to see a good, informative reference, send that too — if appropriate, it will be added to the growing T<sub>E</sub>X bibliography. To avoid duplication, you might want to check the latest version of the T<sub>E</sub>X bibliography first; see Nelson Beebe's instructions for accessing the TUGlib archive, page 205, or the latest TUG Resource Directory for a printed version.)

Next, if you ever have the opportunity, write an article for some magazine or journal whose readers are doing things where T<sub>E</sub>X could be a useful tool, to describe what T<sub>E</sub>X can do, and how to learn more about it. Or give a talk to a group of people at a meeting of a publishing, scientific or computer-related society. Point out the fact that, though T<sub>E</sub>X software is in the public domain, the many different implementations must all adhere to a single standard in order to be referred to as T<sub>E</sub>X, and one of the consequences is that input prepared in a standard way for one computer will yield exactly the same results on another. A number of articles have been written in this vein, and references can be found in the T<sub>E</sub>X bibliography.

Finally, put in a reference to TUG. There are many users of T<sub>E</sub>X who don't know that TUG exists, or how to get in touch. There are thousands of users of personal computers without access to electronic

networks in this position. One of the TUG Board's hot discussion topics is how to reach these people. If you can help, or have any good ideas, do get in touch.

### DANTE meeting, Vienna

The tenth meeting of the German T<sub>E</sub>X interest group took place in Vienna on 21–23 February 1991, at the Technical University of Vienna. It was my pleasure to attend this meeting and to meet a most enthusiastic, well-organized, and growing group of T<sub>E</sub>X users.

The meeting was divided into a number of technical sessions, each with a distinct theme, among them L<sup>A</sup>T<sub>E</sub>X, auxiliary software, fonts, and news from other user groups. A business meeting occupied part of one afternoon, and workshops were offered the last morning on the subjects of L<sup>A</sup>T<sub>E</sub>X, WEB, and SGML.

Rainer Schöpf presented an update on the status of L<sup>A</sup>T<sub>E</sub>X3.0. Barbara Burr, the editor of DANTE's newsletter, *Die T<sub>E</sub>Xnische Komödie*, described features of GNU Emacs that could be used to make L<sup>A</sup>T<sub>E</sub>X input easier and more reliable, and also the GNU documentation system, T<sub>E</sub>Xinfo. A presentation that I (as a former linguistics student) found particularly fascinating was the description of how T<sub>E</sub>X has been used in the preparation of a linguistic atlas, with phonetic transcriptions of selected words superimposed on maps to delineate the areas in which distinct pronunciations are found, assisting the study of patterns of linguistic change.

In the font area, Konrad Neuwirth surveyed what fonts can be used with T<sub>E</sub>X besides Computer Modern. Yannis Haralambous introduced ScholarT<sub>E</sub>X, intended not only to provide fonts for many different languages, but also to simplify the handling of multilingual documents in a scholarly setting. The 256-character font agreed on in Cork was presented by Norbert Schwarz and Peter Breitenlohner.

Users group news included a presentation by Malcolm Clark on the state of user groups in Europe and America. Jiří Veselý spoke on T<sub>E</sub>X in Czechoslovakia. The final technical presentation was by Joachim Lammarsch, describing DANTE's software program.

In addition to the technical program and business meeting, attendees were welcomed to a buffet supper in the banner room of the Rathaus, with musical accompaniment appropriate to the waltz capital of the world. Some of us chose to enjoy more musical adventures, in this 200<sup>th</sup> anniversary year

of Mozart's death, attending a performance of "Die Zauberflöte" at the Staatsoper. Wonderful!

I would like to congratulate Hubert Partl and Irene Hyna on their excellent meeting arrangements—it was so well organized that it seemed to run itself. And I would like to thank everyone who had any part in the meeting for their kind hospitality.

### Publications of other T<sub>E</sub>X organizations

In previous issues, abstracts of TUGboat articles have appeared in other languages, particularly German. On thinking about this, however, it seemed obvious that what would be most useful to TUGboat readers was information on what appears in other T<sub>E</sub>X publications.

This new approach starts with this issue, where we have abstracts of two issues of the *Cahiers GUTenberg*, the official publication of the Groupe francophone des Utilisateurs de T<sub>E</sub>X. Coverage will be expanded to the publications of other T<sub>E</sub>X organizations in future TUGboat issues.

### TUG's annual meeting

The preliminary program for this year's meeting indicates that there will be a higher concentration of presentations than ever before on how T<sub>E</sub>X is actually used by publishers. Those of us who really do production work know that there are times when it's necessary to resort to more "traditional" methods (like cut-and-paste for inserting figures or applying page numbers or even running heads to items submitted in camera-ready form; careful reading of the TUGboat "Production notes" column will uncover many such references). There are also times when other software is needed as well, working in consort with T<sub>E</sub>X, to provide features not built into "canonical" T<sub>E</sub>X (e.g. graphics) or to make certain phases of manuscript preparation more convenient (e.g. translators from the input to word processors or SGML). A realistic approach to such requirements is needed for success in using T<sub>E</sub>X as a production tool, and I expect to learn much from this summer's speakers.

I'd like to put in a plug here for the annual question-and-answer session. Last year we tried a new approach. Instead of expecting the attendees to come up with questions on the spot, we solicited questions from readers of several of the electronic discussion lists. (We got started too late to put a notice in TUGboat.) And we promised to search out answers, report them at the meeting Q&A session, and publish the results in TUGboat. The response was not large, but the questions were good ones, and the ability to research answers beforehand

meant both that there were fewer cases of “I don’t know” and there was a transcript to be published in the Proceedings. We were happy with the success of this approach, and are using it again this year. If you have any good general questions, or ones that you think would be instructive, or even specific problems that you’ve tried for a long time to solve without success, send them in, and we will do our best. For presentation at the meeting, questions that have relatively short answers will be favored, but all questions will be published, along with whatever answers we can dig up.

If you have e-mail access, send your questions to `TUG-Q@TAMVM1.Bitnet` or to `TUG-Q@TAMVM1.TAMU.edu`.

If you have to use paper, write to “TUG91 Q&A Session” in care of the TUG office (the first address on page 203).

I expect to see many familiar TeX users in Dedham, and hope to meet many new ones as well.

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## TeX in Germany

Walter A. Obermiller

Göttingen was the place to be for TeX users and implementors, as the 9. annual meeting of the German-language TeX users was held from October 10–12, 1990. Formerly in a geographically “marginal” position, the old university town Göttingen is now located in the center of Germany. Approximately 150 participants from Germany, Austria, Belgium and the UK attended the meeting. It was jointly sponsored and organized by the German-language TeX-users group DANTE and the German Society for Scientific Computing (GWDG), which is based in Göttingen.

In the wake of the meeting, the 3. member conference of DANTE was held in the afternoon on Oct 10. Chairman Joachim Lammarsch presented an encouraging outlook on DANTE’s future. DANTE has had a *boom* year; membership increased from 150 at the beginning of 1990 to a staggering 858 with another 100 applications still pending. These figures and the age structure, with students prevailing, show that DANTE is doing its part to promote TeX in Germany.

The TeX server in Heidelberg has been complemented by the DANTE FTP-server at the University

of Stuttgart which stocks a fine collection of TeX programs, amongst it emTeX. Additionally DANTE is making efforts to distribute TeX to people not in the possession of a network connection.

Talks were scheduled for Oct. 11, beginning with a review by Joachim Schrod on the unholy marriage of non-standard font files and drivers not conforming to the TUG driver committee standards. The combination of two non-standard components may work, but often as a nonstandard font and a standard dvi-driver are used, problems arise. Character spacings will be incorrect and significantly degrade the readability of output. Unfortunately, even commercial implementations of drivers have these problems.

Peter Abbot presented the usage statistics of the Aston Archive-Server for the last months. Problems with the Rutherford gateway into BITNET still persist but are tackled with a new encoding scheme (`vvencode`) which is under development at Aston. Some participants surmised the problems were caused by left lane traffic in the UK part of the BITNET cable....

Applications of LaTeX control statements, as in `ifthen.sty`, were discussed in a talk by H. Kopka. It was followed by a report by A. Lingnau on the development of an online documentation system for mathematical software using LaTeX as the typesetting engine.

An approach to documenting LaTeX style files was presented by W. Kaspar and received lively attention of the audience. Many of the available style files out there lack documentation. The solution is not as trivial as it seems. For example, copyright issues make documentation of certain styles *within* the style file itself a contentious issue. The goal of the discussion was to design a multilingual documentation format for style files, and a style file to print them. The documentation should include information on other required styles and style combination that cause problems.

Some 30 popular LaTeX style files have been documented by volunteers in this manner and efforts are under way to compile a complete list of styles available. It was decided to pull different approaches together until the next German TeX meeting in Vienna (Feb. 20–22, 1991) and resume discussion.

Urs Widmer informed on the use of TeX in typesetting Chinese and Japanese texts, highlighting problems with the fonts and the many different character encoding schemes in use for Chinese, Japanese and Korean.