The Times where someone wished all of his friends and colleagues a Merry Christmas, 'except one'. But I could hardly be so uncharitable, or wish to be.

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Editorial Comments

Barbara Beeton

TₑX: the past ...

From time to time, bits of trivia related to TₑX's history come to light. The most recent is a copy of a letter that Don Knuth found in his files and forwarded to me with the comment that it was "written 2.5 years before I began working on TₑX!!"

Dated November 7, 1974, it is addressed to Dr. Daniel Shanks of the Naval Ship Research and Development Center, Bethesda, Maryland; Shanks was at that time a member of the editorial board of the journal *Mathematics of Computation*. The letter states, in part,

> I would like to record my great disappointment in the quality of the new typography in *Mathematics of Computation*. I know that the change was caused by economic concerns, but I don't understand why we can't achieve in the 1970's what was routinely done in the 1870's. The type font is unattractive; the spacing between letters of a word is jerky and not conducive to smooth reading; a lot of the letters look slightly too large or too small. Although the right margin is ragged (and I don't mind this especially), many of the words are noticeably crowded together as if some margin alignment is being done anyway. This unattractive appearance will certainly discourage me from submitting any further papers to *MOC*, at least until all the other journals have deteriorated to the same level.

The October 1974 issue of *Math. of Comp.* was the first set in "cold type" — by a sophisticated typewriter. That method continued in use up to the first issue of 1981, when a switch was made to a composition system (not yet TₑX) running on an in-house computer at AMS. The next piece of Don's writing published by the AMS was "Mathematical Typography",* the lecture that introduced TₑX to the world at large.

Some more glimpses of the past appear on the following pages, in the transcription of a conversation between Don and Roswitha Graham, president of the Nordic TₑX Users Group.

... and the future

Although Don announced in these pages that his work on TₑX is complete, many users are concerned that there are things that TₑX cannot do, that are nonetheless desirable and consistent with the practice of fine typography. Discussions are proceeding in several electronic discussion lists and at meetings of TₑX users whenever they occur. The importance of this topic is such that the column dedicated to "future" topics, Dreamboat, has been moved from its former location near the end of *TUGboat* issues to a more prominent location immediately following this introductory section.

Two articles in this column deal with the state of TₑX and possibilities for the future. The first, by Dick Palais (whom old-timers will remember as the founding chairman of TUG), gives a perspective colored by tradition and personal acquaintance with Don and the Stanford TₑX project. The other is by Phil Taylor, who, while by no means a TₑX newcomer, was introduced to TₑX far from its point of origin and approaches the matter from quite a different direction.

Both Dick and Phil are faithful to Don's exhortation to create "masterpieces of the publishing art". If their methods differ, it is because their experience differs; I have never met two TₑX users who have learned it in the same way, or even the same parts of it, and it has long since ceased to surprise me when I learn something new about TₑX from even a new practitioner. The discussion is interesting, and Phil's article includes instructions on how to listen in or join it.

Another article (p. 510) solicits volunteers for tasks associated with the implementation of LaTₑX3. This important project, when complete, should provide a TₑX environment even more attractive to new users than the present LaTₑX, as well as flexible methods for implementing the requirements of book and journal designers, features much desired by

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* *Bulletin Amer. Math. Soc.* (N.S.) **1** (March 1979), 337–372

anyone working in a production environment. Your participation is encouraged.

TUG: the present

TUG is going through some changes.

Sometime very soon after I write this, the TUG office will be moving from Providence to Santa Barbara. A new Executive Director, Pat Monohon, will be taking charge. For much of the past year, Pat has been in charge of a group of volunteers who have been copying and distributing the public domain TEX packages that are available from TUG. So she has already begun to become familiar with some of the functions that are part of the TUG office duties. We wish her well.

I would also like to take this opportunity to recognize everyone who has worked so diligently in the Providence TUG office: Karen Butler, Cliff Alper, Teresa Pires, Kathy Sheely. They have been unstintingly helpful whenever I've had questions, and I shall miss working with them. And I'm not forgetting Ron Whitney — his contribution to making my job easier has been greater than I can say; in addition to managing the office, he has continued to respond to my requests for assistance with the *TUGboat* styles, and the credit for their reliability and ease of use in production is mainly his. Thank you all!

Not only is the office undergoing a transition — the elected management will be changing too. As already announced in *TEX and TUG News*, no one stepped forward to stand for election as TUG president, so the Executive Committee has studied the Bylaws for guidance in this situation. There *will* be a new president for a term beginning on January 1; the specifics will be announced in the next issue of *TTN*.

Please remember that this is your organization, and its success depends on you. Let's all of us, every TUG member, pull together and give our new representatives the support they deserve.

New ideas in typography

Earlier this fall I attended the Goudy Award Symposium at the Rochester Institute of Technology. This annual event, named for the esteemed American typographer, honors an outstanding type practitioner with an award and a program of talks about type and typographers.

One of the speakers this year was Peter Karow, of URW, Hamburg. His talk described a new typesetting program — the hz-Programm (named for Hermann Zapf, who designed the fonts on which

it depends) — which optimizes text in such a way as to achieve nearly equal word spacing throughout each paragraph, using several interesting techniques that I believe are of interest to readers of *TUGboat*.

The first technique should be familiar already: paragraph-wide line breaking; this is, of course, the technique used in TEX, and though Karow didn't mention it during his talk, when I asked if the source were Knuth's algorithm his answer was "Of course!"

The second technique depends on specially designed fonts to lengthen or shorten lines to approach the target measure. For selected letters multiple shapes of differing widths are provided; typically these are letters that occur relatively frequently (e.g. "e") or have shapes that can by a small change have a significant effect on line length (e.g. "m").

A third technique can be called "intelligent kerning"; this consists in applying only positive kerning to lines that are shorter than the target length, and only negative kerning to lines that are longer.

There are two more components to the package. The typographic quality of the resulting text is most impressive. The paper will be published elsewhere, but I have asked, and expect to receive permission, to reprint it here in a future issue.

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An Interview with Donald Knuth

In November 1991, Donald Knuth was one of a select group honored by appointments to Honorary Doctorates by the Royal Institute of Technology (KTH), Stockholm (see *TUGboat* 13, no. 2, p. 134). After his installation, he participated in a meeting of the Nordic TEX Users Group, where he responded to questions from the audience. He also spent some time talking informally with Roswitha Graham, the president of the Nordic group. These discussions were recorded, and edited transcriptions appear here with the permission of the participants.