

RESULTS OF THE 1985 TUG QUESTIONNAIRE

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Response to the 1985 TUG Questionnaire was better than anticipated; 187 questionnaires, including three composite responses, were received. The following summary should be read with caution because (1) there was a wide range in the number of responses to individual questions, from near 100% on some to a low of 24 replies to question #21 (needs of METAFONT users not met by TUG); (2) categorizing responses to the essay-type questions is necessarily a subjective task; (3) some individuals replying to questions #3, 6, 8 and 19 chose not to order their responses from 1-*n* as requested; and (4) the scorer's ignorance of acronyms and abbreviations common in science undoubtedly caused some error in compiling the results for questions on professional journals, associations, T_EX competitors and the like.

T_EX User Profile

Of those responding, 36% first learned about T_EX at their workplace, 27% from a friend, 22% through familiarity with the works of Donald Knuth, 4% from journal articles, 2% at conferences, and 9% from other sources. 3% have never actually used T_EX; 31% have used it less than one year; 24%, two-three years; 10%, three-four years; 5%, four-five years; and 5%, more than five years. 3% classed themselves as non-users; 22%, beginners; 53%, intermediate users; 22%, advanced users; and a courageous 4%, true wizards. 33% gave their principal occupation as computer programmer, systems manager or systems operator; 24%, researcher; 19%, teacher; 6%, secretary; and 18%, other. That only 3% of the others listed themselves as students perhaps reflects that the questionnaire was distributed during the summer, or perhaps raises the question whether TUG should offer a discount student membership rate.

Regarding educational resources used in learning T_EX, 25% relied on *The T_EXbook*, 13% on *T_EX and METAFONT*, 12% on *TUGBOAT*, 10% on friends, 8% on *First Grade T_EX*, 8% on local documentation, 7% on *The L^AT_EX Manual*, and 17% on all other sources. For the reasons noted above, the validity of any rank ordering of the importance of these sources is suspect; however, *The T_EXbook*, *T_EX and METAFONT*, and TUG courses were the three options most often ranked as most important or useful by those following the 1-*n* numbering system. The responses to question #4 (educational resources you lacked when learning T_EX) were varied: 21% focused upon humans (gurus, teachers, an active local T_EX community, etc.) in their answers; 8% noted hardware or software problems (no working version of T_EX, inadequate output devices and the like) as their primary impediment in learning T_EX, and 7% listed miscellaneous causes such as lack of time. A solid 64% majority of responses, however, concentrated upon inadequate documentation, with 12% desiring a master reference manual of T_EX commands; 10%, a beginner's manual; 10%, sample input files and templates; 7%, technical memos (about drivers, font files, interfacing to operating systems, etc.); and 25%, various miscellaneous forms of documentation.

T_EX is being used to typeset many kinds of documents: 22%, letters and memos; 21%, scientific reports; 16%, software documentation; 12%, overhead projector transparencies; and 29%, all other kinds. T_EX was rated as being most important or useful for scientific reports and least useful in typesetting tables of data, an unsurprising response. Only 3% of the respondents indicated they use `plain.tex` *au naturel*; 38% combine it with macros of their own, 11% with a personally designed macro package, 15% use L^AT_EX, 12% use macros developed by their employer, and 21% use other macro packages.

Judging from the replies to questions #9-15, the current \TeX user population is drawn primarily from the fields of computer science, electrical engineering, mathematics, physics and publishing. Those responding noted they subscribe to or read regularly 177 journals: 19%, *CACM* and other ACM publications; 16%, IEEE publications; 37%, other computer journals; 10%, math journals; 7%, physics journals; and 11%, all others. Respondents thought slightly less than half of these journals would welcome articles about \TeX , with *Byte*, IEEE and ACM publications mentioned most often, and with a *New Yorker* profile of Donald Knuth being perhaps the most creative suggestion of the lot. Respondents indicated membership in 72 different professional associations: ACM, 24%; IEEE, 15%; AMS, 6%; DECUS, 5%; MAA, 5%; and all others, 40%. Seventy different conferences and meetings were listed as having been attended in the past year, with DECUS, TUG and SIGGRAPH being the only three listed $\geq 5\%$ of the time. 25% of the respondents are willing to volunteer to write a journal article about \TeX , 15% are willing to advocate its adoption by professional associations they belong to, and 21% are willing to give talks about \TeX at conferences.

25% of the respondents to question #16 indicated they have access to the ARPANET, 13% to USENET, 12% to BITNET, 9% to CSNET, 8% to UUCP and 33% to other computer networks and bulletin boards.

METAFONT User Profile

Of those responding, 85% have never attempted to use METAFONT; 7% have used it less than one year; 1%, one-two years; 4%, two-three years; 2%, three-four years; and 1%, four-five years. 76% of those replying to question #18 classed themselves as non-users; 18%, beginner; 3%, intermediate user; 2%, advanced user; and 1%, true wizard. 38% of users learned METAFONT from *TEX and METAFONT*, 20% from *The METAFONTbook*, 13% from friends, 12% each from *TUGBOAT* and local documentation, and 5% from all other sources. Nearly half (49%) of METAFONT users reported lacking a working version of the program or had similar software problems when learning METAFONT; with 28% noting need for better documentation; 7%, lack of teachers and other users; and 16%, miscellaneous problems.

\TeX Site Profile

85% of those responding reported that \TeX is in use or being installed at their place of employment. 40% work for non-profit educational institutions; 25%, non-profit research institutions; 30%, for-profit corporations; and 5%, others. \TeX is supported and new users trained by paid staff at 40% of \TeX sites, by volunteers or students at 27% of the sites, and is unsupported at 33% of employers using \TeX . 41% of respondents estimated there are 0-10 users at their site; 32%, 11-25 users; 14%, 26-50 users; and 13%, more than fifty users. 66 different typesetting and text formatting programs were listed as \TeX 's "competition": Troff, 19%; Runoff, 17%; Script, 10%; trix red/redpp, 9%; nroff/dtroff, 7%; Scribe, 5%; and all others, 33%.

TUG Services

80% of the respondents consult the membership list occasionally; 12%, frequently; and 8%, never. 26% thought the list is fine in its current format, 19% asked for more sorting and indexing (by geographic location, wishful vs. real users, etc.) or to have on-line access to the list to produce individualized sorts, 43% wanted more fields of data (or current fields like electronic mail addresses and applications completed more often), and 12% requested that changes and corrections sent to TUG be updated in subsequent lists.

38% have consulted a \TeX site coordinator and rated the response they received as 2.16 on a scale from 1 = excellent to 5 = poor. Of those who have contacted on-line information sources about \TeX , 54% consulted \TeX hax, 33% consulted Laser-lovers, and 13% used other sources. Average scores for quality of response (on the 1-5 scale) were: 2.29 for \TeX hax, 2.17 for Laser-lovers and 2.12 for other sources.

TUGBOAT subscribers reported that 19% read technically-oriented articles; 9%, the administrative news; 70%, both; and 2%, neither. Suggestions for future articles were difficult to categorize: 42% wanted macro-related topics (descriptions of \LaTeX and other widely used packages, sample solutions to common formatting problems and the like), 30% wanted more information about related software like on-screen "preview" programs or about how \TeX compares with other text formatting software, 15% wanted regular news about METAFONT, and 6% wanted people-related information (job opportunities, listings of products and services offered by paid \TeX consultants and TUG volunteers, etc.). Of the 63 individuals willing to volunteer for

TUGBOAT assignments, 14% would guest edit an issue; 21%, edit a column; 64%, write an article; and 1%, other.

TUG Meetings

63% of those responding have never attended a TUG meeting; 19% have attended one; 12%, two; 4%, three; 1%, four; and 1%, five. Travel expenses (39%) were the most frequently listed reason for not attending, followed by conflicts in schedule (20%), lack of interest (15%), high meeting fees (9%), and other reasons (17%). Suggestions for locations of future meetings were: New England/New York City, 28%; East Coast, 17%; deep South (east of Texas), 4%; Midwest, 5%; Colorado, 3%; Texas, 6%; Southwest (east of California), 2%; Pacific Northwest, 5%; northern California, 5%; southern California, 4%; Europe, 11%; Canada, 4%; Australia, 1%; and alternating locations, 5%. The Steering Committee has already taken action on this item by scheduling the 1986 TUG meeting for Tufts University in suburban Boston. 19% of respondents were willing to act as hosts for future TUG meetings in their areas.

Concerning regional T_EX speaker series, 20% of the respondents are willing to organize such events, and 83% of respondents indicated they would probably attend, being willing to travel an average 73.5 miles for an evening or 151.7 miles for a weekend event. 5% thought such meetings should be scheduled monthly; 37%, quarterly; and 58%, on an ad hoc basis.

TUG Courses

71% of the respondents have never attended a TUG-sponsored course; 15% have taken one; 11%, two; 2%, three; and 1%, four or more. Reasons for not attending courses closely paralleled those for not attending meetings: travel costs (40%), lack of interest (18%), high course fees (17%), and other reasons (25%). 69% thought beginning T_EX should be taught using `plain.tex`; 17%, L^AT_EX; other macro packages, 8%; and a choice of macro packages or `plain.tex`, 6%.

Responses to question #47 about course fees averaged to \$404 for a 5-day beginning course, \$269 for a 3-day intermediate course and \$190 for a 2-day advanced seminar. Some individuals expressed a desire to have course fees charged by class rather than per student, and others indicated the courses should be priced at cost. Maximum desirable enrollment for courses with lab sessions averaged to 20 students and for lecture-only courses to 47 students; 40% think that labs are necessary at the

beginning level, 33% at the intermediate level, and 27% for certain advanced courses. Topics suggested for advanced seminars correspond closely with the current TUG curriculum: macro writing and other macro-related topics (53%), METAFONT, typography and book design (15%), output routines (8%), internal workings of T_EX82 (9%), hardware-specific seminars (10%), and miscellaneous (5%).

Summary

In general, results of the 1985 TUG Questionnaire presented few surprises; the need for more documentation and for greater interaction among T_EX users have been pressing concerns of the TUG leadership for years. Many of the essay-type responses touched upon controversial topics, such as the individual who refused to answer questions #10-15 (about journals, professional associations and conferences that might welcome information on T_EX) with the comment: "Let the people who profit from T_EX promote its use... T_EX is not a religion!" Rest assured that TUG has no plans for the deification of Prof. Knuth; rather, those questions are meant to reflect that TUG's charter is that of a volunteer organization, viable only through the unpaid efforts of its members. *Everyone* who uses T_EX profits from the fact that the program is in the public domain. Fewer than one per cent of those responding to the questionnaire indicated they consider T_EX consulting their primary occupation, and until the user population increases to the point where specialists *can* earn a living solely from their T_EXpertise, the further documentation and macro packages requested by average users simply will not be developed. Perhaps the greatest benefit of the TUG questionnaire was in eliciting the names of 59 volunteers for various project assignments; special thanks to those willing to assume such responsibilities.

A final note. The author has made a resolution never again to produce a non-machine-scorable questionnaire of this length and complexity.