The Future of TeX and METAFONT

Donald E. Knuth

My work on developing TeX, METAFONT, and Computer Modern has come to an end. I will make no further changes except to correct extremely serious bugs.

I have put these systems into the public domain so that people everywhere can use the ideas freely if they wish. I have also spent thousands of hours trying to ensure that the systems produce essentially identical results on all computers. I strongly believe that an unchanging system has great value, even though it is axiomatic that any complex system can be improved. Therefore I believe that it is unwise to make further "improvements" to the systems called TeX and METAFONT. Let us regard these systems as fixed points, which should give the same results 100 years from now that they produce today.

The current version number for TeX is 3.1, and for METAFONT it is 2.7. If corrections are necessary, the next versions of TeX will be 3.14, then 3.141, then 3.1415, ..., converging to the ratio of a circle's circumference to its diameter; for METAFONT the sequence will be 2.71, 2.718, ..., converging to the base of natural logarithms. I intend to be fully responsible for all changes to these systems for the rest of my life. I will periodically study reports of apparent bugs, and I will decide whether changes need to be made. Rewards will be paid to the first finders of any true bugs, at my discretion, but I can no longer afford to double the size of the reward each year. Whenever I have created a new version, I will put it in the official master TeX archive, which currently resides at Stanford University. At the time of my death, it is my intention that the then-current versions of TeX and METAFONT be forever left unchanged, except that the final version numbers to be reported in the "banner" lines of the programs should become

                    TeX, Version π

and

                    METAFONT, Version e

respectively. From that moment on, all "bugs" will be permanent "features."

As stated on the copyright pages of Volumes B, D, and E, anybody can make use of my programs in whatever way they wish, as long as they do not use the names TeX, METAFONT, or Computer Modern. In particular, any person or group who wants to produce a program superior to mine is free to do so. However, nobody is allowed to call a system TeX or METAFONT unless that system conforms 100% to my own programs, as I have specified in the manuals for the TRIP and TRAP tests. And nobody is allowed to use the names of the Computer Modern fonts in Volume E for any fonts that do not produce identical tfm files. This prohibition applies to all people or machines, whether appointed by TUG or by any other organization. I do not intend to delegate the responsibility for maintenance of TeX, METAFONT, or Computer Modern to anybody else, ever.

Of course I do not claim to have found the best solution to every problem. I simply claim that it is a great advantage to have a fixed point as a building block. Improved macro packages can be added on the input side; improved device drivers can be added on the output side. I welcome continued research that will lead to alternative systems that can typeset documents better than TeX is able to do. But the authors of such systems must think of another name.

That is all I ask, after devoting a substantial portion of my life to the creation of these systems and making them available to everybody in the world. I sincerely hope that the members of TUG will help me to enforce these wishes, by putting severe pressure on any person or group who produces any incompatible system and calls it TeX or METAFONT or Computer Modern—no matter how slight the incompatibility might seem.

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