

TeX: The Next Generation

Philip Taylor

The notice of the annual DANTE meeting included an announcement that DANTE had decided to set up a working group to co-ordinate the further development of TeX. This announcement was circulated widely via the electronic lists, and all were invited to contribute ideas and work towards this goal. The first session of the working group took place at the end of March in Hamburg.

The meeting was opened by Joachim Lamarsch, who announced the creation of a group to co-ordinate an investigation into the future of TeX (the name will *not* be TeX, but no specific new name was proposed). The group will be led by Rainer Schöpf, and will include Peter Abbott, Peter Breitenlohner, Frank Mittelbach, Philip Taylor, Joachim Schrod, and Norbert Schwarz.

An e-mail list with open membership will be set up (NTS-L@VM.URZ.Uni-Heidelberg.de); it will be the primary source of suggestions to the group. The name 'NTS' is short for 'New Typesetting System', and is intended to be no more than an interim, working, non-contentious, name for the project.¹

Joachim then passed the meeting over to Rainer, who took as his starting point a paper that I had previously written in which were outlined five apparent options. These are:

- 1) Leave TeX as it is now. If Don is sufficiently happy with TeX that he is prepared to leave it for posterity in its present form, then I think we should certainly consider that as an option for the TeX world as a whole.
- 2) Extend TeX by just enough that those who really understand its deficiencies agree that the extensions are not only justified but *essential*: i.e. there are some 'simple' typesetting tasks with which TeX_π cannot deal correctly, but with which an Extended TeX could.
- 3) Extend TeX to incorporate the combined wish-lists of the major TeX practitioners, while retaining TeX's present 'look-and-feel'.
- 4) Extend TeX as in (3), also taking the opportunity to reconsider TeX's 'look-and-feel' and to implement major changes in that area if it is felt beneficial.
- 5) Design a typesetting system for the 21st Century, using whatever elements of TeX are felt to continue to represent the state of the typesetting art.

¹ Look at the last three words of the very first line in *The TeXbook*; thanks to Kresten Krab Thorup for pointing this out.

Rainer felt that (1) was not an option, and we then discussed in open forum options (2)–(5), all of which were felt by some present to have some merit. No firm decision was made as to which to pursue, and it was pointed out that the options were not necessarily exclusive—one could, for example, select (2) as a short time scale immediate action plan, while investigating (5).

The meeting then went on to take suggestions from the floor as to possible improvements, enhancements or suggestions. These included:

- Support for graphics;
- Support for colour;
- Support for rotated text;
- Support for grid alignment;
- Improved algorithms for page layout;
- Elimination of hard-coded constants and conventions;
- Improvement of TeX as a programming language;
- Extension of the 'boxes & glue' paradigm;
- Support for line numbering;
- Improvement of orthogonality and completeness;
- 'Make TeX object-oriented';
- Remove 'superfluous features'.

One speaker presented his own list:

- Who will (or should) use TeX?
- What is the user interface to be?
- Is backward compatibility essential, and if so, at the DVI or TeX level?
- The legal status;
- An implementation environment.

The meeting attempted to categorise these suggestions in terms of the five proposed options, but it became obvious that this was neither the time nor the place to do so. The meeting was then drawn to a close.

Addendum. The discussion list has now become active. Anyone interested in contributing to this activity can subscribe by sending the message

```
SUBSCRIBE NTS-L <given name> <surname>
to LISTSERV@VM.URZ.Uni-Heidelberg.de. The
NTS-L discussion is archived on
```

```
ftp.th-darmstadt.de [130.83.55.75]
directory pub/tex/documentation/nts-l
```

Files in this directory are bundled by month, named *yymm*, where *yy* is the year and *mm* is the month when the mail arrived. Access to this archive is via anonymous ftp. Access via mail-server will be made available later this year.

◇ Philip Taylor
Royal Holloway and Bedford New College
"The University of London at Windsor"
P.Taylor@vax.rhnc.ac.uk