

TeX — a mass-market product? Or just an image in need of a makeover?

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Abstract

Despite widespread acceptance in the scientific field and with some publishers, and recent advances in the humanities, TeX-based systems have largely been publicised by word of mouth, and no-one can tell how many users there are. The commercial versions advertise where they deem fit but generic publicity for TeX is not common.

Users can be TeX's best advocates, but formal training is rare. Users learn mostly from colleagues — themselves often ill-taught — and acquire bad habits which are hard to overcome. The results are often responsible for the poor image TeX has had among most printers and publishers. If TeX systems are so good at typography, the question is often asked, why does the output look so poor? Although TUG runs courses, it is hard to cover such a geographically dispersed user population.

Support for TeX via the Internet is excellent, often far superior to that of other products, but there is always a need for more introductory documentation aimed at the beginner and the non-scientific user. Some installation help is also still needed, especially for the first-timer: the assumption that everyone is already skilled in the principles of computing no longer holds.

This paper argues that the biggest need is for distributable publicity targeted at identifiable markets backed up by presentable documentation. More of the power of L^ATeX should be made use of in creating these documents if it is to regain its market share.

Bad habits die hard

One of the early joys of L^ATeX was the speed with which a new user — assuming some competence in using a text editor — could learn half a dozen commands and create a paper which looked infinitely better than anything a wordprocessor of the time could produce. Passing on the information that L^ATeX could do this, even with mathematics, was probably the prime factor in its widespread adoption in the scientific community. Questions could be answered online in the newsgroups and mailing lists, and the TeX Users Group had its annual conference and thousands of members. The academic and research community at that time formed a self-contained mass market.

Synchronous typographic editing, popularised by early DTP systems and graphical wordprocessors did not initially affect TeX-based systems, as the formatting and mathematical capabilities of what were coming to be called 'graphical' systems were primitive by comparison with TeX. Faster proces-

sors enabled more sophisticated interfaces, however, and encouraged the perception that what you saw was all there was to it.

L^ATeX remains the most sophisticated programmable non-proprietary system, but the prevalent text-mode interface and the perceived difficulty of learning textual commands have long been recognised as major discriminants in a user's choice of application, despite at least half a dozen systems over the years using TeX in a synchronous graphical mode.

Training and learning Notwithstanding the continuing availability of training courses in L^ATeX (both publicly by TUG and privately within user institutions), many users still acquire their knowledge of how to use the system from colleagues in laboratories, classrooms, libraries, and offices. Misconceptions persist, as anyone involved in institutional or newsgroup support of TeX can verify from experience. Numerous well-written documents exist on the CTAN servers which can be used in self-study

to learn how to use \LaTeX properly, but many of the answers to frequently-asked questions have to be repeated regularly on the newsgroup comp.text.tex as well as appearing in the comprehensive FAQs, and the training technique known as ‘sitting by Daisy’¹ continues to predominate.

This comes to a head not in the production of private or internal documents but in the submission of \LaTeX files to publishers. Although many of them have used \LaTeX for years, most would claim that it is only because of pressure from authors who insist on supplying it. Few publishers now employ \LaTeX experts to undertake the syntactical correction of \LaTeX files necessitated by the authors’ misunderstandings, and some even find it more profitable to print out an author’s document with errors and have the entire thing retyped from scratch in *Word* by keyboarding companies in the Far East.

Most of the publishers’ misconceptions (‘ \LaTeX has only one font’, ‘ \LaTeX can’t do graphics’, ‘ \LaTeX is only for mathematics’, et cetera ad nauseam) stem from their experience of authors’ own misconceptions and lack of training. Given the unfortunate look and feel of the default formats (book, article, report, and letter), and the early (pre- $\LaTeX 2_{\epsilon}$) difficulty of using anything other than Computer Modern, the publishers’ view that \LaTeX was typographically inadequate is perhaps understandable.

Authors claim, with some validity, that they are not to blame for this, as it is their job — for example — to perform particle physics experiments, write business reports, or analyse the linguistic aspects of a manuscript, rather than to become typesetters. However, it remains true that one of the major advantages of using \LaTeX , with its wide range of packages, is that the authors precisely do *not* have to become typesetters, any more than they would have to using a word processor (although in both cases there is an assumption that the author is familiar with the standard requirements of publishers for accuracy, consistency, and familiarity with the conventions of publication).

Documentation We can see, therefore, that some of the negative publicity encountered by proponents of \LaTeX derives from the exposure of the user (whether author or publisher) to examples of \LaTeX which abuse or misuse the language because of a lack of understanding engendered by inadequate training. The same claim, however, can also be made of any sophisticated system used by untrained

operators. The scientific, business, or humanities author who tries to pick up the rudiments of Quark *XPress* or *Framemaker* from similarly untrained colleagues is likely to encounter similar difficulties. The problem of training is a large one, given that the first task is to persuade sufficient potential users even to consider using the system in the face of the negative image so often encountered.

More and better documentation can probably help here, especially if sufficient attention is paid to its formatting so that it creates a superior image to that presented by other systems, and to its content so that it does not presume an unwarranted familiarity with any particular discipline.

Using \LaTeX it is perfectly possible to create styles which reflect current trends in user documentation. There is a tendency or desire, however, on the part of some documentation authors to stick with the default formats, and it is unclear if this stems from a lack of experience or a reluctance to introduce what others may see as unneeded dependencies (on PostScript, for example). There are of course occasions when the defaults are desirable, such as the documentation for packages, but there must surely be many more when a different look and feel would be more conducive to persuading the potential user in favour of \LaTeX .

It is this initial task of *persuading* which seems to offer the best hope of countering the current antipathy or apathy, by way of giving \LaTeX ’s image the makeover referred to in the subtitle.

Publicity

The meetings of the TUG Publicity Committee have from time to time considered the production of large-scale generic marketing material, but so far as I am aware (and as a member the fault is as much mine as anyone’s), previous attempts have foundered due to lack of personal time and the problems of agreeing on the content. The TUG office has produced brochures and leaflets, but these have tended to be targeted at specific TUG-related objectives such as increasing membership or conference attendance, rather than simply broadening the appeal of \TeX itself.

The hard work which the many people involved have put into efforts to date has not gone unheeded, however. The assorted minutes of meetings and the present author’s own notes have been used to provide a framework for an experimental document²

¹ Informal learning from a co-worker, derived from the method of training of company telephone operators in the 1930s

² It should be noted that the current experiment is not a part of any TUG activity, as it was originally designed as an internal project within the author’s institution.

in the form of a brochure aimed at publicising L^AT_EX with specific reference to:

- portability, persistence, and durability;
- ease of use and flexibility in application;
- widespread support;
- commercial and free versions;
- examples of real-life applications.

The objective of this experimental leaflet is to test its effectiveness at generating interest in L^AT_EX among non-users and re-generating interest among those with misconceptions. As formal in-depth market research at the level normally conducted by full-scale academic or commercial research projects is out of the question for financial reasons, the participation of individual L^AT_EX consultants as well as TUG and the online T_EX community will be sought when editing of this first draft is finished in October 2001.

The current draft is implemented as a 4–page brochure which will print on A3 or A4 paper folded once to A4 or A5 respectively. It includes the following content:

- a brief explanation of what L^AT_EX is and why the user might need it;
- a list of the principal features;
- quotes from commercial and academic users about its usefulness;
- samples of different kinds of output with brief comments about them, specifically
 - a reset fragment of the 42–line Bible;
 - font samples;
 - mathematics;
 - tabular setting;
 - vector and bitmap graphics;
 - automated cross-referencing.
- information about where to obtain a copy;
- details of vendors, platform support, and technical requirements;
- information about networked support and the T_EX Users Group;
- space for the contact details of a local distributor, user group, consultant, vendor, etc.

The quotes and availability information are currently sourced from the present author’s institution, where the leaflet has so far been distributed on a pilot basis at meetings on academic publishing and the reproduction of study texts, but other more

globally representative quotes and details can of course easily be used to replace these, within the space available.

As a first step in extending the pilot phase outside the author’s institution, criticisms, suggestions, and replacement text are actively sought for the four main categories of content:

- the quotations from users;
- the illustrations;
- the font samples;
- the marketing and descriptive text.

The effect of using the current draft as an internal pilot has been marked. The leaflet was distributed to about 200 academics at a variety of document-related meetings within the author’s institution and some 20 individuals were sufficiently interested to ask for more information and the installation of the software to test (the T_EX Live 5 CD-ROM was made available). A further exposure by the author’s consultancy to four clients with specific typesetting requirements has resulted in two of them installing the software for evaluation.

The current version can be found in <http://www.silmaril.ie/downloads/documents/leaflet.pdf> and <http://www.silmaril.ie/downloads/documents/leaflet.ps.gz>, and copies will be available for inspection at the TUG annual conference in the University of Delaware in August 2001.

Conclusions

It is not possible to say from the limited pilot information at this stage if this approach will be successful, as the individuals involved were to some extent a self-selected group with an existing express desire to seek alternative solutions to their current systems.

As explained earlier, the prime objectives are to generate interest in L^AT_EX and overcome misapprehensions about it. A more widespread test is needed against groups who have *a*) no previous knowledge of the existence of L^AT_EX, or *b*) previous (poor) experiences of using L^AT_EX. It should be noted that the author is not a professional designer, so the current implementation should not be taken as indicative of any future version.

Further development of this concept therefore rests on there being sufficient interest among the wider community.