

General Delivery

Opening Words

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Electronic Documents

Nowadays the media are buzzing with terms like the “global village”, “information highways”, the “web”, “virtual money”, “hypertext”, and in our daily work, we are confronted more and more with the rapid developments of new techniques in the field of electronic publishing. As this issue of *TUGboat* will show, L^AT_EX users are not left behind, and can continue to use their tool of preference for taking advantage of all these latest possibilities.

Today, the Internet connects more than two million computers and over twenty million people worldwide. For the first time humanity, has the capability of being informed of events at the moment when they arrive, but thanks to the Internet, you no longer have to undergo these events passively, like watching television, but you can go and look up information anywhere on the tens of thousands of information servers and form your own opinion. Moreover, the “Net” is an ideal medium facilitating research, offering a database of entertainment possibilities in-town, or during your next trip to a faraway place. In one word, you are now connected and, more importantly, you can set up your own information server for your colleagues, friends, or other people interested in your activities.

L^AT_EX as a Hypertool

It is this latter point that is of interest when we want to find ways to optimize our investment in the re-use of existing documents marked up in L^AT_EX for this new electronic hyperweb. As explained in the editorial by the guest editor of this issue, Malcolm Clark, several possibilities exist to transform L^AT_EX input files, in a more-or-less automatic way, into HTML, the SGML-based language of the WWW, the popular and user-friendly interface to the Internet, or into PDF, an optimized form of PostScript, which allows hyperlinks.

I thank the various authors, and the developers of these software packages for their interesting work that will allow each of us to fully exploit the advantages of the generic approach of L^AT_EX, with those of the hypertext language of the Web and the typographic quality of PDF.

I, of course, also want to acknowledge the work of Malcolm Clark, who is well-known in the T_EX world, not only because he is a former President of both UK-TUG, and TUG itself, but for his continuous struggle to make T_EX better known as a tool of excellence for the typographic composition of documents. He has once more done an perfect job, and I am sure our readers will find this issue all the more pleasant and informative to read.

Living up to our Promises

As I promised at TUG’95 in St. Petersburg last summer, and restated in the two previous issues of *TUGboat*, we are now well underway to catch up the delay in publishing *TUGboat*. In the near future, you will have the pleasure of receiving and enjoying the TUG’95 Proceedings issue, guest-edited by Robin Fairbairns, whom I wholeheartedly congratulate upon being the newly elected President of UK-TUG.

Moreover, the *TUGboat* Production Team¹ is quite confident that *TUGboat* 16, 4, the last issue of 1995, will be sent to the printer before Christmas, so that you will hopefully receive it in the first half of January.

Looking forward

I feel it is thus appropriate to have a brief look at the future, and, apart from the two “standard” and the Dubna TUG’96 Proceedings of *TUGboat* next year, we are also planning to continue to have a guest-edited theme issue. For 1996 we hope to be able to offer our readers an overview of how well T_EX can be used to compose “beautiful books” in (almost) all languages of the world.

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Introduction

Malcolm Clark

Some of the stimulus for collecting the papers in this volume together comes from a happy coincidence: both GUTenberg and the UK T_EX Users Group had meetings on this theme on the same day — January 19th, 1995. In the event, we have drawn only three

¹ Consisting of Barbara Beeton, Mimi Burbank, Robin Fairbairns, Sebastian Rahtz, Christina Thiele, and myself, with Malcolm Clark helping with this issue of *TUGboat*.

papers presented at these meetings and published in *Cahiers Gutenberg* [4] and *Baskerville* [1].

Portability of an electronic document often implies SGML, the Standard Generalized Markup Language. As Goossens and Saarela point out, SGML has been around for many years, and in fact traces its ancestry back to GML [3] (Generalized Markup Language), developed by IBM. SGML concentrates on document content, and has very little to say about appearance. We can contrast this with $\text{T}_{\text{E}}\text{X}$ which, in its rawer forms, can be obsessed with the details of appearance. $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ provides a convenient compromise between content (or structure), and the form ‘on the page’. As Doyle rightly notes, $\text{T}_{\text{E}}\text{X}$ (and $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$) are rather unhealthily targeted towards paper. If we really are thinking about electronic documents and electronic delivery, we should also be thinking about electronic presentation. This is not to claim that paper is dead as a medium, but there are others which are appropriate and may be more convenient.

Another thread comes through hypertexts: it is a straightforward concept to develop the notions of tables of contents, citations, cross-references and so on, to techniques for navigating through a document, and then to ways of relating similar pieces of content. The notion of hypertext is hardly new: by 1945, Vannevar Bush laid down many of the principles which are still current. To many, the World Wide Web realised Bush’s concepts. In its present form, the Web depends upon SGML. The particular instantiation it uses, HTML, owes something to concepts present in ‘richtext’, which seems remarkably similar to `texinfo`, a $\text{T}_{\text{E}}\text{X}$ -variant. But nothing which appears in this volume is fundamentally Web-specific: the documents could be also available from CD-ROM.

The papers of Doyle and Schwarzkopf demonstrate that $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ can be brought into the hypertext fold, completely independent of HTML, and yet operating happily over the Internet. The Los Alamos E-print archives are especially interesting, since they were developed for the same sort of community for whom the World Wide Web was created.

If you must ensure that your document ‘looks right’ when displayed on a screen, then one of the most appropriate vehicles is Adobe’s Acrobat, which crops up notably in the papers by Haralambous & Rahtz and Granger. Acrobat (a sort of *hyper*-PostScript) parallels the Web, but fits into the model remarkably well. It enables any browser to see an electronic document which has the same ‘look and feel’ whatever device is used to view it. By making some dynamic font-making capabilities available, Acrobat

can emulate the size and shape of most fonts, ensuring that the perceived document retains the geometry it started with. True, it remains an approximation, but it is a very close one. Added to this, Acrobat has hypertext navigation tools built in. A $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ document can be created which can be converted to Acrobat format, complete with highly portable, non-proprietary, fonts, and the hyperlinks.

Exploring another strategy, Goossens & Saarela examine how $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ documents may be converted to HTML and made available on the Web with the hyperlinks they require to exploit the inherent potential.

And to square the circle, Flynn notes how $\text{T}_{\text{E}}\text{X}$ and $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ may be used to translate HTML into print.

It says much for the original concept of $\text{T}_{\text{E}}\text{X}$ and $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ that they appear to fit so well into this brave new world of distributed, linked, electronic documents.

References

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- [3] C. F. Goldfarb, E. J. Mosher and T. I. Peterson. An online system for integrated text processing. *Proceedings of the American Society for Information Science*, vol. 7, pp. 147–150, 1970.
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