can't do *X*'. In every case, you can do *X* often more easily than you can in plain. But it is not documented anywhere. Our office staff mostly use plain TeX because they find the LaTeX book so uninformative. As difficult as they find *The TeXbook*, they feel they can eventually get the information out of it, but it just isn't there in the LaTeX manual. Of all its deficiencies, the worst is the paucity of examples. The situation is somewhat better in French and German, and one of our secretaries makes good use of Raymond Seroul's book, *Le petit Livre de TeX* [InterEditions, 1989, ISBN 2-7296-0233-X]. A somewhat expanded version, by Raymond Seroul and Silvio Levy, has now appeared in English: *A Beginner's Book of TeX* [Springer Verlag, 1991, ISBN 0-387-97562-4]. Leaving all other considerations aside, I consider LaTeX far superior to plain because it encourages you to think of a document in logical, not page layout terms. The criticisms of the diagram mode and `\put` above are precisely because they are such a departure from that ideal. Lamport actually suggests laying your diagrams out on graph paper before entering them. This is absurd. I have coauthored two books using TeX and they each include several hundred diagrams.

Conclusions

I have sucessfully used TeX for books, papers and even routine letters. I find it much easier to use than the standard text processors. Nonetheless, I find it has some deficiencies. Since Knuth has decided that TeX will remain static, the time has come to think of a possible successor. I have set out above some of the possible directions in which change might come. Some of them might be done by a few modifications to the language that would leave the dvi output format unchanged. These could be accomplished by modifications to the underlying language, but would leave all device drivers and previewers current. However, some of the changes would require new device drivers which would render many of our auxiliary tools obsolete.

When TeX was written the computing power available to the average user was much less. Freed from such limitations, we can now hope for a language that is a lot more powerful and easier to use. I hope to see a successor to TeX that is worthy of its predecessor.

Since the first draft of this paper was written, there has been a new development. A formal network, called NTS-L ("New Typesetting System List") has been set up to discuss the question of a successor to TeX. All issues are up for discussion. Should this new language be an incremental improvement to TeX or a new beginning? Should it be upward compatible? Should it be aimed at microcomputers or only for workstations and larger? Even, should it make a pass at being WYSIWYG? The debate is wide-ranging and sometimes heated. Anyone interested should subscribe. Send email to
listserv@vm.urz.uni-heidelberg.de
with a one line message
subscribe nts-l ⟨Your Name Here⟩.

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Approaching SGML from TeX

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Abstract

The present memorandum intends to encourage discussion on a pragmatic TeX approach to SGML.

It assumes a basic knowledge about SGML and builds on [WM92], which also contains bibliographic information.

Comments and contributions are welcome.

Situation

§ **1** *Concern*
Although TeX has become a *de facto* standard by now, the corresponding General Markup language LaTeX cannot claim to be a standard.

This implies severe limitations in using TeX outside the academic world.

Such limitations might be overcome by combining TeX with an accepted General Markup standard, which seems to be SGML.

§ **2** *καιρός (time of opportunity)*
The present development project of a new LaTeX gives the unique chance to introduce a new Markup Language instead of staying frozen in upward compatibility.

§ **3** *Conclusion*
The community of TeX users, esp. the implementors and other wizards, are encouraged to think about

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the far-reaching consequences of the present chance and to actively pursue the project of approaching SGML from TEX. I suggest an active approach to SGML to the TEX Implementors Community, i.e. those colleagues who actively participate in TEX implementation, adaptation, and development.

Suggestions

§ **4** *TEX-based Implementation*
Rather than following the official approach of using a parser, the first concern should be to implement a TEX format which is capable of interpreting one of the general SGML Document Type Definitions (DTD).

§ **5** *Backing*
This suggestion is based on the assumption that TEX might be a well-suited implementation language. First implementation experiments seem to be encouraging.

§ **6** *Possible Steps*
The project might advance in the following steps:

1. Implement interpretation of a general DTD.
2. Implement document structure validation.
3. Implement definition syntax of SGML.

§ **7** *LATEX*
If the first step could be completed successfully, the SGML general DTD might be offered either as the future LATEX user interface or as an additional one.

Benefits

§ **8** *Savings*
The following benefits are anticipated:

1. Elimination of unneccessary parsing software if not required;
2. Elimination of unneccessary parse processing if not required.

§ **9** *Standardization*
SGML processing could inherit most of the advantages of TEX itself, especially

1. vendor independence;
2. portability of the software;

All this could help to avoid a split of user worlds between SGML and TEX.

[WM92] Reinhard Wonneberger and Frank Mittelbach. SGML. Questions and answers. *TUGboat* 13(2):221 (July 1992).

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Abstracts

Les Cahiers GUTenberg Contents of Recent Issues

Numéro 12 - Décembre 1991

B. GAULLE, Éditorial : à propos d'erratum; pp. 1–2

The President of Gutenberg remarks on the success of the special issues of the *Cahiers* (the proceedings of EuroTEX and GUTenberg'91 and "Premiers pas en LATEX") and corrects some misconceptions regarding the use of TEX, SGML, typographic style, and TEX in Europe.

E. GÖPELT & B. SCHMID, WYSIWYG-TEX-editors on the basis of object-oriented system technology; pp. 3–12

This paper describes the motivation for and planned implementation of a WYSIWYG editor for the COMPINDAS (Computerized Integrated Data Base Production System) of FIZ Karlsruhe.

Michael SPIVAK, LAMS-TEX: A Public Domain Document Preparation System Extended AMS-TEX; pp. 13–20

LAMS-TEX provides three basic extensions to AMS-TEX:

(1) As the 'L' in the name implies, LAMS-TEX provides the functionality of LATEX, including (a) automatic numbering, together with symbolic labelling and cross-referencing, for equation numbers, lists, chapter and section headings, figure captions, theorems, lemmas, etc., etc.; (b) automatic placement of floating figures; (c) automatic table of contents generation and tools for creating an index; (d) literal mode; and (e) bibliographies (including interfacing with BIBTEX, if desired). However the approach is rather different, with syntax that is generally much more concise, and *designed to provide the user with much greater flexibility.*

(2) There are special macros, and extra fonts, for easily producing complicated commutative diagrams; the results are at least as good as those found in any professional books and journals. There are also special macros for partitioned matrices and "bordered matrices".

(3) Finally, extensive table macros provide all the special refinements expected from professional typesetters.