
Book Review

Introduction to T_EX

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278 pp., £21.95 ISBN 0-201-51141-X Addison-Wesley, 1990

One has to be quite brave to write a book on T_EX, given the magisterial weight of Knuth's five-volume epic, but the last few years have seen a small rash of books which are aimed at new users. Until we see Stephan von Bechtolsheim's legendary *Another Look at T_EX*, which is expected to appear in 1992, there are no books which attempt to cover the same ground as Knuth's impenetrable tomes. Some good books (notably from Europe) are aimed at the large L^AT_EX market, but others like this and Abrahams' *T_EX for the Impatient* take on the dangerous task of explaining Knuth's 'plain' format again.

The book is in three parts. In the first six chapters, we are introduced to plain T_EX concepts, fonts, mathematical typesetting, and tabular material; chapters seven to eleven are more advanced, covering macros, the manipulation of boxes, more maths, error messages and output routines; the final three chapters comprise a set of worked examples, a discussion of the files T_EX uses, and a useful 85-page listing of all the plain T_EX commands.

How do you introduce someone to a system with over 900 commands? Even the first worked example on page 8 uses 28 macros, which does not inspire confidence. By the time we get onto `\fontdimen` parameters on page 17 (which are not mentioned until page 76 in *The T_EX Book*, inside a double bend), we are getting desperate—especially since the authors immediately tell us to use `\spaceskip` instead of changing the `\fontdimen` numbers! A complete description of how to write a verbatim environment on page 23 precedes the chapter on macros by 72 pages, with no explanation of what `\def` is. Shortly afterwards we enter the world of `\hangindent` and `\hangafter` to produce strange-shaped paragraphs (suddenly using unexplained terms like 'a dimension register'), but then go back to useful things for beginners like `\item`.

Who is this book aimed at? The complete beginner would flounder, I suspect, and the experienced T_EX user does not need to be reminded that commands in plain T_EX start with a backslash, or what a 'dvi' file is. It makes interesting reading, but I was continually aware that I only understood what they were saying because I already knew T_EX. An experienced programmer who had used other markup systems would probably feel at home. Some areas are explained more clearly than in *The T_EX Book*, such as inserts and running heads; in particular the presentation of mathematics is clear and less confusing than Knuth's, and the treatment of `\halign` almost made it make sense. An advanced section on macro programming covers the infamous `\expandafter`, `\futurelet` and `\afterassignment` in a quite clear way; the latter is used in this macro to stretch out text:

```
\def\stretchword#1{\stretchrest#1\endlist}
\def\endlist{\endlist}
\def\stretchrest{\afterassignment\stretchsymbol \let\next= }
```

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```

\def\stretchsymbol{\ifx\next\endlist
    \let\next\relax
    \kern-0.25em
  \else
    \next \kern0.25em
    \let\next\stretchrest
  \fi
\next}

```

The chapter on T_EX's boxes is a useful compendium, and the appendix of all T_EX commands is extremely helpful, but the 'Example Applications' chapter is not so strong. It describes how to draw a histogram using `\vrule` and `\hrule` (surely this is better done by P_CT_EX if one must do it in T_EX?), how to get proper German quotes, how to create overhead slides, and that is it. A curious selection. One wishes the authors had used the space to stress more clearly that T_EX users are *not* tied to Computer Modern Roman, or the backslash as a command character, or describe other macro packages than Knuth's. By contrast, Helmut Kopka's recent book on L^AT_EX (in German) devotes a lot of space to material *not* covered by Knuth or L^Ampport, such as Mittelbach and Schoepf's L^AT_EX extensions, and Wichura's P_CT_EX. He even offers a METAFONT tutorial, which would have been appropriate to the level of reader which Krieger and Schwarz expect.

The cover and spine of this book say the author is Norbert Schwarz: the title page says that it is by Jost Krieger and Norbert Schwarz. This is so sloppy that the reviewer starts to wonder if it is not deliberate for some reason.

The production of the Knuth volumes on T_EX have generally been a credit to Addison-Wesley. This book is not up to that standard; the Computer Modern Roman font has not reproduced well—one would have hoped that the publisher would have more experience of it by now. When will T_EX users learn to produce books that do not have the 'T_EX' look writ large?

T_EX is in great danger of becoming moribund and marginalized. Perhaps a useful comparison is with Fortran: the language is so widely used that we cannot get rid of it, and it does its job very well, but few people defend its idiosyncrasies. This book will not start any re-evaluation of the software, but is more likely to confirm it as a hacker's delight. The authors know their T_EX well; there are enough macro tips and reference material in this book to ensure that it remains of use, but it is difficult to see it making a convert of a Framemaker user who happens to read past the first few pages.

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