Writing a book is hard work. It can also be rewarding work – if the readers are satisfied with the book. In comparison, writing a review about a book is easy: in a few paragraphs you criticize what it tooks years to write. Nevertheless, the readers deserve an honest review, so I won’t hide the fact that in my opinion the first book reviewed here is less than what it could have been. This book, \LaTeX\ for Everyone by Jane Hahn, is published by Personal \TeX\ Inc. (PTI), and which will replace \LaTeX, a Document Preparation System by Leslie Lamport in the PC-\TeX\ packages that PTI sells.

Surely, Lamport’s book leaves a lot to be desired as an introductory book. For this purpose, you need a book with a clear expository style, a sufficient number of examples and well designed exercises. On the surface, it looks as if \LaTeX\ for Everyone could have been such a book, since it has a clear ‘if you want this, do that’ way of explaining, it has summaries at the end of all sectional units, and lots of exercises. Unfortunately it falls short of being a good introduction: it shows structural flaws, it contains a substantial number of mistakes, and it explains several parts of \LaTeX\ confusingly or not at all.

Structure

Chapter 2 introduces the basic commands of \LaTeX, and it also tells you how to adjust line spacing, margins, paragraph indentation, and footnote spacing – I will come back to this in a minute.

Chapter 3 is an odd mixture of things: it explains about document styles, typefaces and typeface sizes, sectioning commands, symbolic references, hyphenation, lists, formulas, accents, and headers and footers.

Chapter 4 deals with mathematics, but the environ-
ments for displayed equations were treated in chapter 3. Chapter 5, Rows and Columns, discusses \texttt{tabbing, tabular, array and eqnarray}. There are two problems with this arrangement of material:

1. The information on mathematical formulas is spread over three chapters.
2. \texttt{array} is used in chapter 4 on pages 93 and 99, but is not explained until later on, on page 128.

Chapter 6, Customization, treats page and line breaks, centering, vertical and horizontal space, lengths and boxes. This is followed by a chapter on floating objects and one on preparing large documents. In my view, chapter 6 should have been put after chapters 7 and 8, and combined with parts from chapter 3 in a chapter on influencing the layout.

Chapter 7 contains a lot of useful information about floating tables and figures, but it could have been written more concisely I think. And, like other authors of books on \LaTeX\ – see some of my earlier reviews – Ms. Hahn does not clarify what \texttt{table} and \texttt{figure} are, namely ‘envelopes’ for floating figures and tables.

Furthermore, the book contains seven appendices. Appendices A and B, on user-defined commands and counters respectively, contain lots of useful information with instructive examples. Appendix C, on style parameters, is also a nice appendix, but it lacks the page-layout and list-layout diagrams, which are by now familiar to most \LaTeX\ users.

Appendix D treats the \texttt{picture} environment. Appendix E, \texttt{Errors}, is a particularly good appendix, with lots of examples. I missed one thing in this appendix: what happens when you forget the required argument of \texttt{\begin{thebibliography}?}

Appendix F gives examples in the form of question and answer, and is one of the best parts of the book!

Appendix G ‘discusses’ \SlT\ in twelve (sic!) lines. The page on which it is printed can just as easily be torn out of the book, since all it tells the reader is that \SlT\ is a program similar to \LaTeX, designed for creating slides, and with commands different from those of \LaTeX. If the reader wants to know more, he

---

\footnote{To be published in TUGboat 13.1, 57–59 (1992).}

\footnote{I should add that the answers to the exercises are given in small print below the questions.}
or she is advised to print and read slides.tex and local.tex.

Finally, the index is awkward to work with: all environments must be looked up under the main entry ‘environment’, and all commands under the main entry ‘commands’. Strangely, the entry ‘commands’ is followed by ‘captions’, ‘center’, ‘comment’, …

3 My preference would be to list, e.g., ‘picture’ environment between ‘picture’ and ‘placement’, as in the \LaTeX User’s Guide, or to have a separate command index.

My main criticism is that the structure of \LaTeX for Everyone does not reflect the philosophy behind \LaTeX – like most other books on \LaTeX unfortunately. Chapters 2–4 of \LaTeX, a Document Preparation System by \LaTeX’s creator Leslie Lamport mostly explain about those features of \LaTeX that are related to logical structure of a document. Only in chapter 5 does she discuss those features that are more related to the visual structure of a document.

By contrast, Ms. Hahn continually mixes structure commands with layout commands.

An example: in almost every chapter Ms. Hahn introduces a command that accepts the “\leavevmode\textit{command}” and every time she explains what “\leavevmode\textit{command}” does. If she had moved this to a separate appendix on layout changes, this would reflect the philosophy of \LaTeX, and it would make the exposition much clearer.

Another one: in section 3.10.1 she gives this example

\begin{itemize}
  \item \hspace{1cm} potatoes
  \item \hspace{1cm} celery
  \item \hspace{1cm} frying chicken
  \item \hspace{1cm} milk
\end{itemize}

immediately after she has introduced the \texttt{itemize} environment. First of all, this can be done much simpler with a \newcommand of \labelitemi. Secondly, this sort of example really belongs in a separate chapter on layout changes.

Errors

This review column does not provide the space required for an extensive summary of all errors in \LaTeX for Everyone. Instead, I will mention a few interesting ones.

1. The author confuses the document style \texttt{book} with the abstract class of documents that can be called ‘book’. Furthermore, to confuse the reader she introduces a new term, ‘style guide’, as a synonym for ‘document style’. She also confuses \LaTeX with its standard document styles (p. 69–70)

2. On page 42 she calls \TeX’s ‘usual’ typeface, Computer Modern, Times Roman.

3. On page 88: ‘A super- or subscript that is an English word should be set in roman type’. Is this not the case for mathematical texts in French or Dutch?

4. An explanation of \*{\texttt{params}} is missing in all places where \texttt{tabular} is treated (pages 127 and 288).

5. ‘You should get into the habit of typing names as follows: … J. ‘S. ‘Bach’ (page 142). Not true, since it depends on the particular typographical convention one uses: in common usage the space between ‘J.’ and ‘S.’ is omitted.

6. A table in section 6.6 suggests that \LaTeX does not understand the following units of length: dd, cc, bb and sp, which the basic \TeX program, and therefore \LaTeX, an extension, understands.

7. In section 6.7, the author uses \texttt{makenbox} to get an alignment!

8. On page 164, Ms. Hahn writes that

\begin{verbatim}
  \oddsidemargin=0in
  \textwidth=6.5in
\end{verbatim}

results in a right margin of 1 inch. This happens sometimes, but only if you use American letter size paper!

9. The ‘default order of preference’ for figure placement is \texttt{bthp}, according to the author, which is wrong, since this default is given by the document style, for example \texttt{[btp]} in article.

10. On pages 194–197 Ms. Hahn suggests producing an index by sorting the entries in the .idx file in your editor, manually changing the \texttt{indexentry} commands into \texttt{item} and so forth, and then combining multiple entries into one. I find this appalling advice, with index programs such as MakeIndex available.

11. Similarly, in section 8.5 there is no mention of \BIBTeX.

12. The command \setlength is discussed in the main text, whereas \newcommand, \renewcommand and \newenvironment are treated in the appendices. In my view, the latter are more important, because they make typing easier or can clarify the structure of a document. A separate appendix on layout changes would be an appropriate place to discuss \setlength.

13. A discussion of \newtheorem is completely missing.

Besides this, Ms. Hahn sometimes suggests bad typography. For example a tall formula, an integral in display style, in text. Shouldn’t authors of books on \TeX keep traditional typographical rules of thumb in mind?

Conclusion

On the whole, \LaTeX for Everyone is an unsatisfactory book. It has the potential of becoming a good book, in a revised edition, if the structural flaws are solved and all the errors are removed.
The author considers \LaTeX{}'s strongest feature, a position I disagree with strongly: its main merit is document structuring. Math is a \TeX{} feature, and \LaTeX{} does not add new math capabilities: it presents them in a structured and sometimes more user-friendly way. If Ms. Hahn had recognized the key role of document structuring in \LaTeX{}, she would probably have written a different book.

A final remark: the publisher chose to have the book produced from 2000 dpi camera-ready copy, which is the high quality output a book on \TeX{} deserves. Unfortunately, the typeface Computer Modern was used, and the layout is the standard book style. That \TeX{} can produce 'masterpieces of the publishing art'\footnote{The last line of the last chapter of The \TeX{}book.} using other fine typefaces and a layout created by a professional designer, is shown too rarely – an exception is Victor Eijkhout’s recent book \TeX{} by Topic.

---

Practical SGML,
Eric van Herwijnen,

‘A review of a book on SGML in the columns of TUGboat?’ some of you may wonder. What does SGML have to do with \TeX{}? Well, nothing, but since the term SGML has surfaced often in TUGboat and on the TUG conferences the past years\footnote{See for example the proceedings of the 1991 TUG conference.}, I thought a review of an SGML book could be worthwhile.

Practical SGML is one of the best books on SGML currently available. To be absolutely honest, there are not many books on SGML – yet this book is the only one so far with ‘many helpful hints and ideas on developing SGML, applications and discussions of the current software written to be conforming to the ISO standard’, as is written in the foreword of the book. This is indeed a book about practical SGML!

The book is divided into three parts. Part I, Getting started with SGML, is an introduction to SGML. It explains what a document type definition or ‘dtd’ is, what the role of the dtd in the processing of the document is, and what steps are necessary to create and process an SGML document.

Part II is intended for document managers or programmers, and explains SGML in more depth. Some of the topics discussed in this part are: formal aspects of the language SGML, distinguishing data characters from markup, and the reference concrete syntax.

Part III is about SGML implementations and should be read by everyone who has to install and maintain an SGML software system. Mr. Van Herwijnen discusses what components are usually found in such a system, how to create SGML documents, how to convert SGML documents into documents that can be processed, for instance to get output on paper, or in order to store information in a database. He also gives some examples of SGML parsers.

The book also contains five appendices. Appendix A contains the answers to the exercises in the book. In appendix B Mr. Van Herwijnen tells how he wrote Practical SGML using SGML, and in appendix C he even gives the complete document type definition for his book.

Appendix D is a short appendix, in which the author gives common SGML definitions for use with \TeX{}. Finally, appendix E contains useful advice on how to read the ISO standard (8879) in which SGML is defined.

At the end of the book we find a glossary and an index, and throughout the book the author gives lots of valuable references to existing literature on SGML and related topics.

Mr. Van Herwijnen, is leader of the text processing section at CERN, the European Laboratory for Particle Physics in Geneva, Switzerland. SGML is one of the important tools in the text processing section at CERN, which probably explains the high quality of Practical SGML: it was written by someone who has extensively used SGML in practice. Since no prior knowledge of text processing or publishing is required to understand what is written in Practical SGML, I can highly recommend it to anyone who is interested in this subject.

---

\TeX{} by Topic, A \TeX{}nician’s Reference,
Victor Eijkhout,

Victor Eijkhout has definitely done the \TeX{} community a service by presenting us with his book, ‘\TeX{} by Topic’, published by Addison-Wesley. I recommend it highly to everyone who has had some acquaintance
This organizational problem can be seen even in the \TeX{}book, though one hesitates to complain. We \TeX{}es have all spent hours poring over the \TeX{}book, enjoying its lovely writing, its complex concepts, and its illuminating examples. One cannot help admiring it and its author, of course. Still, it must be admitted, when a macro writer is struggling to find some particular bit of information, a quick definition, a nudge in the right direction, he or she can find the \TeX{}book index thoroughly unhelpful and the bit of information wanted scattered over many different pages in many different chapters.

`\TeX{} by Topic,’ on the other hand, excels in organization, making it a most helpful adjunct to the \TeX{}book. The basic plan is to break the whole subject of \TeX{} into about 40 topics, each discussed in its own chapter. Each chapter begins with a list of control sequences relevant to that chapter, followed by a brief explanation of the theory behind that topic, then brief remarks and examples. The chapters in the book are organized into three parts: chapters on basic mechanism; text treatment and math; and finally, output and aspects of \TeX{}’s connection to the outside world.

The book is meant as a reference source, not a tutorial. It assumes that the reader has a general grasp of \TeX{} vocabulary and syntax. It is brief and concise and information dense.

It includes detailed explanations of the mechanisms underlying \TeX{}’s workings and \TeX{} programming techniques. In the last part of the book is found a description of the differences between \TeX{} Version 2 and Version 3, a 13 page glossary of \TeX{} primitives, a bibliographical list of references, character tables, math symbols, a list of examples. The book ends with a 3 page Index by command and a 2 page Index by topic, each with sending readers to one particular page for information on each entry.

Evaluation:
I have found the book useful several time already, and I have been using \TeX{} for a number of years. Even if you have been using \TeX{} for a number of years you may not have had occasion to use a particular command and using `\TeX{} by Topic’ may save you valuable hours by quickly defining or demonstrating the bit of information you need. In the event that you must also consult the \TeX{}book, having two explanations rather than one for a given topic can be helpful.

I think my complaints about the book relate to its brevity which is also one of its virtues. ‘T. by T.’ tends to be more theoretical than practical, and it is somewhat sparse with examples. There are many times when it might well be helpful to readers to explain ‘why’ a particular construct should be used, as well as mentioning that it exists.

For instance, the strut is mentioned on p. 213. First, it is explained somewhat inaccurately by saying it is defined statically in Plain \TeX{} as \verbatim{\texttt{\vruleheight 8.5pt depth 3.5pt width 0pt}}. Actually the definition of the \texttt{\strut} command only asks to copy the strut box. The strut box has been separately set to include a rule of those dimensions. When making up font families one need not change the definition of \texttt{\strut} but only the contents of the \texttt{\strutbox}. The \texttt{\strut} command itself is not static. The quick explanation given `\TeX{} by Topic’ is understandable as an effort in extreme brevity but could be slightly misleading if taken literally. Secondly, the strut is mentioned only as being used in tables. How else can or is it used? Perhaps this question is considered to be too basic, but the strut is found in many other macros and its use could be explained further.

A similar example is found in the brief mention of \texttt{\everycr}. ‘T. by T.’ mentions that it is included after every nonredundant \texttt{\cr}, and defines it in the list of primitives. But how might the \TeX{}nician make use of it?

Or, in the explanation of `\let’ and `\futurelet’ which are at least as clear as those found in the \TeX{}book, perhaps it would be helpful to let users know why it is advantageous to use those constructions instead of the roughly analogous `\def’ and `\expandafter.’ But perhaps that is a different book, a book on macro writing.

In the end, all this is mere quibbling. There is a wealth of well organized material included in this book’s 300 pages. I am delighted to have `\TeX{} by Topic’ at my elbow as I work, and if you are a serious \TeX{} user, you will be too.

Amy Hendrickson, 
TeX{}nology Inc. 
amyh@ai.mit.edu