strut, \mst, with changed height and depth (the standard strut is 2.5ex high and .9ex deep). \mst is used again in row *iii* where some extra space is added at the bottom of the integral sign, but not at the top. \mst takes three arguments or parameters: The first is the character from which the strut is derived, the second is the additional space on the top of the character and the third is on the bottom. The first two rows of this table had additional space at both the top and bottom while the "integral" row was changed only at the bottom. Fine tuning tables in this way can improve their visual form immensely. Row *iii* demonstrates the use of a \zb or *zero-centered box* for putting items in the center of larger boxes. This row with the \zb has **no** struts. In addition, \zb boxes are centered and have zero height and depth. This means that they take up no vertical space, so that a partial horizontal line or rule may be inserted. Here the \use{4}\- tells the table commands to use 4 (data) columns for the horizontal rule.

Many other variations are possible.

Editor's note: The INRSTEX table commands will be made available through the TEX Users Group in both printed form and on magnetic media. Details can be obtained from the TUG office.

Queries

Editor's note: This is a gentle request to readers who find they can answer any of the queries published in this column. Please send a copy of your answer to the TUGboat editor as well as to the author; all answers will be published in the next issue following their receipt.

WEB System Extensions

I'm working on D. E. Knuth's "WEB System for Structured Documentation". If you have any experiences with or suggestions for improving this software development and documentation tool, please let me know about them. I want to extend the WEB system so that it is possible to use other programming languages than Pascal. If anybody out there uses the WEB system with another text formatting system than TEX or if you have made extensions to the system, I would also like to hear about that. I'm very interested in all your experiences, in what you use WEB for, and in your suggestions for improvement.

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Editor's note: The last issue of TUGboat, 7#1, contained two articles on this subject: R. M. Damerell, "Error detecting changes to Tangle", pages 22–24, and Wolfgang Appelt and Karin Horn, "Multiple changefiles in WEB", pages 20–21. At least one attempt to build a WEB for C is known to Helmut Jürgensen, who would also be interested in hearing of work in this area, for possible publication in future issues.

This query was originally disseminated via TeXhax and UNIX-TeX, and the following responses have been posted.

WEB (TEX, LATEX etc.) should all conform to ISO-646 (i.e. ASCII) in the following way: In ISO-646 the codes 64, 91–96 and 123–126 are reserved for "national or application oriented use". Many languages use more letters than a–z, these letters are present on keyboards, and the codes above are used for their representation. Every application (e.g. WEB) should be designed so these codes can be used according to the national standards and the documentation should show how this is done.

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Drama Scripts

Can anyone tell me where I can find macros for formatting a play complete with line numbers and different fonts for characters, text and stage directions?

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Marking Changes in Revised Documents

I would like to know if any of you have solved the following problem for TEX generated documents:

When revising a document there is a convention where changed lines are identified by a vertical rule in the right margin.

I would like to be able to define macros that can be invoked at the start and end points of a contiguous sequence of changed text that cause the vertical rule to be automatically inserted. The changed text can span paragraphs and pages.

While it is reasonably straightforward to identify the start and end points of the vertical rule, I have not been able to come up with a scheme to accurately determine the height (or depth) of the rule.

If you have looked at this problem and found a solution, I would very much appreciate hearing from you.

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Editor's note: This question was posed during the question and answer session at the 1985 TUG meeting, but no solution was presented. One possible approach, requiring action by the output processor, was suggested: At appropriate points in the text invoke \special commands which would place beginning and ending points in the right margin; this same information might be passed via \marks to the output routine, which could insert additional endpoints at the bottom, and beginpoints at the top, of appropriate pages in the case of spanned text. Although this approach would require a "nonstandard" .dvi translator, it avoids the necessity for TEX to know anything about the dimension.

Side-by-Side Source/Output Samples; First-Line Special Handling

I have two questions for TEXperts. (Maybe they've been answered before.)

(1) I wanted to write a little demonstration file , so I wanted a macro "\showoff ⟨texstuff⟩ \endshowoff" that would perform the texstuff and then give a verbatim listing of texstuff. I couldn't make it work. The TEXbook's macro at the top of p. 382 almost works, but it doesn't give line breaks.

Can it be done? One possibility would be to put the texstuff in an auxiliary file and read the file twice. Can it be done without an auxiliary file?

(2) On page ix of Joy of TEX, Spivak has a paragraph where the first line is in caps-small caps, the remainder in Roman. Can this be done automatically?

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Editor's note: The auxiliary file technique was used to set the tables, input and output, in the article by Michael Ferguson on page 106. The verbatim macros are based on those used by Knuth to set The TEXbook (The TEXbook, pp. 420–421) and go by the names \begintt and \endtt. It was found to be expedient to put the \...tt commands into the auxiliary file, and to \let them \relax when the content was to be acted on rather than displayed verbatim; this may not be necessary, but after several ineffectual attempts to input the auxiliary file after entering verbatim mode (yielding at most one blank line and no verbatim text), it seemed most productive to take the easy way out.

This technique might be built into a \showoff macro, with one argument giving the name of an auxiliary file, as follows:

```
\def\showoff#1{\begingroup % process the file
  \let\begintt=\relax \let\endtt=\relax
  \input #1 \endgroup
  \bigskip % separate output from input
  \input #1 % print verbatim listing
}
```

The first and last lines (except for comment lines) of the auxiliary file should be \begintt and \endtt respectively.

In order to preserve line breaks, the verbatim text must be read in while ^M (the carriage-return character) is active (as it is when \obeylines, set on by \begintt, is in effect). This may or may not be a suitable convention while actually processing the text, and analysis of this problem should determine the answer to the question "can it be done without an auxiliary file?"

The question about fancy first-line processing has been asked before, in TUGboat 4, no. 2: 80-81, but if any answer has surfaced, we have not seen it.

Customized Editors for TEX

Now that there are TEX and LATEX, what about editors for handling input for these? I would like to compile a list of customized editors. What I expect — well, hope for — is a list of packages for the EMACS family (Gosling, CCA, GNU, Epsilon, ...), but maybe other people have customized their editors also, or even written special editors (VAX/VMS TPU anybody?). Of particular interest are Unix systems and PC's.

When answering, please quote base editor (if any) and version. Also let me know, please, if and how you're willing to make it available. I will compile a list for publication in TUGboat and redistribution via the TEX bulletin boards. If there is sufficient interest, we might even start a TUGboat column.

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Editor's note: A set of templates for LATEX, to be used with DEC's Language-Sensitive Editor (LSEDIT), which runs on top of TPU on VMS systems, has been developed at Lear Siegler, Inc. These templates, and a "Quick Reference Guide" for their use, are available through TUG; see the TUG order form and publications list for details.

Post-LATEX Index Formatting

Is there a LATEX addition which formats nice indexes? The amount of manual work remaining after LATEX leaves off is discouraging (after using Digital standard Runoff).

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To the members of TUG:

Now that *The Joy of TEX* has appeared, old friends (and other acquaintances of old) may be wondering why I've stopped using my first name, inserted a new initial, and joined the ranks of those who waggle their academic degrees after them like little pennants, so I'd like briefly to explain.

The idea was for the cover and title page to list the author as "Spivak, M.D., Ph.D.", and thus exude that air of multi-degreed authority so popular in the books fondly being parodied. The clue to the spurious degree would be the Library of Congress Cataloging-in-Publication Data, listing the author as "Spivak, Michael David". (When I say "idea" I really mean something rather more concrete, since all this appeared on the camera copy supplied to the *AMS.*) My mother, to whom the book is dedicated, was looking forward to this bit of academic buffoonery, since my initials were chosen so that the M.D. "would always be in front of your name, instead of after it".

Unfortunately, the *Society*'s doyennes of academic stodginess, impervious to the promptings of humor, clumsily altered this to its present obnoxious form. Other petty changes, sneakily effected behind my back, are too numerous to mention here. (I don't know who wrote the copy for the back of the book, so can't identify the source of the hypocritical remarks about my "lively style" that "makes this an entertaining manual.")

It is customary for the author of a book to accept responsibility for its defects, and endeavor to make corrections and improvements in future editions. In this case, I expressly disavow any such responsibilities. If you find things wrong with the book, please don't tell me, tell the *AMS*; they own it, and apparently feel that they are better qualified than I to decide what should appear in it.

Mike Spivak, *né* Michael David Spivak