

# L<sup>A</sup>T<sub>E</sub>X

## L<sup>A</sup>T<sub>E</sub>X V3: Philology & Typography Reports to Read, Reports to Do

Bernard GAULLE

Some time ago Frank Mittelbach proposed several *Research tasks* that might be done by volunteers in order to bring some proposals to the L<sup>A</sup>T<sub>E</sub>X V3 design team. The list of tasks (today 24) is still alive and is nearly about the following topics: Syntax for tables, chemistry, commutative diagrams, index or bibliographical commands; Experimenting with `\emergencystretch`; Conventions for footnotes and endnotes, for `^^` usages and about typography; Multilingual requirements; Most commonly used L<sup>A</sup>T<sub>E</sub>X styles; Math font handling; Converting numbers to textual form; Rewrite of MakeIndex in WEB; etc. (For the latest information about these tasks and the volunteers involved, get the file `vol-task.tex` from the archive on the server located at Niord.SHSU.edu in [FILESERV.LTX3PUB]).

A few tasks still have no coordinator or even no volunteers; don't hesitate to join us.

Some groups have already started to report (like VTs 2, 4, 5, 11, 15 and 16) and continue to work. So don't hesitate to comment on their reports if you think it useful that your opinion be known before any decision is definitely taken.

As coordinator of the VT15 group about multilingual documents, I would like to give an account of the work done and suggest that people send me reports, especially about the parts of the task which are still void because we simply don't know what are the typographic habits in your country.

The first part of our work has been reported; it was most recently updated in March, and is available on the server at Niord.SHSU.edu (`vt15d02.tex`, V1.02). In this report we discuss the standard and non-standard T<sub>E</sub>X mechanisms for language processing, character sets, filters and font encodings. We suggest what could be a language definition in L<sup>A</sup>T<sub>E</sub>X V3. Where does a language apply? How does the user switch from one language to another? What could be a *default* language, a *main* language? ... All these questions are discussed in the document that ends with an important choice: *With L<sup>A</sup>T<sub>E</sub>X V3, every document is multilingual.*

Now we have to collect as many typographic country habits as possible, either national or local but used by numerous people for years. After that

we will establish a list of common usages that require specific mechanisms. And then report again.

If you are aware of specific things, for example, bibliographic habits, please summarize them and let us know. If you are involved in any "Typographer's Inn" and know how print correctly, let's say, a caption title in an Ethiopian text, please send us few words, preferably in English. References as well as samples are welcome too. It will greatly help for the design of L<sup>A</sup>T<sub>E</sub>X V3, the L<sup>A</sup>T<sub>E</sub>X for the next century.

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## Tough table becomes easy with P<sub>T</sub>C<sub>T</sub>E<sub>X</sub>, but it's even easier with L<sup>A</sup>T<sub>E</sub>X

Claudio Beccari

In *TUGboat* 14.4 (1993) p. 420, Kevin Carmody presents an interesting way of using P<sub>T</sub>C<sub>T</sub>E<sub>X</sub> for producing a table with "gnomons" that Carmody says "defeated my best efforts to typeset it in plain T<sub>E</sub>X".

No doubt P<sub>T</sub>C<sub>T</sub>E<sub>X</sub> can be used to draw almost any simple shape with text in it, but I'd rather have liked to see something tougher than the simple table with "gnomons", which, maybe, is not so simple to set in plain T<sub>E</sub>X (although careful reading of *The T<sub>E</sub>Xbook* where ruled tables are dealt with and an intelligent use of `\multispan` should be sufficient to overcome the little intricacies of that table), but is almost trivial with L<sup>A</sup>T<sub>E</sub>X (see Figure).

Due to the repetition of the same construct in almost half the entries, with the help of the L<sup>A</sup>T<sub>E</sub>X command `\newcommand`, `\m` was defined in order to reduce typing, exactly as Leslie Lamport suggests to do; the vertical spacing of the array was adjusted with the redefinition of `\arraystretch`; in order to have the last column as wide as the others, the last entry was set within a zero-width box as is suggested in the L<sup>A</sup>T<sub>E</sub>X book; in other words, just plain L<sup>A</sup>T<sub>E</sub>X:

```
\begin{displaymath}
\newcommand{\m}[1]{\multicolumn{1}{r|}{#1}}
\renewcommand{\arraystretch}{1.6}
\begin{array}{*{10}{r}}
\m{1} & & \m{3} & & \m{5} & & \dots & & \m{19} & \backslash
```

1	3	5	7	9	11	13	15	17	19
1	4	7	10	13	16	19	22	25	28
1	5	9	13	17	21	25	29	33	37
1	6	11	16	21	26	31	36	41	46
1	7	13	19	25	31	37	43	49	55
1	8	15	22	29	36	43	50	57	64
1	9	17	25	33	41	49	57	65	73
1	10	19	28	37	46	55	64	73	82
1	11	21	31	41	51	61	71	81	91
1	12	23	34	45	56	67	78	89	100

Figure 1: Infinite Rectangular Array

```

\cline{1-1}
1      &\m{4} &\m{7} & ... &\m{28} \\
\cline{1-2}
1      &5      &\m{9} & ... &\m{37} \\
...
\cline{1-9}
1      &12      &23      & ... &
          \m{\makebox[0pt]{r}{100}} \\
\cline{1-10}
\end{array}
\end{displaymath}

```

An experienced L<sup>A</sup>T<sub>E</sub>X user could further reduce typing by means of smarter definitions, but this is not the point. I suppose that also T<sub>E</sub>X users could do the same, since after all both `\multicolumn` and `\cline` are made up essentially with `\multispan`.

In spite of this let us thank Kevin Carmody for drawing our attention to the facilities offered by P<sub>T</sub>C<sub>T</sub>E<sub>X</sub> for typesetting something unusual.

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## Letters

### On the review of *T<sub>E</sub>X in Practice*

I was interested to read Frank Pappas's review of T<sub>E</sub>X in Practice by Stephan von Bechtolsheim. I recently purchased a copy of the series and could not help but react to the quality problems myself. However, Pappas was a bit too quick to remove responsibility from the author and lay it all on Springer-Verlag. As a compositor/typesetter for over 30 technical books for various publishers, I would like to share some thoughts with the TUG community.

1. Technical authors, particularly those of us who are T<sub>E</sub>Xnicians, tend to equate knowledge of T<sub>E</sub>X with knowledge of bookmaking. T<sub>E</sub>X in Practice is only one of many T<sub>E</sub>X books that suffer from poor writing, ugly design, lack of attention to composition details, or typesetting errors.

2. Technical authors believe, and publishers are too quick to accept, that a book authored with T<sub>E</sub>X is "just going to typeset itself." There is nothing about electronic manuscripts or T<sub>E</sub>X that eliminates the traditional needs for copyediting, proofreading, manual page make-up, hand-crafted tables, and so forth.

3. Publishers desire to save money by deferring many aspects of book production to the author. This has come to include complete coding of source files, creation or alteration of style files, art preparation, proofreading, page make-up, and indexing. In the old days, publishers did not believe that authors could do these things, possibly because the authors did not know how to handle hot lead. Why, in the age of desktop publishing, do authors suddenly know any more about such crafts? We may be "empowered," but we are not necessarily enlightened.

At the risk of appearing self-serving, I admonish authors and publishers alike: nothing has changed from traditional bookmaking, except that manuscripts are now provided in electronic files. Authors, you don't know all that much about bookmaking. Publishers, do not trust that authors know all that much about bookmaking. Just as an author expects her publisher to listen carefully regarding the content of the book, so also should she expect advice from the publisher on book production, and then heed that advice.

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