

Re: What Software to Type Math In?

Source: <http://sci.tech-archive.net/Archive/sci.math/2006-02/msg02453.html>

- *From:* hrrubin@xxxxxxxxxxxxxxxxxxxxxx (Herman Rubin)
 - *Date:* 14 Feb 2006 15:16:10 -0500
-

In article <45c6bbF5m2p8U2@xxxxxxxxxxxxxxxx>, Marc Olschok <invalid@xxxxxxxx> wrote:

Herman Rubin <hrrubin@xxxxxxxxxxxxxxxxxxxxxx> wrote:

Marc Olschok <invalid@xxxxxxxx> wrote:

Herman Rubin <hrrubin@xxxxxxxxxxxxxxxxxxxxxx> wrote:

[...]

If there is somebody else available who can take care of the typesetting aspect of your document, you may as well say "I just want to type it quickly, the _final_appearance_ of the document is not _my_business_". And of course this makes sense. The same applies, if the final appearance does not matter as such, e.g. in a personal not[e] for yourself. (even in this case, I would feel _very_ uncomfortable with a format that is not plain text and where readability depends on the existence of a particular version of a particular software)

What is "plain text"?

Something that I can process with simple editors and other text-tools across a variety of different platforms, independent of the particular fonts or encodings available. Something I can e-mail or post in newsgroups without having to assume any special capabilities on the part of other readers.

Re: What Software to Type Math In?

If you post TeX, the reader will need a TeX compiler and reader. If you post LaTeX, a little more. If you post what we call "mathtex", which leaves off some of the TeX punctuation, the reader needs to know enough TeX to be able to tell what you are doing. To do fully what you want is not possible.

In short: I want to be able to use ed in a dumb terminal, if needed. I admit that such a notion of "plain text" is a moving target: right now it is still ASCII for me; in the near future, when all those tools will have migrated, it will perhaps be Unicode.

To do things with ASCII, you may be able to get away with the clumsy diagramming of characters; this is not enough.

To me, mixing Latin, Greek, and Cyrillic characters in a text is "plain text". Put in subscripts and superscripts with full or reduced size and crude "half-spacing", and recognizable mathematical symbols, and you have LOTS of power. I want to be able to put the characters on the screen exactly where I want them, and I want it to be read by a fixed-width "editor" which has the relevant fonts. I would settle for a "super-ASCII" with the "gazillions" of characters.

You want an Unicode-capable editor.

I want an editor capable of a sufficient amount of Unicode in fixed-width type. I have not seen such.

The old Apples has a way to put the typewriter decoding for a particular font in a corner of the screen. One did not have to mouse the character in, but knew how to type it.

And one needed an Apple to begin with.

There were other PCs with the capabilities. The computer people tell me that what I want is "trivial"; the people producing the software insist on giving me features which I do not want, and not keeping it simple.

Re: What Software to Type Math In?

If instead, the final appearance matters and can not be delegated to somebody else, one may as well start right away with the real thing.
As far as I could see, this is to be the situation of the OP.

In many cases, fixed width typing is much easier to read than typeset material.

As others already pointed out, there is no antagonism between 'typesetting' and 'fixed width type'. Whether fixed width is easier to read depends on the material and the medium.

I have rarely found fixed width type much harder to read, and in many situations easier. If you look at articles printed by photocopying of typed material, they are not harder to read; they are likely to take more space. I understand that Italic type was invented to save paper.

Also, the current use of subscripts and superscripts in typeset material can be quite difficult to read. I first encountered this when a student asked me what (in TeX) ϵ_F was; in this case, it was essentially a standard use of symbols. It was VERY difficult to see that the small Greek letter and the capital Roman letter were not on the same line. This is also the case for much simpler situations as i_j . In photocopied typed text, with the " $_j$ " a half line lower, no problem.

Another advantage of a typewriter rather than a typesetter is that the author has easy control of line breaks. Also, fixed width fonts are necessary for easy communication.
This goes completely against the typesetting mentality.

Depending on the final format it might also go completely against the idea of readability. Nobody suggested that you typeset

Re: What Software to Type Math In?

your e-mail.

I still use Berkeley mail for sending email or responding. The email with this newsreader is like that as well. Email sent by many of the fancier mailers lacks line breaks, and can be difficult to handle.

Sure. The same point could be made against special fonts in mail. Compare "Ji visited Wrzburg" to "Ji\v{r}\i\ visited W\"urzburg". Observe, that I can type the left version directly into LaTeX.

If that right side is supposed to be LaTeX, I cannot read it. what does the string of characters `\v{r}\i\` mean? I do know the TeX way of indicating umlauts, but I do not like it. I would not mind the European typewriter version of having such things as umlauts and accents as non-spacing superimposed characters.

In fact, easy documentation depends on plain text format. This is one of the reasons for using TeX and LaTeX, even if all the fine points of typesetting are ignored.

I am asking for a plain text format, with a huge character set. This is feasible. TeX and LaTeX use plain text CHARACTERS, but not a plain text FORMAT.

There are two issues here.

One is your need for an editor able to handle all these fonts in a coherent way. The question of typesetting does not even enter here.

This I find not to be a problem, compared to the massive overhead of TeX or LaTeX. I compose at the terminal, and I know what I want it to look like, so I need WYSIWYG to see if it is doing that. Correcting TeX "punctuation" errors is extremely difficult and time-consuming, even with my use of multiple simultaneous windows.

Re: What Software to Type Math In?

The other is the question, whether TeX or LaTeX could handle such texts as input. For TeX the answer is most likely 'no' since it is meant to be frozen. However, LaTeX is actively developed further and it might well be able to handle this in the future, like it already can for several encodings, as pointed out in the example above.

Marc

—
This address is for information only. I do not claim that these views are those of the Statistics Department or of Purdue University.
Herman Rubin, Department of Statistics, Purdue University
hrubin@xxxxxxxxxxxxxxxxx Phone: (765)494-6054 FAX: (765)494-0558
.