

TeXmuse's shortcomings and wants

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The 'first stage of TeXmuse' is over: a program that, by and large, can typeset Bach's *Inventions*.

But not everything was solved. In addition to the incompleteness inherent in a program that can *only* typeset the *Inventions* (so: no slurs, no many-note-head notes, no repetition signs, etc.), there are things that the program just doesn't do right yet. This document is a compilation of those things. It is intended as disclaimer, as warning, and as debate forum. If the solution to a problem hits you, please let me know!

There are things that: *a)* have been figured out but not implemented; *b)* have not been figured out; *c)* misbehave in particular circumstances that I had not foreseen when implemented them, and have not fixed yet.

Figured out, not implemented

Line breaking is still limited. It was figured out along with pickup-bars: both things mean user's control over ends of measures and barlines. There is variables `\@bar@line` and `\@break`, which will set the different kinds of barline and break at the end of blocks. The latter can be 0 for no break, 1 for discretionary break, 2 for forced break, and 3 for forced break and font change. But only 1, and to an extent 2, are implemented.

Sharp key signatures. Flats are nicer because they can be defined algorithmically for all clefs. But the behavior of sharps in key signatures in different clefs is not easily programmed. I am still looking for a way, but I will probably have to wire it in as a list. And then, I'm having trouble with METAFONT's capacity...

Rests show up still a little off to the right, I think. Also, whole-rests are badly drawn.

Time signatures. I haven't designed the numbers in TeXmuse's font. What about using another font? Then this becomes one of the not-figured-out problems.

Closing ties after a line-break. This ties into a problem with ties, one of the 'not fixed' kind.

Not figured out

These are the most terrifying.

Adding stuff to the score, for example measure numbers and possibly time signatures, was supposed to be very easy. METAFONT would tell T_EX where to put them. But: METAFONT cannot write files. I can't see a way of communicating METAFONT \Rightarrow T_EX that would be needed for this kind of thing to be done completely automatic. The user's help will have to be enlisted.

Different-width lines, for example for indented music, I have not thought too much about, but if you ask me right now, I wouldn't know how to do it. Not so bad, though.

The final barline, when there is more than one instrument, is a headache. METAFONT connects the intra-staff barlines with inter-staff barlines, but there is as yet no way for it to know what *kind* of barline it was. That's why the intra-staff final barline is good, but the connection is not. This would happen with every non-normal barline in the piece, if they were implemented. But this is part of a bigger problem:

General characteristics of the piece. The user's input goes essentially staff by staff. So, where are general changes (time- or key-signature changes, repetitions) going to be input? It wouldn't make sense to ask the user to input them in all staves—apart from being repetitive, it asks for fatal mistakes.

Whole-measure rests go centered in the measure. They are not part of a character, but rather an addition to the line. And that has not been yet dealt with.

Not fixed

Ties behave wrong when there are many on the same note in the same line. It's a pretty obvious and bad-looking problem. I'm sure it's very simple, but never got around to fixing it.

Opening-line clefs and other material (key signatures) gets not aligned when the note in one of the staves has an extra element—an accidental, for example.

Beam heights, unlike regular stems, have not been set to reach the middle line of the staff when they are far away from the staff. I didn't remember that when racking my brains with beaming.