MKII MKIV LMTX

where does it end

context 2020 meeting

Welcome

This meeting was kind of special because of the Covid situations. It forces us to adapt and think about how to deal with this kind of situations. But, we had a very nice meeting as usual. The first talk was a summary of where we started and where we are now. The other talks are more specialized.

All presentations use the same simple style. No interaction, no fancy pdf features, also because we had to stream them.

MKII

- In the 80's I bought the TEXbook but it all stayed pretty abstract.
- In the beginning of the 90's we had to get some math on paper we bought (!) a copy of LATEX.
- Right from the start we had to make in look a bit better than out of the box.
- So a shell around if evolved but soon we started from scratch.
- We did so first on top LAMS-TEX, then we switched to inrsTEX.
- Soon we only used a few components of that: we learned from trial and error.
- We joined the ntg, met Taco and friends, and slowly got some presence.
- And it all went on till we had what we later called MkII.
- But, we always had ideas about what more we wanted.
- We went from TEX to ε-TEX to pdfTEX to pdfeTEX.
- We played with the idea of `eetex`, different backends etc. (show old Maps article).

MK . .

- ConTEXt has been keyword driven and class based from the start.
- This came with a performance hit so the reputation was that it was slow: inheritance, flexibility, user control . . . it all comes at a price.
- ConTEXt always had an abstract driver model (dvips, dvipsone, dviwindo, Acrobat, pdfTEX, etc).
- It also had an adaptive the front end so we could support successive engines: TEX, ε-TEX, pdfTEX, Aleph, XETEX.
- There had to be color and graphics support from the beginning.
- The interfaces permitted extension without breaking compatibility. The user interface was multilingual: we started with Dutch and German (users).
- It came with management tools (like TEXexec, TEXutil, TEXfont, texmfstart) etc. for job control, dealing with (user) fonts, image manipulations etc.
- And of course MetaPost, xml, combining font setups, mixing encodings, utf patterns evolved with the system.
- Educational usage was often the reason for new features.

MKIV

- At some point we started playing with Lua (in SciTE).
- And then with Hartmut started adding some basic Lua support to a clone of pdfTEX that soon became LuaTEX.
- Next the Oriental TEX project provided means for Taco to transition to C.
- And for years we slowly built up the system. A LuajitTEX version showed up and Luigi took over integration in TEXLive (like compilation within the infrastructure and updating libraries).
- In parallel we tested features and explored what we needed with ConTEXt: MkIV evolved.
- And . . . soon, all further development happened in MkIV only: MkII became frozen.
- The interface subsystem was upgraded and Wolfgang checked and completed all setups while we did. Obsolete (font, language, input) mechanisms were removed.
- A lot happened: some more TEX, lots of Lua, better MetaPost integration, more advanced xml.
- To some extend a project like that became to late because the glory days of TEX were already past (publishing changed) but just as with pdfTEX a conceptual upgrade like was felt needed.

MKXL (aka LMTX)

- When LuaTEX had to be frozen a follow up took place in LuaMetaTEX. The name reflects the importance of each core component.
- The idea is to have an lean and mean engine, one that will become very stable and does not depend on the issues of the day.
- It's for all those dedicated users who like quality and playing around but also want guarantees that the tools keeps working years from now: it's about independence.
- Of course we tested and explored with ConTEXt and this time LMTX evolves. Here the X reflects that we consider xml to be part of the picture.
- Although there will be (and already is) new functionality the change is less dramatic because this we don't have the change in fonts, encoding and regime subsystems (which made some MkII commands go away).
- Hopefully some of the more tricky (hard to do in good old TEX) mechanisms can be improved now.
- And at some point we will freeze MkIV and development will happen in LMTX only.

This meeting

- My talks in this meeting are mostly about LuaMetaTEX and the ConTEXt version LMTX that targets it: how it is done, which concepts show up, where we want to go.
- Unless you kept a close eye on last years development, you will encounter of plenty of new features that relate to LuaMetaTEX. So, there is more to tell, but most of that is already known from previous meetings.
- And, as usual, a ConTEXt meeting is not only a deadline, but also a starting point. It's you who keep it all going. And, even more than that, it is about us meeting.