The LuaMetaTeX engine is a follow up on LuaTeX. It integrates the TeX text rendering engine, the MetaPost graphic engine and the Lua script interpreter. The development is part of the ConTeXt macro package development. This macro package tightly integrates the three subsystems. The LuaMetaTeX code is part of the ConTeXt distribution.

The LuaMetaTeX engine is lean and mean. There is for instance no backend code present. In ConTeXt this is handled in Lua. Graphic inclusion is also delegated to Lua. The TeX frontend is a slightly extended version of the LuaTeX one. System depedencies are minimized. Where possible we stay close to the original TeX concept because that is a well documented reference. The binary can also be used as stand alone Lua engine.

The MetaPost library also has access to Lua, which means that the language can be enhanced and functionality added on demand. There are several graphic libraries provided in ConTeXt. This graphical language is efficient in runtime and graphical output. In combination with Lua we have a high performance graphical subsystem that can handle a huge amount of data. Additional text (like labels) is typeset at high quality.

The Lua code that comes with ConTeXt contains a lot of helper code which means that one can set up selfcontained workflows without many extra dependencies. Documents can be encoded in TeX, Lua, xml or whatever suits. There is support for databases too.

The ConTeXt code base evolved over time. The basic functionality is quite stable. The move from MkII to MkIV to lmtx has been gradual. The efficiency in terms of code and performance has been improved stepwise. Development continues and beta releases occur on a regular basis. The ConTeXt user community is quite willing to experiment with betas that can be installed alongside stable snapshots.

The installation is relatively small (fonts make up much of it) and updating is easy. We operate in the TeX Directory Structure, which is a proven concept.

LuaMetaTeX — factsheet