



REDESIGN OF A METAPOST-BASED FONT GENERATING SYSTEM

Marek Ryćko, Bogusław Jackowski

A glance at history

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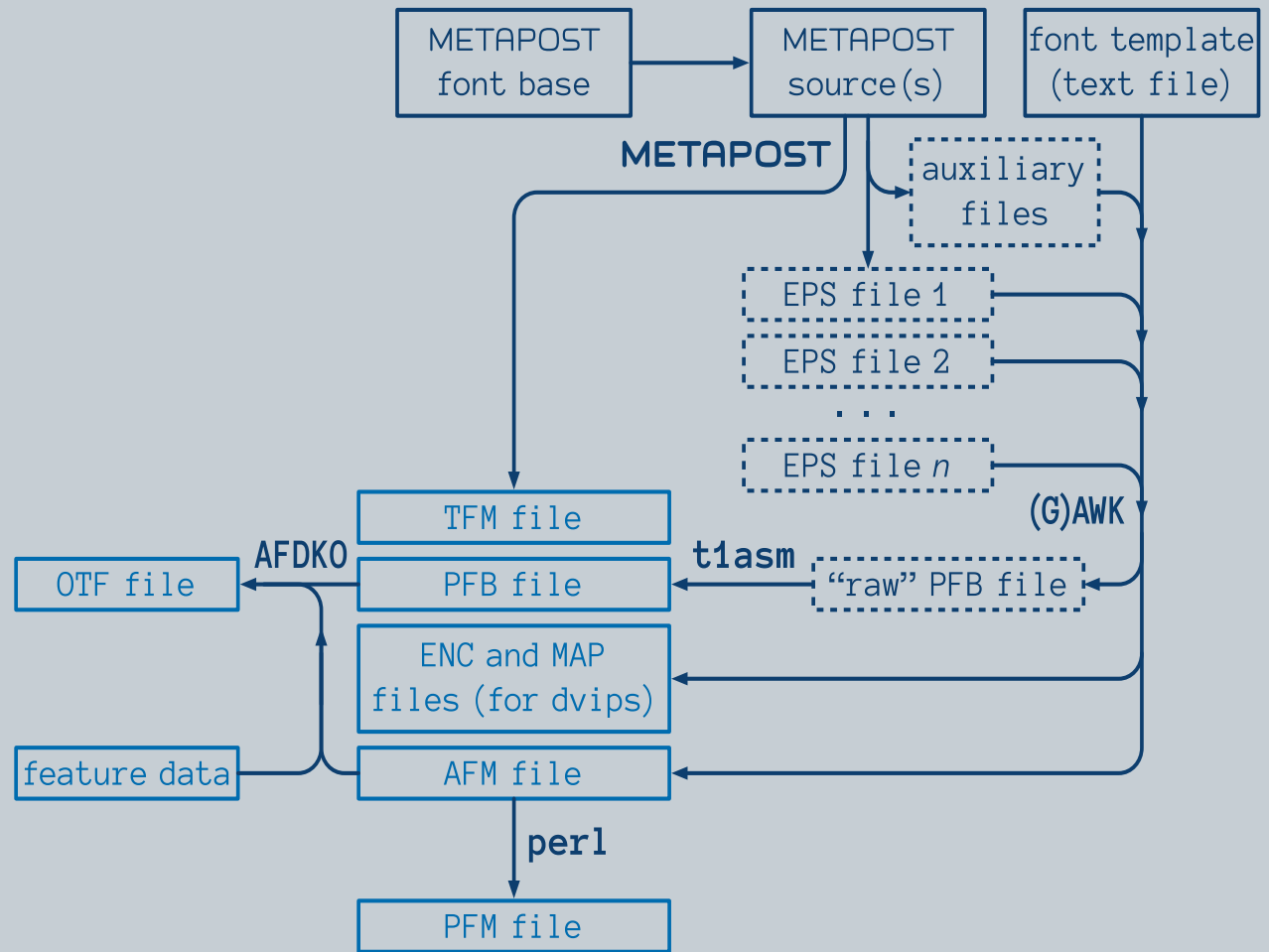
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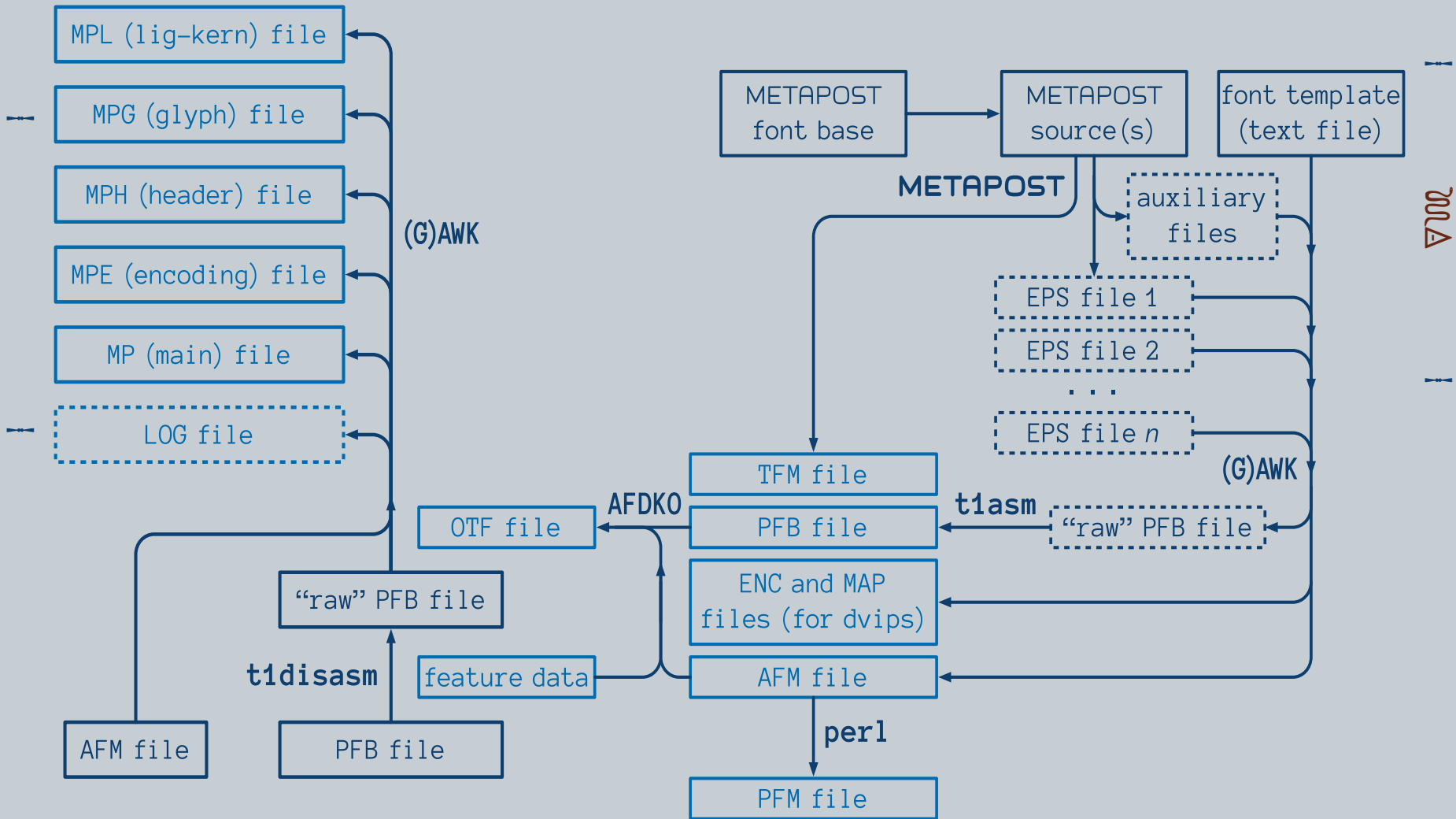
ENGINE 2001–2017 (B. Jackowski, J.M. Nowacki, P. Strzelczyk)



2001

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- We decided to extend the engine in order to make its output universal, not merely \TeX -oriented.
- But the engine structure became non-uniform, scattered, and tiresome in installing and configurating. Hence a scarce number of users: Janusz M. Nowacki, Johannes Küster (splendid Minion Math), Jacek Kmieciak (Pyszczyki/Faces), the GUST e-Foundry (TG Gyre, Latin Modern, and math companion to both, altogether 130 font files, more than 120,000 glyphs), and, perhaps, occasionally, somebody else.

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- Therefore, we finally decided to simplify the engine - we employed only METAPOST and Python (with FontForge library).

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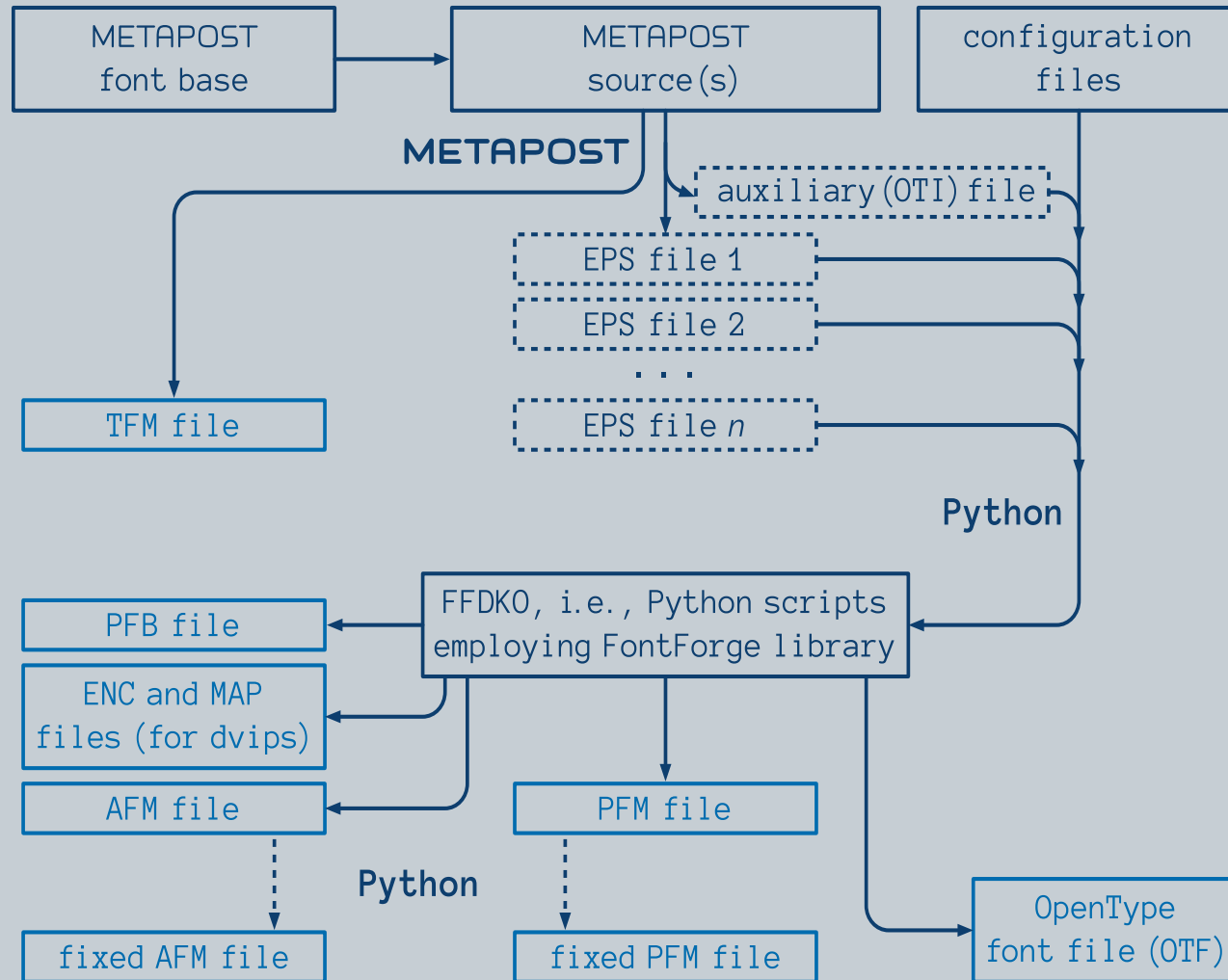
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A glance at history

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ላይኛዎቻችን ! ለገገ

A glance at this moment

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ሪገገ ይዘት

! ገገ
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! ገገ

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የሥራ ማዘጋጀት ! ግብይት ! ማቀጠል, ለ ሂሳብ ለ ማዘጋጀት ! ግብይት

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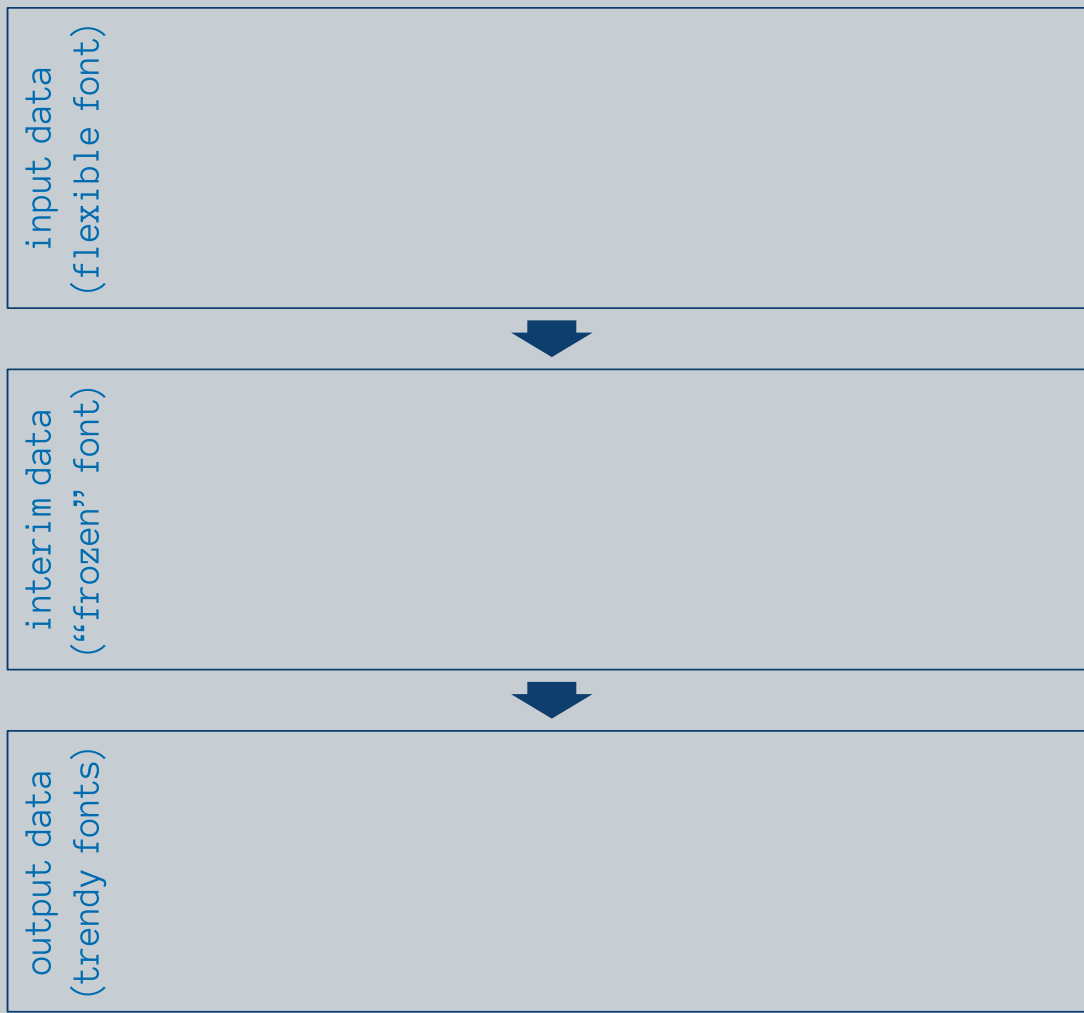
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- The main implementation idea is to use Python as a governing shell running METAPOST (which makes the engine independent of the operating system) and provide a simple yet universal installation (micro)language.
- We hope that such approach will improve transferability of the engine – both to other users and systems.

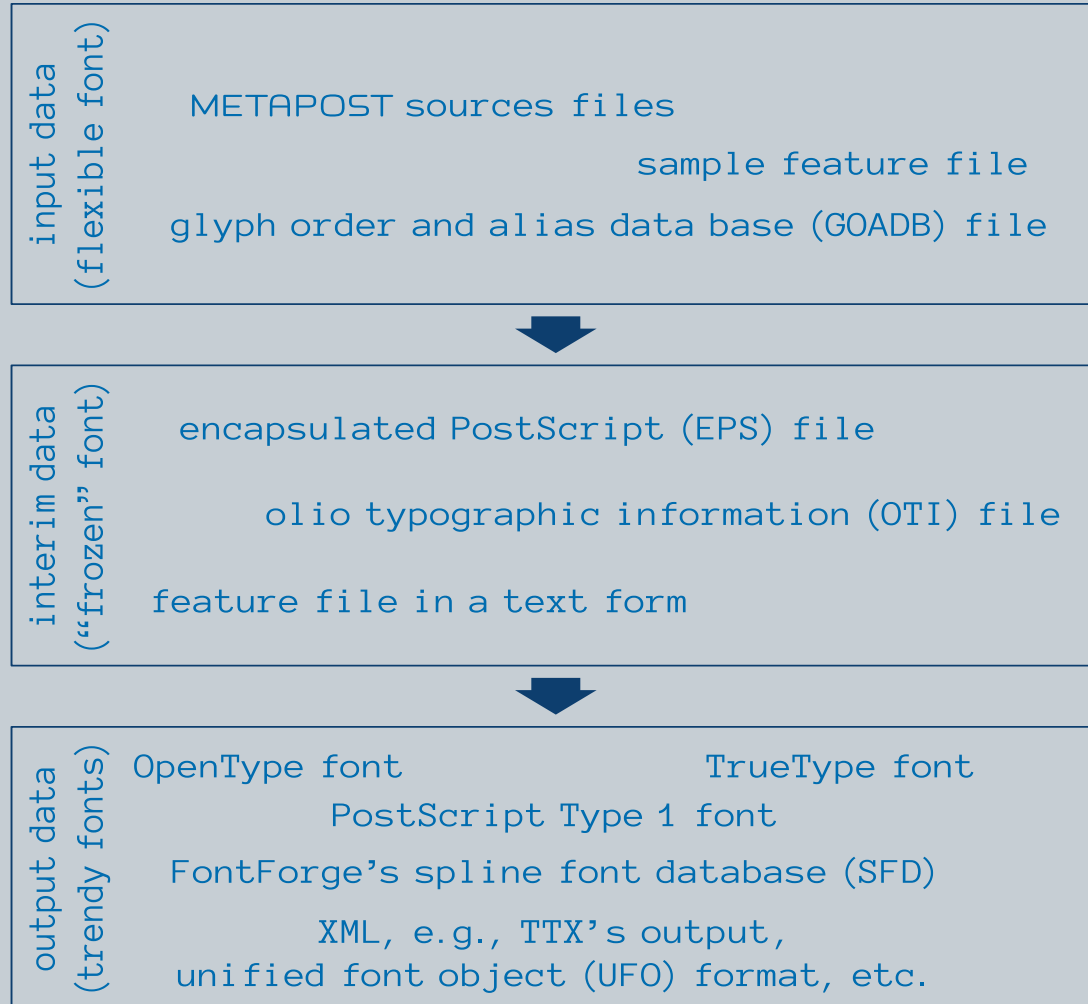
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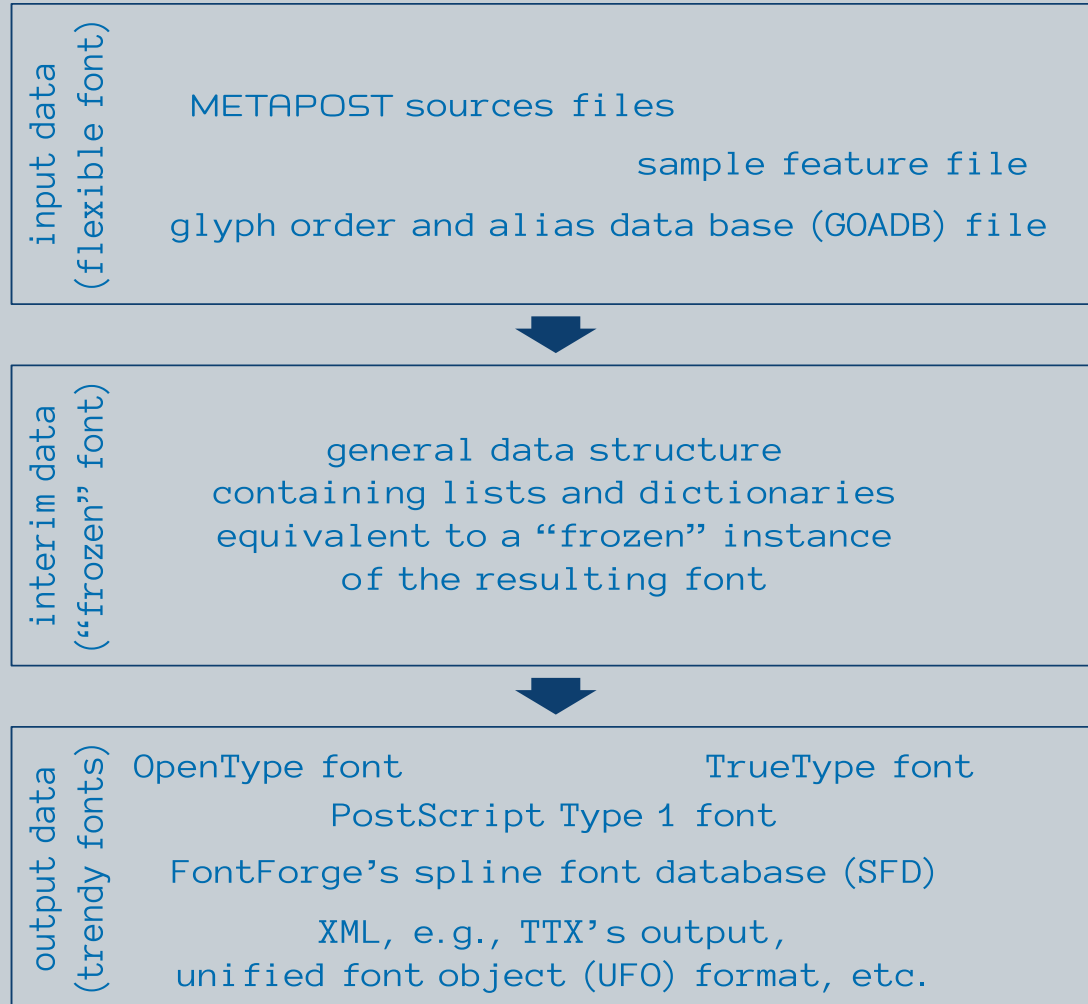
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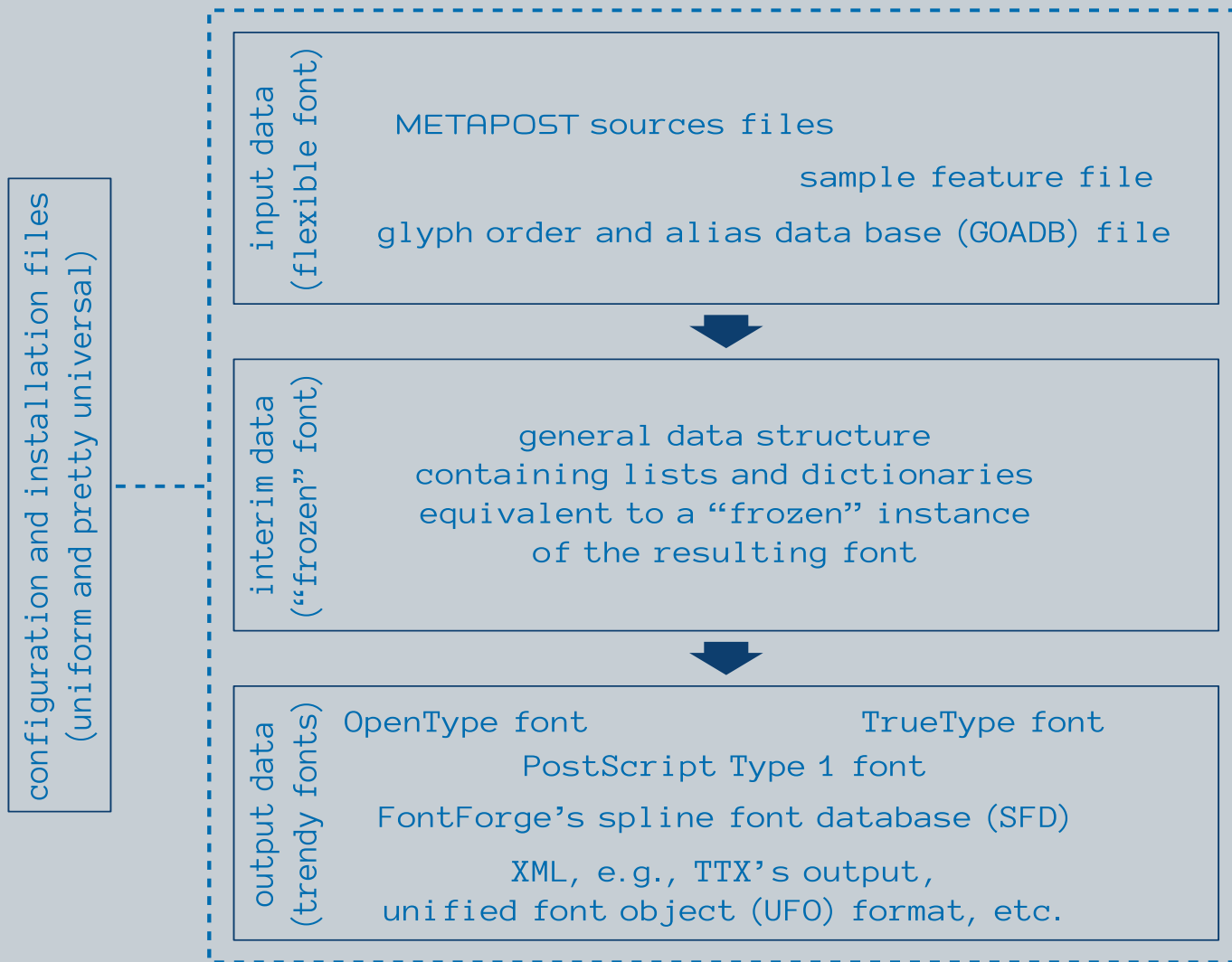
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Future works

- In practice, the font generating engine cannot be as simple as depicted on the diagram which has been shown – two more components (or modules) are needed.
 - Important component is the converter which generates METAPost sources out of the “trendy” fonts. The old engine was equipped by a converter from PostScript Type 1 fonts to METAPost sources.

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(It is worth emphasizing that both converter and formater, although obsolescent, are still used by us).
- We have the plan to finish the project of the T_EX Gyre font enhancement as soon as possible (we recall that so far two fonts were enhanced: TG Adventor and TG Pagella), including T_EX Gyre math fonts.

Dreams

- We do not give up our interest in fonts. But some day we will do... Our basic dream is to pass the font generating system on to people who like programming and font creation. Currently, as the experience shows, it is hardly transferable. We guess that the reason is its intricate structure and therefore the system is perplexing in use.
- We hope that the current redesign will definitely help to cure the mentioned drawbacks, in particular, the system will substantially become more efficient. And there are a lot of splendid fonts that could be processed, e.g., equipped in math...



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- Our far-reaching dream is to work out a “typeless” system for setting documents. We’d like to replace the notion of frozen font (so called “variability” does not help too much) with a hierarchical collection of programmable objects, mutually independent but able to communicate with each other.

ඊළඳු ප්‍රජා ජීවිතය ! ජීවිතය, ආ දැනුම වැඩිදියුණු ! මනුෂ්‍යයන්ගේ හිතවතුන් වැඩිදියුණු ! ආදායම් පහසු ජීවිතය

That's all, so far... – thank you for your attention!

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