

# Creating cuneiform fonts with METATYPE1 and FontForge

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## Abstract

The cuneiform font collection covers the Basic Latin (ASCII) block and glyph subsets for Akkadian, Ugaritic and Old Persian with current total number about 600 cuneiform signs. An extension for other languages is planned (Neo-Babylonian, Hittite, etc.). All cuneiform sign forms visually correspond to uniform “Neo-Assyrian” shapes.

Fonts are produced in two steps. With METATYPE1, the package developed by the authors of the Latin Modern and T<sub>E</sub>XGyre fonts, we can generate hundreds (or thousands) glyphs to assembly a Type 1 font with many glyphs, but with no predefined encoding. The older variant of the cuneiform font collection, made 10 years ago, consists of several separate Type 1 components. A relative small number of mostly simple and repetitive elements is described by METAPOST macros in three variants.

In the second step we construct OpenType using FontForge, the free font editor, created by George Williams. Cubic and quadratic approximation of outline curves are allowed because of a simple design of cuneiform wedges. Therefore both TTF flavored and PostScript (CFF) flavored formats may be generated. We use FontForge scripting facilities, it is also possible to write commands in its internal textual format (SFD), directly or with some pseudo-automatic tools.

Unfortunately, the glyph repertoire does not correspond to Unicode because more than 300 glyphs do not have their Unicode numbers, and, on the other hand, my fonts covers only about 20% of the Unicode Sumerian-Akkadian cuneiform range (cuneiform signs and numeric signs). The paper describes cuneiform design and a process of font development.