
Production notes

Karl Berry

Almost all of the characters in Janusz’s article could be typeset with no particular trouble. But two needed special attention: the character ą (U+F0001 LATIN SMALL LETTER A WITH STROKE THROUGH TERMINAL) and the visible glyph 𐀀 (U+FE00 VARIATION SELECTOR-1).

For the former, X_ƎL^AT_EX has no problems typesetting U+F0001 from the Junicode font:

```
\newfontfamily{\Junicode}
  {JunicodeTwoBeta-Regular.ttf} % for XeTeX
\newcommand{\sgl}[1]
  {\Junicode #1}
\newcommand{\Fzerosone}{\sgl{...}}
```

However, I wanted to use Lua^AT_EX to typeset the article, because its support for microtype’s font expansion feature avoided several overfull lines, and it typeset some other character. It turns out (github.com/latex3/luatex/issues/244) that setting the HarfBuzz rendering mode is what’s needed. (This is not the default in `lualatex`, even though it uses the `luahbtex` engine.)

```
% For LuaTeX:
\newfontfamily{\Junicode}
  [Renderer=HarfBuzz]{JunicodeTwoBeta-Regular.ttf}
```

For the latter character: ordinarily, Unicode prescribes that variation selectors are invisible, but a few fonts also provide a visible glyph; the one here (found by Janusz) is from `NotoSansManichaean-Regular.ttf`, following what is printed in the Unicode font charts.

X_ƎL^AT_EX could handle this with its `\XeTeXglyph` primitive, which can be used to typeset any glyph from a font, whether mapped to an input character or not; in this case, `\XeTeXglyph 58`. (The `ttx` program can be used to discern such internal information in any OpenType or TrueType font.)

For Lua^AT_EX, however, it was necessary both to use the `Base` rendering mode, and a bit of Lua code devised by Henri Menke (thank you Henri, and thank you search engines), which emulates many X_ƎL^AT_EX primitives in Lua^AT_EX (gist.github.com/hmenke/6e8ff7c90a5e5df3c4895f60059a2ef7):

```
\ifx\undefined\XeTeXglyph % LuaTeX case:
  \def\XeTeXglyph{%
    \directlua{...}}%
\fi
\newfontfamily{\NSM}
  [Renderer=Base]{NotoSansManichaean-Regular.ttf}
\newcommand{\VSone}{\NSM\XeTeXglyph 58}}
```

Happy Unicode typesetting.

◇ Karl Berry
github.com/TeXUsersGroup