Subject: Indic Fonts display - UPP
Posted by deep on Fri, 20 May 2022 13:13:19 GMT
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I need Indian scripts display in applications created using UPP.

To display Indian fonts HarfBuzz usage is required.

All Indian scripts are very complex. All these complexcities are handled by HarfBuzz.

We have conjuncts (joined glyph) some times with up to 5 chars and multi tier. Some char sequences are interchanged for display.

Steps required for Display India String.

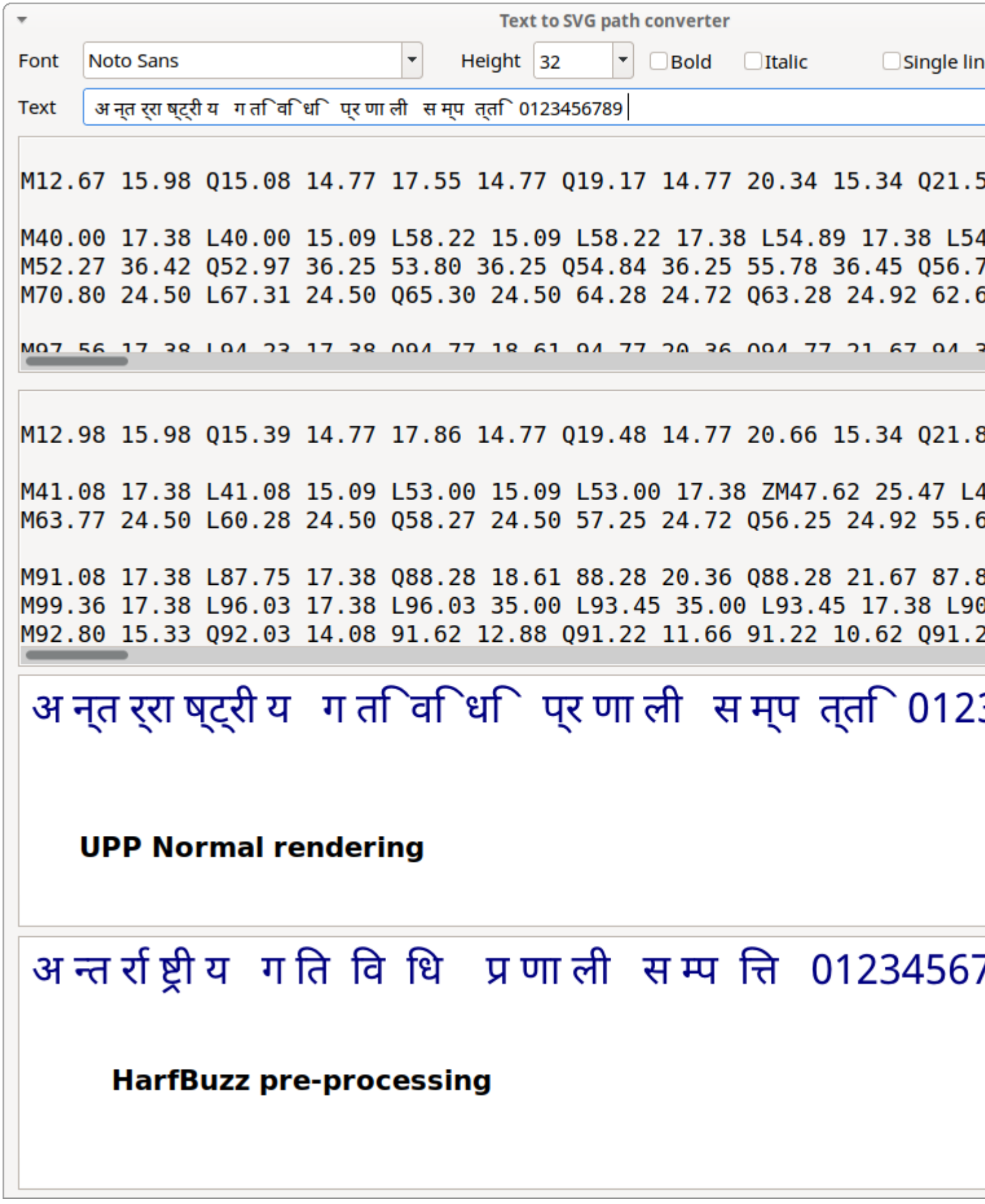
Load and init font with HarfBuzz functions Shape the string with HarfBuzz function. This gives correct glyph sequence Get array of Glyph index for the processed string Display string using glyph index to get glyph from font file.

I have modified the TextToSvgPath example to display the Indic fonts.
I am attaching code in next message along with font files.

Looking for hints how to use HarfBuzz pre-processing generically for UPP display.

File Attachments

1) UPP_Devanagari_Display.png, downloaded 698 times


Text to SVG path converter
Font
Noto Sans
Height
32
Bold
Italic
Single lin
Text
अ न्त र्रा ष्ट्री य ग ति वि धि प्र णा ली स म्प त्ति 0123456789
M12.67 15.98 Q15.08 14.77 17.55 14.77 Q19.17 14.77 20.34 15.34 Q21.5
M40.00 17.38 L40.00 15.09 L58.22 15.09 L58.22 17.38 L54.89 17.38 L54
M52.27 36.42 Q52.97 36.25 53.80 36.25 Q54.84 36.25 55.78 36.45 Q56.7
M70.80 24.50 L67.31 24.50 Q65.30 24.50 64.28 24.72 Q63.28 24.92 62.6
M12.98 15.98 Q15.39 14.77 17.86 14.77 Q19.48 14.77 20.66 15.34 Q21.8
M41.08 17.38 L41.08 15.09 L53.00 15.09 L53.00 17.38 ZM47.62 25.47 L4
M63.77 24.50 L60.28 24.50 Q58.27 24.50 57.25 24.72 Q56.25 24.92 55.6
M91.08 17.38 L87.75 17.38 Q88.28 18.61 88.28 20.36 Q88.28 21.67 87.8
M99.36 17.38 L96.03 17.38 L96.03 35.00 L93.45 35.00 L93.45 17.38 L90
M92.80 15.33 Q92.03 14.08 91.62 12.88 Q91.22 11.66 91.22 10.62 Q91.2
अ न्त र्रा ष्ट्री य ग ति वि धि प्र णा ली स म्प त्ति 0123
UPP Normal rendering
अ न्त र्रा ष्ट्री य ग ति वि धि प्र णा ली स म्प त्ति 01234567
HarfBuzz pre-processing

Subject: Re: Indic Fonts display - UPP
Posted by deep on Fri, 20 May 2022 13:16:46 GMT
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File with code and fonts along with info of modification done to files in uppsrc/Draw folder.

File Attachments
1) TextToSVGPath-HarfBuzz.tar.gz, downloaded 308 times

Subject: Re: Indic Fonts display - UPP
Posted by mirek on Mon, 23 May 2022 14:44:54 GMT
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This is really helpful as composition is one thing that is missing.

This solves the problem in Linux. Could you try or suggest how to integrate harfbuzz in windows?

I think plugin/harfbuzz should possible; alternatively it might be possible to ship static library maybe with our win32 release?

Subject: Re: Indic Fonts display - UPP
Posted by deep on Tue, 24 May 2022 07:08:34 GMT
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Mirek,

I will check it for windows also. Within week.