THE

Nirmala Challenge

OR

'One thing *not* to do when building
a user interface'

Problems in search of a solution

Indic scripts in the pre-Windows 8 user interface displayed in a hodge-podge of different fonts presenting a range of problems:

unharmonious with the Segoe UI typeface used for European languages and central to the Windows experience branding;

varying styles and weights originally intended for document use and not optimised for UI use;

inconsistent scaling factors, resulting in mismatched visual type size when combined with Segoe UI;

inconsistent vertical metrics, causing problems in scaling of UI items or clipping of Indic glyphs.

The original project brief

Design new Regular and Bold weight types for six Indic scripts: Bengali, Devanagari, Gujurati, Malayalam, Odia (Oriya), & Telugu;

target specific UI localisations: Bengali (Indian & Bangladesh), Gujurati, Hindi, Konkani, Malayalam, Odia, & Telugu;

target core Windows UI text size (9pt @ 96ppi, i.e. 12ppem), plus smaller size used in some Office UI elements;

hint for screen legibility, targeting GDI and DWrite ClearType renderers;

harmonise style, scale and weight to Segoe UI fonts;

use vertical metrics of Segoe UI fonts.

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The thing not to do...

Design all the dimensions of UI elements—windows, tabs, dialogue boxes, menus, etc.—around the metrics of a particular font for European languages.

This *will* cause localisation problems.

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The creeping project brief

Add support for four additional scripts: Gurmukhi, Kannada, Sinhalese, & Tamil;

target range of larger sizes for use in Metro UI, Windows phones and other higher resolution devices.

Surprise!

New Metro asymmetric greyscale rendering.

The design approach

or, 'How do you want your compromises?'

Maximise legible size per script, ensuring key details can be cleanly rendered at initial target sizes;

design close to the full pixel y-direction grid at the primary target size (12ppem), and to the full or sub-pixel x-direction grid, but flexibly according to the individual scripts;

deal with descender height restriction issues on a script-by-script basis, trying to find the best compromise for the individual writing system;

apply strong y-direction hinting to force details within device metrics at specific sizes;

fail in the best way possible.

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The weight compromise

Loss of weight harmony across scripts in order to maintain detail legibility at primary target size;

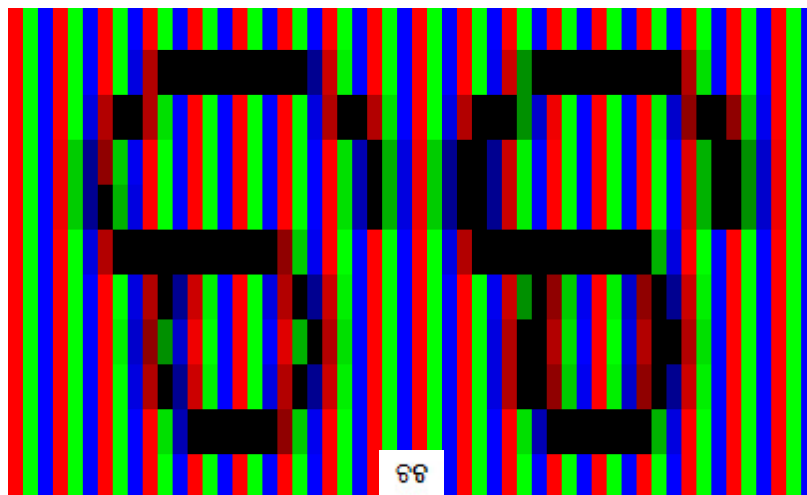non-traditional weight distribution for some scripts in Bold font due to asymmetric rendering models.

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The weight compromise

Loss of weight harmony across scripts in order to maintain better legibility at primary target size;

non-traditional weight distribution for some scripts in Bold form due to asymmetric rendering mode

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Loss of weight harmony across scripts in order to maintain detail legibility at primary target size:

non-traditional weight distribution for some scripts in Bold due to asymmetric rendering models.

File

टू की तुलना करें टुक, टुक (चुक)

Font: 'Nirmala UI' 11pt

टू की तुलना करें टुक, टुक (चुक)

StaticText1

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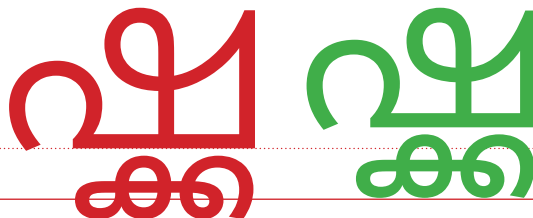
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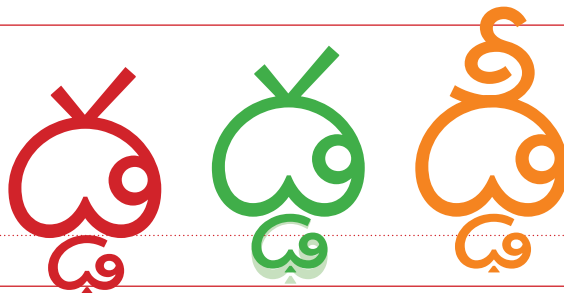टू की तुलना करें टुक, टुक (चुक)

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Challenges and solutions

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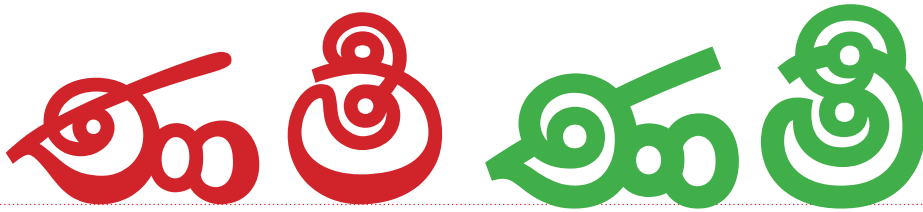Challenges and solutions

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Challenges and solutions

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Thoughts to take away

Localisation means more than translation;

dimensions of UI elements need to be localised or to be made adaptive;

low resolution user interfaces are not scaleable to high resolutions: fonts designed to work as well as possibly in the constraints of coarse ppem grids will not appear well in high resolution devices.

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