ஒரு கல்லுல ரெண்டு மாங்க: Nimbus Sans Tamil

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Abstract: Nimbus Sans is a Neo-Grotesque typefamily, that is one of the best-selling fonts of the type foundry URW++. It is based on Helvetica and is used predominantly in corporate communication. The foundry is currently working on expanding the type family to provide support for a variety of global scripts. Nimbus Sans Tamil attempts to seamlessly bridge historical typographic practices with modern trends within Tamil typeface design.

It is a five weight low contrast type family comprising of upright and italic styles, along with stylistic variants for certain characters to adjust vertical spacing and improve the typographic texture in both text and display environments. This type family also supports numerous stylistic alternates that offer a palette for typesetting possibilities in the Tamil script. Nimbus Sans Tamil is work in progress and will be available to users by September 2017.

Key words: URW++ Nimbus Sans Tamil, Tamil typeface design, typesetting, typographic differentiation.

1. Introduction

Since the 1990's, the growth of internet users has been exponential. In 2016, 46.1% (3.4 billion) people accessed the internet and 48.4% were Asian.[1] One implication of this growth is an emphasised need for a focus on global scripts within the discipline of typeface design, as businesses seek to reach larger audiences via communication in vernacular languages. It is pertinent for contemporary type families to have

broader script coverage than has historically been provided, and for global scripts to adapt to the possibilities and conventions of typographic representation.

Tamil belongs to the Dravidian group of languages, spoken by 77 million people and is the 17th most widely spoken language worldwide. It is an official language in India, Sri

Lanka and Singapore.[2] The Tamil script descends from the Brahmi script and is alpha syllabary in nature. In this kind of writing system, the vowels are written through modification of consonant letters creating ligatures. Traditionally, Tamil was written using a pointed metal stylus to make an incision on dried palm leaves, which was then smeared with lamp black or coal powder and cleaned with a cloth. This method helped the soot to settle into the incised letters and make them visible. This resulted in the Tamil script gaining a low contarast appearance.[3]

The first known printed Tamil book is *Doctrina Christiam en Lingua Malauar Tamul*, 1578, Quilon in the Malabar coast. Early Tamil types were upright with very low stroke contrast following the manuscript letterforms. During the later part of the 19th century, P.R. Hunt of the American Mission Press supervised the cutting of Tamil types that John Murdoch has referred to as an improvement to Tamil typography. It has been observed that these types were influenced by the calligraphy of the script as it existed at that time.[4] These typefaces introduced stroke modulation and inclined letterforms for text typography.

Recent trends indicate a move to upright typefaces. Adobe Tamil, Noto Sans Tamil and Baloo Thambi are designs that are reflective of this transition. The publication industry in Tamil Nadu, India employs slanted modulated typefaces for most of the reading texts. During the last five years, upright styles are used more fervently, though in small quantities in supplement publications and editorial content. However, in locations such as Sri Lanka, Malaysia and Singapore a preference for upright Tamil types is observed.

2. Nimbus Sans Tamil

Nimbus Sans is a popular typefamily of the foundry URW++ located in Hamburg, Germany. URW++ is currently involved in the project of extending the script

support of Nimbus Sans to global scripts. Nimbus Sans Tamil is a Neo-Grotesque typefamily that is Unicode compliant and uses Opentype features for correct orthographic representation. The design and develoment of Nimbus Sans Tamil is a versatile and contemporary typefamily that has numerous unique features which are described below.

2.1 Script matching: design consistencies between the Latin and Tamil

The Tamil and Latin scripts of the upright style are designed to maintain a similar visual feel. Nimbus Sans Latin has either vertical or horizontal cuts and the Tamil is designed to maintain consistency with this approach (figure 1). The width of the Latin is generous, while maintaining contemporary proportions, the Tamil is also designed with sufficient horizontal space.

Figure 1. Harmonization of stroke terminations
across scripts

2.2 Script matching: sizing the Latin and Tamil

Many Tamil typefaces have the Tamil characters drawn the same size as the x-height of the Latin characters. As the Tamil script has more details happening within a given space in comparison to Latin, Nimbus Sans Tamil is designed slightly larger than the Latin x-height to maintain an optical appearance of similar sizing between the two scripts (figure 2).

Figure 2. Relative vertical sizing between Tamil and Latin scripts.

2.3 The Tamil Italics

As Tamil type design has an italic tradition, the design of the Nimbus Sans Tamil Italics is based on a calligraphic model rather than slanting the upright. The counterforms of the loops in characters like Va (வ) are organic, based on writing the script with a pen. The stroke in characters such as Ka (க) are faster in the italic and constructed in the upright. The Tamil italic bears little resemblance to the Latin italic in detail and aims at creating a different texture that will help in differentiation with the upright style (figure 3).

Figure 3. The italic design of Nimbus Sans Tamil takes inspiration from the calligraphic tradition of the script to introduce differentiation with the upright style. This departs from the model of the Latin, where an oblique rather than cursive model is employed.

2.4 Text and display forms

Tamil characters such as Nya (ஞ) and Lla (ழ) occupy significant vertical space. These characters are made smaller for the text forms. In display forms they appear to be flying off the baseline and variants can be accessed using stylistic alternates that sit comfortably on the baseline (figure 4.). The vowel markers, such as the virama and anusvara also occupy different space on the vertical metrics for the text and display forms.

The ligatures used by the Tamil script occupy vertical space more on the bottom. These ligatures are designed smaller to make the Tamil more efficient regarding interlinear spacing. This sizing variation is designed carefully to avoid any jumps while reading, in both text and display conditions.

Figure 4. Text forms of some Tamil characters sit above the baseline to economise on space (left). Stylistic alternates sitting on the baseline are available for display typesetting at larger sizes (right).

2.5 Other stylistic alternates

The Opentype feature 'stylistic alternates' of Nimbus Sans Tamil support localised forms, archaic forms and some stylistic alternates that are described below.

When the character Ra (ர) combines to form ligatures it takes the shape of the Vowel marker Aa (ா), except in cases where such a subsitution would cause ambiguity (figure 5).[5] One of the designers of Nimbus Sans being Tamilian was also aware of the existence of the two forms. Newspapers use either of the forms based on the editors preference. Both these localised forms of Ra can be accessed using the stylistic alternates feature.

Figure 5. Alternate *kaal* form of base consonant Ra is accessible via stylistic alternates for user preference, when such a subsitition does not lead to ambiguity on the text.

Archaic forms that are not a part of current orthography are also included, such as the ligature form of Nna, Nnna and Rra in combination with the vowel marker Aa (figure 6a); and the alternate form of vowel marker Ai that combines contextually with characters Nna, Nnna, La and Lla.

The I and Ii matras have two forms when they combine with the characters Ka, Ca and Ta. The alternate stylistic form is based on handwritten forms found in palm leaf manuscripts and consists of a single stroke movement (figure 6b).[6]
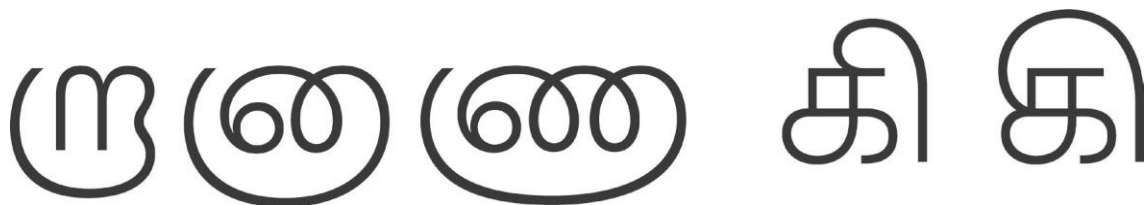

Figure 6a (left). Archaic forms of Rra, Nna, and Nnna ligatures with vowel marker Aa.

Figure 6b (right). Variant forms of Ka with vowel matra I.

2.6 Component based production for reduced file size

Designing and producing typefaces with components help to reduce the file size of the final file. Smaller file sizes contribute to a a quicker page load time and are an essential

part of optimising typefaces for web usage. Nimbus Sans Tamil benefits from two methods of optimisation, designing as components and producing as components.

As the Tamil script has many repititive forms, the shared forms are stored as components. The individual glyphs are assembled using this component along with the additions to it to construct the unique form. This sort of optimisation reduces the number of nodes that results in a smaller final file size.

While forming a ligature, there is a consistency in how the vowel markers combine with consonants. Usually, Tamil typefaces are produced making individual glyphs for each of these ligatures. In Nimbus Sans Tamil, the vowel markers are designed and stored as components and attach to each consonant with an Opentype Glyph positioning value. Using this method significantly reduces the required number of glyphs to be drawn (figure 7).

Figure 7. By planning at the design stage; reusing component shapes via contextual substitutions allows for a dramatic reduction in the character set needed to accurately represent the Tamil orthography without sacrificing aesthetics.

3. Conclusion

The most used text typefaces on screens are low contrast. Corporate communication also has a preference for global script coverage in popular sans serif typefaces. In addition, the Nimbus Sans Tamil typefamily is designed and developed to offer a range of possibilties that include differentiation for text and display weights, italics and regular, making it a noteworthy typefamily for the Tamil script.

The idiom ஒரு கல்லுல ரெண்டு மாங்க (Ore kallula rendu manga - striking two mangoes with one stone) is the Tamil equivalent of killing two birds with one stone. On that note, the multiple functionalities along with the various styles that the Nimbus Sans Tamil

typefamily serves makes it truly versatile and contemporary. The typefamily will be available to users by September 2017.

Acknowledgements

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