Subject: Encoding of Tamil Fractions in Unicode

To

Dr. Lisa Moore

Chair, Unicode Tech Committee,
Unicode Consortium, U.S.A.

Dear Dr. Lisa Moore

International Forum for Information Technology in Tamil (INFITT - http://www.infitt.org) through its Unicode Working Group recommends to encode the Tamil fractions in Unicode.

Proposal to encode Tamil fractions is enclosed for your consideration and action.

We are also pleased inform you that INFITT WG02 working group experts on Unicode are working on the following proposals to further enrich Unicode:

1. Adding New Grantha Characters to the extended Grantha Block in SMP used by few Indic Scholars
2. Adding Archaic Tamil symbols and scripts of Tamil
3. Encoding the correct canonical forms Tamil Characters in the new Extended Tamil block and Grantha Characters of in Extended Grantha block in SMP, thus extending wide Unicode Usage to Tamil Publishing Industry, currently crippled with the limitations.

In view of the above we also think it may be appropriate to reserve block 11B5 to 11CF to enable the extended Tamil block be arranged together. You may also consider block 11D0 to 11D7 for the extended Grantha Block.

Should you need clarifications or assistance feel free reach me in my cell.

Best Regards,

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Proposal to Encode Tamil Fractions in Tamil Extended Block

Working Group on Unicode, INFITT (http://www.infitt.org)

1.0 Introduction:

In 2009, it was requested by ICTA (Sri Lanka) and INFITT to allot the sixteen Tamil Fractions with individual Code Points in a separate block to be named TAMIL EXTENDED block in the SMP. This proposal requests to encode the Character names based on the names used in Tamil language. While the Tamil Fractions can be added now, future proposal will seek to add other Tamil symbols in the Tamil Extended block in the SMP. Samples of some symbols to be added in the future in Tamil Extended block are shown in this document. Hence, the proposal requests a four-column TAMIL EXTENDED block to be large enough to encode other archaic symbols used in Tamil script. If sufficient space for Tamil Extended block can be located in BMP, Unicode Tech Committee is requested to place the Tamil Extended block in BMP itself.
2.0 Tamil Fractions:

This proposal requests the following 16 Tamil fractions with the following Tamil-specific Character Names. Let us assume 11B row in SMP is used the Tamil Extended Block & the Tamil fractions are given in the ascending order in code points.

The Tamil Character Names and Annotations are given next.

2.1 Character Names and Annotations of Tamil Fractions

11CE0 TAMIL FRACTION MUNTIRI
= 1/320

11CE1; TAMIL FRACTION ARAIKKAANI
= 1/160
11CE2; TAMIL FRACTION KAANI  
= 1/80

11CE3; TAMIL FRACTION ARAIMAA  
= 1/40

11CE4; TAMIL FRACTION ARAIVIISAM  
= 1/32

11CE5; TAMIL FRACTION MUKKAANI  
= 3/80

11CE6; TAMIL FRACTION ORUMAA  
= 1/20

11CE7; TAMIL FRACTION MAAKAANI  
= 1/16

11CE8; TAMIL FRACTION IRUMAA  
= 1/10
11CE9; TAMIL FRACTION ARAIKKAAL
= 1/8

11CEA; TAMIL FRACTION MUMMAA
= 3/20

11CEB; TAMIL FRACTION MUMMAKAANI
= 3/16

11CEC; TAMIL FRACTION NAALUMAA
= 1/5

11CED; TAMIL FRACTION KAAL
= 1/4

11CEE; TAMIL FRACTION ARAI
= 1/2

11CEF ; TAMIL FRACTION MUKKAAL
2.2 CHARACTER PROPERTIES FOR TAMIL FRACTIONS:

11CE0  TAMIL FRACTION MUNTIRI;No;0;L;;;;1/320;N;;;;;
11CE1; TAMIL FRACTION ARAIKKAANI;No;0;L;;;;1/160;N;;;;;
11CE2; TAMIL FRACTION KAANI;No;0;L;;;;1/80;N;;;;;
11CE3; TAMIL FRACTION ARAIMAA;No;0;L;;;;1/40;N;;;;;
11CE4; TAMIL FRACTION ARAIVIISAM;No;0;L;;;;1/32;N;;;;;
11CE5; TAMIL FRACTION MUKKAANI;No;0;L;;;;3/80;N;;;;;
11CE6; TAMIL FRACTION ORUMAA;No;0;L;;;;1/20;N;;;;;
11CE7; TAMIL FRACTION MAKAANI;No;0;L;;;;1/16;N;;;;;
11CE8; TAMIL FRACTION IRUMAA;No;0;L;;;;1/10;N;;;;;
11CE9; TAMIL FRACTION ARAIKKAAL;No;0;L;;;;1/8;N;;;;;
11CEA; TAMIL FRACTION MUMMAA;No;0;L;;;;3/20;N;;;;;
11CEB; TAMIL FRACTION MUMMAAKAANI;No;0;L;;;;3/16;N;;;;;
11CEC; TAMIL FRACTION NAALUMAA;No;0;L;;;;1/5;N;;;;;
11CED; TAMIL FRACTION KAAL; No;0;L;;;;1/4;N;;;;;
11CEE; TAMIL FRACTION ARAI;No;0;L;;;;1/2;N;;;;;
11CEF; TAMIL FRACTION MUKKAAL; No;0;L;;;;3/4;N;;;;;
Note that TAMIL FRACTION MAAKAANI is given a canonical decomposition to < ORUMAA, KAANI> . As the character name is unique in Tamil literature, maakaani is requested to be encoded in the SMP Tamil Extended block.

3.0 Documentation of the Glyph shapes for the 16 Tamil Fractions (proposed for Unicode):

Notices Sur Les Caractères Étrangers, pg. 286,
<table>
<thead>
<tr>
<th>Tamil Symbol</th>
<th>Name in Tamil</th>
</tr>
</thead>
<tbody>
<tr>
<td>ஆம்</td>
<td>1/8 (ஆனாற்றாழி)</td>
</tr>
<tr>
<td>உம்</td>
<td>1/4 (ஆனியும்)</td>
</tr>
<tr>
<td>எம்</td>
<td>1/2 (ஆனேம்)</td>
</tr>
<tr>
<td>கும்</td>
<td>3/4 (கும்பாயத்து)</td>
</tr>
<tr>
<td>கூரை</td>
<td>1/32 (கூரைப் பந்தை)</td>
</tr>
<tr>
<td>பூரை</td>
<td>1/16 (பூரைப் பந்தை)</td>
</tr>
<tr>
<td>பொவை</td>
<td>3/16 (பொவைப் பந்தை)</td>
</tr>
<tr>
<td>பூரை</td>
<td>1/40 (பூரைப் பந்தை)</td>
</tr>
<tr>
<td>பொவை</td>
<td>1/20 (பொவைப் பந்தை)</td>
</tr>
<tr>
<td>பொஞ்சை</td>
<td>1/10 (பொஞ்சைப் பந்தை)</td>
</tr>
<tr>
<td>பொவை</td>
<td>3/20 (பொவைப் பந்தை)</td>
</tr>
<tr>
<td>பொரை</td>
<td>1/5 (பொரைப் பந்தை)</td>
</tr>
<tr>
<td>பொரை</td>
<td>1/320 (பொரைப் பந்தை)</td>
</tr>
<tr>
<td>பொவை</td>
<td>1/160 (பொவைப் பந்தை)</td>
</tr>
<tr>
<td>பொவை</td>
<td>1/80 (பொவைப் பந்தை)</td>
</tr>
<tr>
<td>பொவை</td>
<td>3/80 (பொவைப் பந்தை)</td>
</tr>
</tbody>
</table>
Glyph Shapes of Tamil Fractions (TACE 16, Tamil Nadu)

from: http://kanimozhi.org.in/kanimozhi/?p=18
<table>
<thead>
<tr>
<th>இலத்தி</th>
<th>ரூ.</th>
<th>எண் கணிப்பு</th>
</tr>
</thead>
<tbody>
<tr>
<td>கூறு கூறு</td>
<td>3.40</td>
<td>12.80</td>
</tr>
<tr>
<td>கூறு கூறு</td>
<td>1.280</td>
<td><em>i</em> கூறு</td>
</tr>
<tr>
<td>கூறு கூறு</td>
<td>1.600</td>
<td>கூறு கூறு</td>
</tr>
<tr>
<td>கூறு கூறு</td>
<td>5.120</td>
<td>கூறு கூறு</td>
</tr>
</tbody>
</table>
from: Iniya Tamiḻ Ilakkaṇam, Yoki Śrī Cuttānanta Pāratiyār, Kavita Publications,
T Nagar, Chennai, Madras.
4.0 Some Tamil Symbols – Research in Progress

Here are some sources with *archaic* symbols that are being analyzed for future proposal(s) for inclusion in SMP Tamil Extended block. They will be taken up with correct glyph shapes and character names at a later date. These data is provided to alert the necessity of Tamil Extended block in SMP sufficiently large and spacious to hold them when they get encoded into Unicode in the future.
வா.மு.சி.காவாரசன்  என்று குறிப்பிட்டும் குறிச்சிகள்

Va.Mu.Se. Kaviarasan
U.S.A.
Chairman (Officiating)

S.Maniam
Singapore
Executive Director

Dr. Naga.Ganesan

Chairman, Working Group

WG02- Unicode WorkingGroup

International Forum for Information Technology in Tamil -Registered as a Non-Profit Organisation in U.S.A

www.infitt.org
INTRODUCTION

viii. The following abbreviations and signs are in use:

- மீட், மீட் - மீட், மீட் - மீட்
- மீட், மீட் - மீட், மீட் - மீட்
- மீட், மீட் - மீட், மீட் - மீட்

Notices Sur Les Caractères Étrangers, pg. 286,
Miron Winslow’s Tamil English Dictionary, Madras, 1862.