TAM TO UNICODE CONVERSION

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Introduction:

TAM is the official monolingual Tamil (8 bit) encoding scheme of the Government of Tamilnadu, which has the largest Tamil speaking population in the world. A vast amount of Tamil textual information in digital libraries, online newspapers, magazines etc., is available today in this encoding scheme. As Unicode is fast becoming the encoding by choice, there is a need for conversion from TAM encoded text to Unicode.

TAM, a monolingual Tamil encoding scheme, is a superset of the TAB bilingual Tamil encoding scheme.

TAM is a glyph encoding scheme, while Unicode is a character encoding scheme. Hence there exists a one-to-one, one-to-many, many-to-one or many-to-many relationship between the Tamil alphabets in TAM and those in Unicode.

A tamil alphabet in a TAM encoded text could be made up with a single, two or three bytes. The first part of this note describes, in a simple C like pseudo code, how to determine the string sequence in TAM that goes to make a Tamil alphabet. The second part provides a cross mapping table to convert this sequence into the corresponding Unicode string sequence.

Determine a Tamil alphabet:

vowel = { 0xDC, 0xDD, 0xDE, 0xDF, 0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6 }
consonant = { 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF, 0xF0, 0xF1, 0xF2, 0xF3, 0xF4, 0xF5,
              0xF6, 0xF7, 0xF8, 0xF9, 0xFA, 0xFB, 0xFC, 0xFD, 0xFE }
grantha = { 0xFA, 0xFB, 0xFC, 0xFD, 0xFE }


```
while (not end of file)
{
      x = read(1)
      case (x = 0xE5)                    // 'O' vowel
          {
                y = read(1)
                if (y = 0xF7)            // 'O' changed to 'AU' vowel
                {
                      string = xy
                }
                else
                {
                      string = x
                      move(-1)
                }
                convert (string to unicode)
                loop
          }
      case (x = 0xAC)                    // 'AI' vowel modifier
          {
                y = read(1)
                if (y is a consonant)     // 'AI' vowel modified consonant
                {
                      string = xy
                }
                else
                {
                      string = x
                      move(-1)
                }
                convert (string to unicode)
```

```
                    loop
            }
    case (x is a consonant)
            {
                    y = read(1)
                    if (x is a grantha)
                    {
                            if (y = 0xA7 or y = 0xA8)   // 'U' or 'UU' modified grantha
                            {
                                    string = xy
                                    convert (string to unicode)
                                    loop
                            }
                    }
                    if (y = 0xA3)     // 'AA' modified consonant
                    {
                            string = xy
                    }
                    else
                    {
                            string = x
                            move(-1)
                    }
                    convert (string to unicode)
                    loop
            }
    case (x = 0xAA)                         // 'E' vowel modifier
            {
                    y = read(1)
                    if (y is a consonant)
                    {
                            z = read(1)
                            if (z = 0xA3 or z = 0xF7)   // 'O' or 'AU' vowel modified consonant
                            {
                                    alphabet = xyz
                            }
                            else                      // 'E' vowel modified consonant
                            {
                                    string = xy
                                    move(-1)
                            }
                    }
                    else
                    {
                            string = x
                            move(-1)
                    }
                    convert (string to unicode string)
                    loop
            }
    case (x = 0xAB)                 // 'EE' vowel modifier
            {
                    y = read(1)
                    if (y is a consonant)
                    {
                            z = read(1)
                            if (z = 0xA3)                 // 'OO' vowel modified consonant
                            {
                                    alphabet = xyz
                            }
                            else                          // 'EE' vowel modified consonant
                            {
                                    string = xy
                                    move(-1)
                            }
                    }
```

```
                }
                else
                {
                        string = x
                        move(-1)
                }
                convert (string to unicode string)
                loop
        }
    case (otherwise)
        string = x
        convert (string to unicode string)
        loop
}
```

Note :
read(1) means read one byte
move(-1) means move the file pointer back one byte

```

```
The entries in the second section are in the Tamil alphabetical sequence
and contain the many-to-one and many-to-many relationships.
The code points that make up the string are separated by a space.
#
A range of code points are indicated by a hyphen between the start and the end
code points
#
If a TAM code point is not defined or it has no equivalent UNICODE code point
the UNICODE code point is left blank.
#
Control character mappings are not shown in this table, following
the conventions of the standard UTC mapping tables. However, the
TAM character set uses the standard control characters at
0x00-0x1F and 0x7F.
#################
#
SECTION ONE - (one-to-one and one-to-many relationship)
--
#
0x20   0x0020   # SPACE
0x21   0x0021   # EXCLAMATION MARK
0x22   0x0022   # QUOTATION MARK
0x23   0x0023   # NUMBER SIGN
0x24   0x0024   # DOLLAR SIGN
0x25   0x0025   # PERCENT SIGN
0x26   0x0026   # AMPERSAND
0x27   0x0027   # APOSTROPHE
0x28   0x0028   # LEFT PARENTHESIS
0x29   0x0029   # RIGHT PARENTHESIS
0x2A   0x002A   # ASTERISK
0x2B   0x002B   # PLUS SIGN
0x2C   0x002C   # COMMA
0x2D   0x002D   # HYPHEN-MINUS
0x2E   0x002E   # FULL STOP
0x2F   0x002F   # SOLIDUS
0x30   0x0030   # DIGIT ZERO
0x31   0x0031   # DIGIT ONE
0x32   0x0032   # DIGIT TWO
0x33   0x0033   # DIGIT THREE
0x34   0x0034   # DIGIT FOUR
0x35   0x0035   # DIGIT FIVE
0x36   0x0036   # DIGIT SIX
0x37   0x0037   # DIGIT SEVEN
0x38   0x0038   # DIGIT EIGHT
0x39   0x0039   # DIGIT NINE
0x3A   0x003A   # COLON
0x3B   0x003B   # SEMICOLON
0x3C   0x003C   # LESS-THAN SIGN
0x3D   0x003D   # EQUALS SIGN
0x3E   0x003E   # GREATER-THAN SIGN
0x3F   0x003F   # QUESTION MARK
0x40   0x0040   # COMMERCIAL AT
0x41   0x0B95 0x0BBF   # TAMIL LETTER KI
0x42   0x0B99 0x0BBF   # TAMIL LETTER NGI
0x43   0x0B9A 0x0BBF   # TAMIL LETTER CI
0x44   0x0B9E 0x0BBF   # TAMIL LETTER NYI
0x45   0x0BA3 0x0BBF   # TAMIL LETTER NNI
0x46   0x0BA4 0x0BBF   # TAMIL LETTER TI
0x47   0x0BA8 0x0BBF   # TAMIL LETTER NI
0x48   0x0BAA 0x0BBF   # TAMIL LETTER PI
0x49   0x0BAE 0x0BBF   # TAMIL LETTER MI
0x4A   0x0BAF 0x0BBF   # TAMIL LETTER YI
0x4B   0x0BB0 0x0BBF   # TAMIL LETTER RI
0x4C   0x0BB2 0x0BBF   # TAMIL LETTER LI
0x4D   0x0BB5 0x0BBF   # TAMIL LETTER VI
```

```
0x4E              0x0BB4 0x0BBF                     # TAMIL LETTER LLLI
0x4F              0x0BB3 0x0BBF                     # TAMIL LETTER LLI
0x50              0x0BB1 0x0BBF                     # TAMIL LETTER RRI
0x51              0x0BA9 0x0BBF                     # TAMIL LETTER NNNI
0x52              0x0BB8 0x0BBF                     # TAMIL LETTER SI
0x53              0x0BB7 0x0BBF                     # TAMIL LETTER SSI
0x54              0x0B9C 0x0BBF                     # TAMIL LETTER JI
0x55              0x0BB9 0x0BBF                     # TAMIL LETTER HI
0x56              0x0B95 0x0BCD 0x0BB7 0x0BBF       # TAMIL LETTER KSHI
0x57              0x0B95 0x0BC0                     # TAMIL LETTER KII
0x58              0x0B99 0x0BC0                     # TAMIL LETTER NGII
0x59              0x0B9A 0x0BC0                     # TAMIL LETTER CII
0x5A              0x0B9E 0x0BC0                     # TAMIL LETTER NYII
0x5B              0x005B                            # LEFT SQUARE BRACKET
0x5C              0x005C                            # REVERSE SOLIDUS
0x5D              0x005D                            # RIGHT SQUARE BRACKET
0x5E              0x005E                            # CIRCUMFLEX ACCENT
0x5F              0x005F                            # LOW LINE
0x60              0x0060                            # GRAVE ACCENT
0x61              0x0BA3 0x0BC0                     # TAMIL LETTER NNII
0x62              0x0BA4 0x0BC0                     # TAMIL LETTER TII
0x63              0x0BA8 0x0BC0                     # TAMIL LETTER NII
0x64              0x0BAA 0x0BC0                     # TAMIL LETTER PII
0x65              0x0BAE 0x0BC0                     # TAMIL LETTER MII
0x66              0x0BAF 0x0BC0                     # TAMIL LETTER YII
0x67              0x0BB0 0x0BC0                     # TAMIL LETTER RII
0x68              0x0BB2 0x0BC0                     # TAMIL LETTER LII
0x69              0x0BB5 0x0BC0                     # TAMIL LETTER VII
0x6A              0x0BB4 0x0BC0                     # TAMIL LETTER LLLII
0x6B              0x0BB3 0x0BC0                     # TAMIL LETTER LLII
0x6C              0x0BB1 0x0BC0                     # TAMIL LETTER RRII
0x6D              0x0BA9 0x0BC0                     # TAMIL LETTER NNNII
0x6E              0x0BB8 0x0BC0                     # TAMIL LETTER SII
0x6F              0x0BB7 0x0BC0                     # TAMIL LETTER SSII
0x70              0x0B9C 0x0BC0                     # TAMIL LETTER JII
0x71              0x0BB9 0x0BC0                     # TAMIL LETTER HII
0x72              0x0B95 0x0BCD 0x0BB7 0x0BC0       # TAMIL LETTER KSHII
0x73              0x0BF3                            # TAMIL DAY SIGN (above 4.0)
0x74              0x0BF4                            # TAMIL MONTH SIGN (above 4.0)
0x75              0x0BF5                            # TAMIL YEAR SIGN (above 4.0)
0x76              0x0BB8 0x0BCD                     # TAMIL LETTER S
0x77              0x0BB7 0x0BCD                     # TAMIL LETTER SS
0x78              0x0B9C 0x0BCD                     # TAMIL LETTER J
0x79              0x0BB9 0x0BCD                     # TAMIL LETTER H
0x7A              0x0B95 0x0BCD 0x0BB7 0x0BCD       # TAMIL LETTER KSH
0x7B              0x007B                            # LEFT CURLY BRACKET
0x7C              0x007C                            # VERTICAL LINE
0x7D              0x007D                            # RIGHT CURLY BRACKET
0x7E              0x007E                            # TILDE
#
0x80                                               # NOT DEFINED
0X81                                               # NOT DEFINED
0x82              0x0B95 0x0BCD                     # TAMIL LETTER K
0x83              0x0B99 0x0BCD                     # TAMIL LETTER NG
0x84              0x0B9A 0x0BCD                     # TAMIL LETTER C
0x85              0x0B9E 0x0BCD                     # TAMIL LETTER NY
0x86              0x0B9F 0x0BCD                     # TAMIL LETTER TT
0x87              0x0BA3 0x0BCD                     # TAMIL LETTER NN
0x88              0x0BA4 0x0BCD                     # TAMIL LETTER T
0x89              0x0BA8 0x0BCD                     # TAMIL LETTER N
0x8A              0x0BAA 0x0BCD                     # TAMIL LETTER P
0x8B              0x0BAE 0x0BCD                     # TAMIL LETTER M
0x8C              0x0BAF 0x0BCD                     # TAMIL LETTER Y
0x8D                                               # NOT DEFINED
0X8E                                               # NOT DEFINED
```

```
0x8F                                                 # NOT DEFINED
0X90                                                 # NOT DEFINED
0x91        0x2018                                   # LEFT SINGLE QUOTATION MARK
0x92        0x2019                                   # RIGHT SINGLE QUOTATION MARK
0x93        0x201C                                   # LEFT DOUBLE QUOTATION MARK
0x94        0x201D                                   # RIGHT DOUBLE QUOTATION MARK
0x95        0x2022                                   # BULLET
0x96        0x0BF9                                   # TAMIL RUPEE SIGN (above 4.0)
0x97        0x0BF8                                   # TAMIL AS ABOVE SIGN (above 4.0)
0x98        0x0BB0 0x0BCD                            # TAMIL LETTER R
0x99        0x0BB2 0x0BCD                            # TAMIL LETTER L
0x9A        0x0BB5 0x0BCD                            # TAMIL LETTER V
0x9B        0x0BB4 0x0BCD                            # TAMIL LETTER LLL
0x9C        0x0BB3 0x0BCD                            # TAMIL LETTER LL
0x9D                                                 # NOT DEFINED
0X9E                                                 # NOT DEFINED
0x9F        0x0BB1 0x0BCD                            # TAMIL LETTER RR
0xA0        0x00A0                                   # NO-BREAK SPACE
0xA1        0x0BA9 0x0BCD                            # TAMIL LETTER NNN
0xA2        0x0BCD                                   # TAMIL SIGN VIRAMA
0xA3        0x0BBE                                   # TAMIL VOWEL SIGN AA
0xA4        0x0BBF                                   # TAMIL VOWEL SIGN I
0xA5        0x2022                                   # BULLET
0xA6        0x0BC0                                   # TAMIL VOWEL SIGN II
0xA7        0x0BC1                                   # TAMIL VOWEL SIGN U
0xA8        0x0BC2                                   # TAMIL VOWEL SIGN UU
0xA9        0x00A9                                   # COPYRIGHT SIGN
0xAA        0x0BC6                                   # TAMIL VOWEL SIGN E
0xAB        0x0BC7                                   # TAMIL VOWEL SIGN EE
0xAC        0x0BC8                                   # TAMIL VOWEL SIGN AI
0xAD        0x0BFA                                   # TAMIL NUMBER SIGN (above 4.0)
0xAE        0x0B9F 0x0BBF                            # TAMIL LETTER TTI
0xAF        0x0B9F 0x0BC0                            # TAMIL LETTER TTII
0xB0        0x0B95 0x0BC1                            # TAMIL LETTER KU
0xB1        0x0B99 0x0BC1                            # TAMIL LETTER NGU
0xB2        0x0B9A 0x0BC1                            # TAMIL LETTER CU
0xB3        0x0B9E 0x0BC1                            # TAMIL LETTER NYU
0xB4        0x0B9F 0x0BC1                            # TAMIL LETTER TTU
0xB5        0x0BA3 0x0BC1                            # TAMIL LETTER NNU
0xB6        0x0BA4 0x0BC1                            # TAMIL LETTER TU
0xB7        0x2022                                   # BULLET
0xB8        0x0BA8 0x0BC1                            # TAMIL LETTER NU
0xB9        0x0BAA 0x0BC1                            # TAMIL LETTER PU
0xBA        0x0BAE 0x0BC1                            # TAMIL LETTER MU
0xBB        0x0BAF 0x0BC1                            # TAMIL LETTER YU
0xBC        0x0BB0 0x0BC1                            # TAMIL LETTER RU
0xBD        0x0BB2 0x0BC1                            # TAMIL LETTER LU
0xBE        0x0BB5 0x0BC1                            # TAMIL LETTER VU
0xBF        0x0BB4 0x0BC1                            # TAMIL LETTER LLLU
0xC0        0x0BB3 0x0BC1                            # TAMIL LETTER LLU
0xC1        0x0BB1 0x0BC1                            # TAMIL LETTER RRU
0xC2        0x0BA9 0x0BC1                            # TAMIL LETTER NNNU
0xC3        0x0B95 0x0BC2                            # TAMIL LETTER KUU
0xC4        0x0B99 0x0BC2                            # TAMIL LETTER NGUU
0xC5        0x0B9A 0x0BC2                            # TAMIL LETTER CUU
0xC6        0x0B9E 0x0BC2                            # TAMIL LETTER NYUU
0xC7        0x0B9F 0x0BC2                            # TAMIL LETTER TTUU
0xC8        0x0BA3 0x0BC2                            # TAMIL LETTER NNUU
0xC9        0x0BA4 0x0BC2                            # TAMIL LETTER TUU
0xCA        0x00A0                                   # NO-BREAK SPACE
0xCB        0x0BA8 0x0BC2                            # TAMIL LETTER NUU
0xCC        0x0BAA 0x0BC2                            # TAMIL LETTER PUU
0xCD        0x0BAE 0x0BC2                            # TAMIL LETTER MUU
0xCE        0x0BAF 0x0BC2                            # TAMIL LETTER YUU
0xCF        0x0BB0 0x0BC2                            # TAMIL LETTER RUU
```

```
0xD0                0x0BF6                              # TAMIL DEBIT SIGN (above 4.0)
0xD1                0x0BF7                              # TAMIL CREDIT SIGN (above 4.0)
0xD2                0x201C                              # LEFT DOUBLE QUOTATION MARK
0xD3                0x201D                              # RIGHT DOUBLE QUOTATION MARK
0xD4                0x2018                              # LEFT SINGLE QUOTATION MARK
0xD5                0x2019                              # RIGHT SINGLE QUOTATION MARK
0xD6                0x0BB2 0x0BC2                       # TAMIL LETTER LUU
0xD7                0x0BB5 0x0BC2                       # TAMIL LETTER VUU
0xD8                0x0BB4 0x0BC2                       # TAMIL LETTER LLLUU
0xD9                0x0BB3 0x0BC2                       # TAMIL LETTER LLUU
0xDA                0x0BB1 0x0BC2                       # TAMIL LETTER RRUU
0xDB                0x0BA9 0x0BC2                       # TAMIL LETTER NNNUU
0xDC                0x0B85                              # TAMIL LETTER A
0xDD                0x0B86                              # TAMIL LETTER AA
0xDE                0x0B87                              # TAMIL LETTER I
0xDF                0x0B88                              # TAMIL LETTER  II
0xE0                0x0B89                              # TAMIL LETTER U
0xE1                0x0B8A                              # TAMIL LETTER UU
0xE2                0x0B8E                              # TAMIL LETTER E
0xE3                0x0B8F                              # TAMIL LETTER EE
0xE4                0x0B90                              # TAMIL LETTER AI
0xE5                0x0B92                              # TAMIL LETTER O
0xE6                0x0B93                              # TAMIL LETTER OO
0xE7                0x0B83                              # TAMIL SIGN VISARGA
0xE8                0x0B95                              # TAMIL LETTER KA
0xE9                0x0B99                              # TAMIL LETTER NGA
0xEA                0x0B9A                              # TAMIL LETTER CA
0xEB                0x0B9E                              # TAMIL LETTER NYA
0xEC                0x0B9F                              # TAMIL LETTER TTA
0xED                0x0BA3                              # TAMIL LETTER NNA
0xEE                0x0BA4                              # TAMIL LETTER TA
0xEF                0x0BA8                              # TAMIL LETTER NA
0xF0                0x0BAA                              # TAMIL LETTER PA
0xF1                0x0BAE                              # TAMIL LETTER MA
0xF2                0x0BAF                              # TAMIL LETTER YA
0xF3                0x0BB0                              # TAMIL LETTER RA
0xF4                0x0BB2                              # TAMIL LETTER LA
0xF5                0x0BB5                              # TAMIL LETTER VA
0xF6                0x0BB4                              # TAMIL LETTER LLLA
0xF7                0x0BB3                              # TAMIL LETTER LLA
0xF8                0x0BB1                              # TAMIL LETTER RRA
0xF9                0x0BA9                              # TAMIL LETTER NNNA
0xFA                0x0BB8                              # TAMIL LETTER SA
0xFB                0x0BB7                              # TAMIL LETTER SSA
0xFC                0x0B9C                              # TAMIL LETTER JA
0xFD                0x0BB9                              # TAMIL LETTER HA
0xFE                0x0B95 0x0BCD 0x0BB7               # TAMIL LETTER KSHA
0xFF                0x0BB8 0x0BCD 0x0BB0 0x0BC0        # TAMIL LETTER SRI
#
#  SECTION TWO - (many-to-one and many-to-many relationship)
#  --------------------------------------------------------------------------
#
0xE5 0xF7           0x0B94                              # TAMIL LETTER AU
#
0xE8 0xA3           0x0B95 0x0BBE                       # TAMIL LETTER KAA
0xE9 0xA3           0x0B99 0x0BBE                       # TAMIL LETTER NGAA
0xEA 0xA3           0x0B9A 0x0BBE                       # TAMIL LETTER CAA
0xEB 0xA3           0x0B9E 0x0BBE                       # TAMIL LETTER NYAA
0xEC 0xA3           0x0B9F 0x0BBE                       # TAMIL LETTER TTAA
0xED 0xA3           0x0BA3 0x0BBE                       # TAMIL LETTER NNAA
0xEE 0xA3           0x0BA4 0x0BBE                       # TAMIL LETTER TAA
0xEF 0xA3           0x0BA8 0x0BBE                       # TAMIL LETTER NAA
0xF0 0xA3           0x0BAA 0x0BBE                       # TAMIL LETTER PAA
0xF1 0xA3           0x0BAE 0x0BBE                       # TAMIL LETTER MAA
0xF2 0xA3           0x0BAF 0x0BBE                       # TAMIL LETTER YAA
```

```
0xF3 0xA3          0x0BB0 0x0BBE                # TAMIL LETTER RAA
0xF4 0xA3          0x0BB2 0x0BBE                # TAMIL LETTER LAA
0xF5 0xA3          0x0BB5 0x0BBE                # TAMIL LETTER VAA
0xF6 0xA3          0x0BB4 0x0BBE                # TAMIL LETTER LLLAA
0xF7 0xA3          0x0BB3 0x0BBE                # TAMIL LETTER LLAA
0xF8 0xA3          0x0BB1 0x0BBE                # TAMIL LETTER RRAA
0xF9 0xA3          0x0BA9 0x0BBE                # TAMIL LETTER NNNAA
0xFA 0xA3          0x0BB8 0x0BBE                # TAMIL LETTER SAA
0xFB 0xA3          0x0BB7 0x0BBE                # TAMIL LETTER SSAA
0xFC 0xA3          0x0B9C 0x0BBE                # TAMIL LETTER JAA
0xFD 0xA3          0x0BB9 0x0BBE                # TAMIL LETTER HAA
0xFE 0xA3          0x0B95 0x0BCD 0x0BB7 0x0BBE  # TAMIL LETTER KSHAA
#
0xE8 0xA6          0x0B95 0x0BC0                # TAMIL LETTER KII
0xE9 0xA6          0x0B99 0x0BC0                # TAMIL LETTER NGII
0xEA 0xA6          0x0B9A 0x0BC0                # TAMIL LETTER CII
0xEB 0xA6          0x0B9E 0x0BC0                # TAMIL LETTER NYII
0xED 0xA6          0x0BA3 0x0BC0                # TAMIL LETTER NNII
0xEE 0xA6          0x0BA4 0x0BC0                # TAMIL LETTER TII
0xEF 0xA6          0x0BA8 0x0BC0                # TAMIL LETTER NII
0xF0 0xA6          0x0BAA 0x0BC0                # TAMIL LETTER PII
0xF1 0xA6          0x0BAE 0x0BC0                # TAMIL LETTER MII
0xF2 0xA6          0x0BAF 0x0BC0                # TAMIL LETTER YII
0xF3 0xA6          0x0BB0 0x0BC0                # TAMIL LETTER RII
0xF4 0xA6          0x0BB2 0x0BC0                # TAMIL LETTER LII
0xF5 0xA6          0x0BB5 0x0BC0                # TAMIL LETTER VII
0xF6 0xA6          0x0BB4 0x0BC0                # TAMIL LETTER LLLII
0xF7 0xA6          0x0BB3 0x0BC0                # TAMIL LETTER LLII
0xF8 0xA6          0x0BB1 0x0BC0                # TAMIL LETTER RRII
0xF9 0xA6          0x0BA9 0x0BC0                # TAMIL LETTER NNNII
0xFA 0xA6          0x0BB8 0x0BC0                # TAMIL LETTER SII
0xFB 0xA6          0x0BB7 0x0BC0                # TAMIL LETTER SSII
0xFC 0xA6          0x0B9C 0x0BC0                # TAMIL LETTER JII
0xFD 0xA6          0x0BB9 0x0BC0                # TAMIL LETTER HII
0xFE 0xA6          0x0B95 0x0BCD 0x0BB7 0x0BC0  # TAMIL LETTER KSHII
#
0xFA 0xA7          0x0BB8 0x0BC1                # TAMIL LETTER SU
0xFB 0xA7          0x0BB7 0x0BC1                # TAMIL LETTER SSU
0xFC 0xA7          0x0B9C 0x0BC1                # TAMIL LETTER JU
0xFD 0xA7          0x0BB9 0x0BC1                # TAMIL LETTER HU
0xFE 0xA7          0x0B95 0x0BCD 0x0BB7 0x0BC1  # TAMIL LETTER KSHU
#
0xFA 0xA8          0x0BB8 0x0BC2                # TAMIL LETTER SUU
0xFB 0xA8          0x0BB7 0x0BC2                # TAMIL LETTER SSUU
0xFC 0xA8          0x0B9C 0x0BC2                # TAMIL LETTER JUU
0xFD 0xA8          0x0BB9 0x0BC2                # TAMIL LETTER HUU
0xFE 0xA8          0x0B95 0x0BCD 0x0BB7 0x0BC2  # TAMIL LETTER KSHUU
#
0xAA 0xE8          0x0B95 0x0BC6                # TAMIL LETTER KE
0xAA 0xE9          0x0B99 0x0BC6                # TAMIL LETTER NGE
0xAA 0xEA          0x0B9A 0x0BC6                # TAMIL LETTER CE
0xAA 0xEB          0x0B9E 0x0BC6                # TAMIL LETTER NYE
0xAA 0xEC          0x0B9F 0x0BC6                # TAMIL LETTER TTE
0xAA 0xED          0x0BA3 0x0BC6                # TAMIL LETTER NNE
0xAA 0xEE          0x0BA4 0x0BC6                # TAMIL LETTER TE
0xAA 0xEF          0x0BA8 0x0BC6                # TAMIL LETTER NE
0xAA 0xF0          0x0BAA 0x0BC6                # TAMIL LETTER PE
0xAA 0xF1          0x0BAE 0x0BC6                # TAMIL LETTER ME
0xAA 0xF2          0x0BAF 0x0BC6                # TAMIL LETTER YE
0xAA 0xF3          0x0BB0 0x0BC6                # TAMIL LETTER RE
0xAA 0xF4          0x0BB2 0x0BC6                # TAMIL LETTER LE
0xAA 0xF5          0x0BB5 0x0BC6                # TAMIL LETTER VE
0xAA 0xF6          0x0BB4 0x0BC6                # TAMIL LETTER LLLE
0xAA 0xF7          0x0BB3 0x0BC6                # TAMIL LETTER LLE
0xAA 0xF8          0x0BB1 0x0BC6                # TAMIL LETTER RRE
```

```
0xAA 0xF9          0x0BA9 0x0BC6                      # TAMIL LETTER NNNE
0xAA 0xFA          0x0BB8 0x0BC6                      # TAMIL LETTER SE
0xAA 0xFB          0x0BB7 0x0BC6                      # TAMIL LETTER SSE
0xAA 0xFC          0x0B9C 0x0BC6                      # TAMIL LETTER JE
0xAA 0xFD          0x0BB9 0x0BC6                      # TAMIL LETTER HE
0xAA 0xFE          0x0B95 0x0BCD 0x0BB7 0x0BC6        # TAMIL LETTER KSHE
#
0xAB 0xE8          0x0B95 0x0BC7                      # TAMIL LETTER KEE
0xAB 0xE9          0x0B99 0x0BC7                      # TAMIL LETTER NGEE
0xAB 0xEA          0x0B9A 0x0BC7                      # TAMIL LETTER CEE
0xAB 0xEB          0x0B9E 0x0BC7                      # TAMIL LETTER NYEE
0xAB 0xEC          0x0B9F 0x0BC7                      # TAMIL LETTER TTEE
0xAB 0xED          0x0BA3 0x0BC7                      # TAMIL LETTER NNEE
0xAB 0xEE          0x0BA4 0x0BC7                      # TAMIL LETTER TEE
0xAB 0xEF          0x0BA8 0x0BC7                      # TAMIL LETTER NEE
0xAB 0xF0          0x0BAA 0x0BC7                      # TAMIL LETTER PEE
0xAB 0xF1          0x0BAE 0x0BC7                      # TAMIL LETTER MEE
0xAB 0xF2          0x0BAF 0x0BC7                      # TAMIL LETTER YEE
0xAB 0xF3          0x0BB0 0x0BC7                      # TAMIL LETTER REE
0xAB 0xF4          0x0BB2 0x0BC7                      # TAMIL LETTER LEE
0xAB 0xF5          0x0BB5 0x0BC7                      # TAMIL LETTER VEE
0xAB 0xF6          0x0BB4 0x0BC7                      # TAMIL LETTER LLLEE
0xAB 0xF7          0x0BB3 0x0BC7                      # TAMIL LETTER LLEE
0xAB 0xF8          0x0BB1 0x0BC7                      # TAMIL LETTER RREE
0xAB 0xF9          0x0BA9 0x0BC7                      # TAMIL LETTER NNNEE
0xAB 0xFA          0x0BB8 0x0BC7                      # TAMIL LETTER SEE
0xAB 0xFB          0x0BB7 0x0BC7                      # TAMIL LETTER SSEE
0xAB 0xFC          0x0B9C 0x0BC7                      # TAMIL LETTER JEE
0xAB 0xFD          0x0BB9 0x0BC7                      # TAMIL LETTER HEE
0xAB 0xFE          0x0B95 0x0BCD 0x0BB7 0x0BC7        # TAMIL LETTER KSHEE
#
0xAC 0xE8          0x0B95 0x0BC8                      # TAMIL LETTER KAI
0xAC 0xE9          0x0B99 0x0BC8                      # TAMIL LETTER NGAI
0xAC 0xEA          0x0B9A 0x0BC8                      # TAMIL LETTER CAI
0xAC 0xEB          0x0B9E 0x0BC8                      # TAMIL LETTER NYAI
0xAC 0xEC          0x0B9F 0x0BC8                      # TAMIL LETTER TTAI
0xAC 0xED          0x0BA3 0x0BC8                      # TAMIL LETTER NNAI
0xAC 0xEE          0x0BA4 0x0BC8                      # TAMIL LETTER TAI
0xAC 0xEF          0x0BA8 0x0BC8                      # TAMIL LETTER NAI
0xAC 0xF0          0x0BAA 0x0BC8                      # TAMIL LETTER PAI
0xAC 0xF1          0x0BAE 0x0BC8                      # TAMIL LETTER MAI
0xAC 0xF2          0x0BAF 0x0BC8                      # TAMIL LETTER YAI
0xAC 0xF3          0x0BB0 0x0BC8                      # TAMIL LETTER RAI
0xAC 0xF4          0x0BB2 0x0BC8                      # TAMIL LETTER LAI
0xAC 0xF5          0x0BB5 0x0BC8                      # TAMIL LETTER VAI
0xAC 0xF6          0x0BB4 0x0BC8                      # TAMIL LETTER LLLAI
0xAC 0xF7          0x0BB3 0x0BC8                      # TAMIL LETTER LLAI
0xAC 0xF8          0x0BB1 0x0BC8                      # TAMIL LETTER RRAI
0xAC 0xF9          0x0BA9 0x0BC8                      # TAMIL LETTER NNNAI
0xAC 0xFA          0x0BB8 0x0BC8                      # TAMIL LETTER SAI
0xAC 0xFB          0x0BB7 0x0BC8                      # TAMIL LETTER SSAI
0xAC 0xFC          0x0B9C 0x0BC8                      # TAMIL LETTER JAI
0xAC 0xFD          0x0BB9 0x0BC8                      # TAMIL LETTER HAI
0xAC 0xFE          0x0B95 0x0BCD 0x0BB7 0x0BC8        # TAMIL LETTER KSHAI
#
0xAA 0xE8 0xA3     0x0B95 0x0BCA                      # TAMIL LETTER KO
0xAA 0xE9 0xA3     0x0B99 0x0BCA                      # TAMIL LETTER NGO
0xAA 0xEA 0xA3     0x0B9A 0x0BCA                      # TAMIL LETTER CO
0xAA 0xEB 0xA3     0x0B9E 0x0BCA                      # TAMIL LETTER NYO
0xAA 0xEC 0xA3     0x0B9F 0x0BCA                      # TAMIL LETTER TTO
0xAA 0xED 0xA3     0x0BA3 0x0BCA                      # TAMIL LETTER NNO
0xAA 0xEE 0xA3     0x0BA4 0x0BCA                      # TAMIL LETTER TO
0xAA 0xEF 0xA3     0x0BA8 0x0BCA                      # TAMIL LETTER NO
0xAA 0xF0 0xA3     0x0BAA 0x0BCA                      # TAMIL LETTER PO
0xAA 0xF1 0xA3     0x0BAE 0x0BCA                      # TAMIL LETTER MO
```

```
0xAA 0xF2 0xA3      0x0BAF 0x0BCA                 # TAMIL LETTER YO
0xAA 0xF3 0xA3      0x0BB0 0x0BCA                 # TAMIL LETTER RO
0xAA 0xF4 0xA3      0x0BB2 0x0BCA                 # TAMIL LETTER LO
0xAA 0xF5 0xA3      0x0BB5 0x0BCA                 # TAMIL LETTER VO
0xAA 0xF6 0xA3      0x0BB4 0x0BCA                 # TAMIL LETTER LLLO
0xAA 0xF7 0xA3      0x0BB3 0x0BCA                 # TAMIL LETTER LLO
0xAA 0xF8 0xA3      0x0BB1 0x0BCA                 # TAMIL LETTER RRO
0xAA 0xF9 0xA3      0x0BA9 0x0BCA                 # TAMIL LETTER NNNO
0xAA 0xFA 0xA3      0x0BB8 0x0BCA                 # TAMIL LETTER SO
0xAA 0xFB 0xA3      0x0BB7 0x0BCA                 # TAMIL LETTER SSO
0xAA 0xFC 0xA3      0x0B9C 0x0BCA                 # TAMIL LETTER JO
0xAA 0xFD 0xA3      0x0BB9 0x0BCA                 # TAMIL LETTER HO
0xAA 0xFE 0xA3      0x0B95 0x0BCD 0x0BB7 0x0BCA   # TAMIL LETTER KSHO
#
0xAB 0xE8 0xA3      0x0B95 0x0BCB                 # TAMIL LETTER KOO
0xAB 0xE9 0xA3      0x0B99 0x0BCB                 # TAMIL LETTER NGOO
0xAB 0xEA 0xA3      0x0B9A 0x0BCB                 # TAMIL LETTER COO
0xAB 0xEB 0xA3      0x0B9E 0x0BCB                 # TAMIL LETTER NYOO
0xAB 0xEC 0xA3      0x0B9F 0x0BCB                 # TAMIL LETTER TTOO
0xAB 0xED 0xA3      0x0BA3 0x0BCB                 # TAMIL LETTER NNOO
0xAB 0xEE 0xA3      0x0BA4 0x0BCB                 # TAMIL LETTER TOO
0xAB 0xEF 0xA3      0x0BA8 0x0BCB                 # TAMIL LETTER NOO
0xAB 0xF0 0xA3      0x0BAA 0x0BCB                 # TAMIL LETTER POO
0xAB 0xF1 0xA3      0x0BAE 0x0BCB                 # TAMIL LETTER MOO
0xAB 0xF2 0xA3      0x0BAF 0x0BCB                 # TAMIL LETTER YOO
0xAB 0xF3 0xA3      0x0BB0 0x0BCB                 # TAMIL LETTER ROO
0xAB 0xF4 0xA3      0x0BB2 0x0BCB                 # TAMIL LETTER LOO
0xAB 0xF5 0xA3      0x0BB5 0x0BCB                 # TAMIL LETTER VOO
0xAB 0xF6 0xA3      0x0BB4 0x0BCB                 # TAMIL LETTER LLLOO
0xAB 0xF7 0xA3      0x0BB3 0x0BCB                 # TAMIL LETTER LLOO
0xAB 0xF8 0xA3      0x0BB1 0x0BCB                 # TAMIL LETTER RROO
0xAB 0xF9 0xA3      0x0BA9 0x0BCB                 # TAMIL LETTER NNNOO
0xAB 0xFA 0xA3      0x0BB8 0x0BCB                 # TAMIL LETTER SOO
0xAB 0xFB 0xA3      0x0BB7 0x0BCB                 # TAMIL LETTER SSOO
0xAB 0xFC 0xA3      0x0B9C 0x0BCB                 # TAMIL LETTER JOO
0xAB 0xFD 0xA3      0x0BB9 0x0BCB                 # TAMIL LETTER HOO
0xAB 0xFE 0xA3      0x0B95 0x0BCD 0x0BB7 0x0BCB   # TAMIL LETTER KSHOO
#
0xAA 0xE8 0xF7      0x0B95 0x0BCC                 # TAMIL LETTER KAU
0xAA 0xE9 0xF7      0x0B99 0x0BCC                 # TAMIL LETTER NGAU
0xAA 0xEA 0xF7      0x0B9A 0x0BCC                 # TAMIL LETTER CAU
0xAA 0xEB 0xF7      0x0B9E 0x0BCC                 # TAMIL LETTER NYAU
0xAA 0xEC 0xF7      0x0B9F 0x0BCC                 # TAMIL LETTER TTAU
0xAA 0xED 0xF7      0x0BA3 0x0BCC                 # TAMIL LETTER NNAU
0xAA 0xEE 0xF7      0x0BA4 0x0BCC                 # TAMIL LETTER TAU
0xAA 0xEF 0xF7      0x0BA8 0x0BCC                 # TAMIL LETTER NAU
0xAA 0xF0 0xF7      0x0BAA 0x0BCC                 # TAMIL LETTER PAU
0xAA 0xF1 0xF7      0x0BAE 0x0BCC                 # TAMIL LETTER MAU
0xAA 0xF2 0xF7      0x0BAF 0x0BCC                 # TAMIL LETTER YAU
0xAA 0xF3 0xF7      0x0BB0 0x0BCC                 # TAMIL LETTER RAU
0xAA 0xF4 0xF7      0x0BB2 0x0BCC                 # TAMIL LETTER LAU
0xAA 0xF5 0xF7      0x0BB5 0x0BCC                 # TAMIL LETTER VAU
0xAA 0xF6 0xF7      0x0BB4 0x0BCC                 # TAMIL LETTER LLLAU
0xAA 0xF7 0xF7      0x0BB3 0x0BCC                 # TAMIL LETTER LLAU
0xAA 0xF8 0xF7      0x0BB1 0x0BCC                 # TAMIL LETTER RRAU
0xAA 0xF9 0xF7      0x0BA9 0x0BCC                 # TAMIL LETTER NNNAU
0xAA 0xFA 0xF7      0x0BB8 0x0BCC                 # TAMIL LETTER SAU
0xAA 0xFB 0xF7      0x0BB7 0x0BCC                 # TAMIL LETTER SSAU
0xAA 0xFC 0xF7      0x0B9C 0x0BCC                 # TAMIL LETTER JAU
0xAA 0xFD 0xF7      0x0BB9 0x0BCC                 # TAMIL LETTER HAU
0xAA 0xFE 0xF7      0x0B95 0x0BCD 0x0BB7 0x0BCC   # TAMIL LETTER KSHAU
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