# Proposal to encode Malayalam Letter Chillu LLL (Updated)

Cibu Johny, cibu@google.com

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## §1. Discussion

In the Malayalam script, a chillu or chillaksharam is a special vowelless form of a consonant. In Unicode, these special vowelless forms of Malayalam are given their own codepoints: 0D7A to 0D7F as Chillu NN, N, RR, L, LL and K (in that order):

ൺ ൻ ർ ൽ ൾ ൿ

Now an additional chillu character is proposed: Malayalam Letter Chillu LLL:

ഢ

While this chillu LLL is not in use today, it has been attested in old Malayalam of the 18<sup>th</sup> century and hence must be encoded for recording those documents.

A 1772 treatise Alphabetum Grandonico Malabaricum describing the old Malayalam script alias Malabar Grantha lists eight "litteris finalibus" (on p 69; p 102 of PDF):

*De litteris finalibus.*

Iximus uſque modo de litteris ſim-
plicibus, atque compoſitis; nunc fi-
nales perpendendae ſunt, ac de iis debe-
mus ſingillatim loqui. Hae igitur ſunt octo,
nempe

ฦᕑ   &ᕑ   ℄   ⵍᕑ   ⅊ᕑ   ⵍᕑ   ⌀

el,   er,   el,   iz,   en,   en,   en,   am:

Of these, the last is merely 0D02 Aɴᴜꜱᴠᴀʀᴀ, and the one before is a doubled Chillu N (this needs further investigation). 0D7F Cʜɪʟʟᴜ K is not listed. However, Cʜɪʟʟᴜ LLL is listed.

The author explains this later (p 70,71; p 101,102 of PDF) and provides examples:

Littera ℄ *iz* videtur aliquo modo ae-
qui-
quivalere ᴢ finali Latinorum; ſed pronun-
tiatur cum aliquo ſibilo, clauſo ferme
ore, ac retrorſum attracta tantiſper lin-
gua: idem tamen ſonat in medio, ac in
fine dictionis; ſic ℄ *kiz* ſubtus; ℄
℄ *kizttaram* res inferioris con-
ditionis &c.

Many more examples are found in an earlier manuscript of a Portuguese-Malayalam dictionary [2], starting from the very first page:

Based on the above attestations one can confidently state that this character 𑌵 was in use in the 18th century. Since then it has been replaced by the LLLA with explicit virama (ഴ്) or a conjunct with the consonant following[3]:



However, given that the chillu representation of vowelless consonants has a distinct encoded form than their virama representation [4], for faithfully recording as digital text the original content of such old prints/manuscripts as cited above, it is justified and necessary to encode a MALAYALAM LETTER CHILLU LLL.

## §2. Choice of codepoint

It is suggested that this character may be placed in the Malayalam block near the DOT REPH character. The proposed codepoint is 0D4F.

## §3. Choice of the glyph

The representative glyph used in this document is a modernized version of the historical character attested in the samples. The glyph is produced from modern LLL as it would most likely be drawn if Chillu LLL were in usage today. The purpose of this modernization is to establish Chillu LLL's relationship with the Malayalam Letter LLL.

## §4. Proposed character with properties

ൿ

0D4F Malayalam Letter Chillu LLL

0D4F;MALAYALAM LETTER CHILLU LLL;Lo;0;L;;;;;N;;;;;

## §5. References

1. Alphabetum Grandonico-Malabaricum Sive Samscrudonicum, Rome, 1772; http://books.google.com/books?id=qmETAAAAQAAJ&dq=Alphabetum%20Grandonico-Malabaricum%20Sive%20Samscrudonicum, retrieved 2013-Apr-26

2. Vocabulario Malavarico, Manuscript by João Ernesto, 1732; http://bdigital.sib.uc.pt/bg3/UCBG-Ms-1090/UCBG-Ms-1090_item1/index.html, retrieved 2013-Apr-26

3. A Malayalam and English Dictionary, Hermann Gundert, 1872; http://books.google.com/books?id=0K8FAAAAQAAJ&dq=gundert&pg=PA246#v=onepage&q&f=false, retrieved 2013-Apr-26

4. Proposal to encode Malayalam Chillaksharams, L2/06-207.

# §6. Thanks

I thank Shriramana Sharma for valuable technical input, and Shiju Alex for providing access to manuscripts.

# §7. Official Proposal Summary Form

(Based on N3902-F)

## A. Administrative

1. Title
**Proposal to encode Malayalam Letter Chillu LLL**
2. Requester's name
**Cibu Johny**
3. Requester type (Member body/Liaison/Individual contribution)
**Individual contribution**
4. Submission date
**2013-Apr-29**
5. Requester's reference (if applicable)
6. Choose one of the following: This is a complete proposal (or) More information will be provided later
**This is a complete proposal.**

## B. Technical – General

1. Choose one of the following:
1a. This proposal is for a new script (set of characters), Proposed name of script
**No**
1b. The proposal is for addition of character(s) to an existing block, Name of the existing block
**Yes, Malayalam**
2. Number of characters in proposal
**1 (one)**
3. Proposed category
**Category B1, specialized small (for this character)**
4. Is a repertoire including character names provided?
**Yes**
4a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?
**Yes**
4b. Are the character shapes attached in a legible form suitable for review?
**Yes**
5. Fonts related:
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?
**Cibu Johny**
b. Identify the party granting a license for use of the font by the editors (include address, e-mail etc.)
**Cibu Johny, cibu@google.com**
6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?
**Yes**
6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?
**Yes**
7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?
**Yes**
8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script.
**See detailed proposal.**

## C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

**No**

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

**Yes**

2b. If YES, with whom?

**The author is himself one of the user community.**

2c. If YES, available relevant documents

**None specifically. The matter was discussed in person and via email/phone.**

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

**Those (scholars and enthusiasts) who desire to store old Malayalam documents using this character.**

4a. The context of use for the proposed characters (type of use; common or rare)

**Rare**

4b. Reference

**See detailed proposal.**

5a. Are the proposed characters in current use by the user community?

**No. This character was in historical use.**

5b. If YES, where?

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

**Yes**

6b. If YES, is a rationale provided?

**It belongs in the Malayalam block which is in the BMP.**

6c. If YES, reference

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

**Only one character is proposed.**

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

**No**

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

**No**

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

**No**

10b. If YES, is a rationale for its inclusion provided?

10c. If YES, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences?

**No**

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

**No.**

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

**No**

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?

13c. If YES, reference:

-o-o-o-