ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html **for guidelines and details before filling this form.**
Please ensure you are using the latest Form from http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html**.**
See also http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**

A. Administrative

1. **Title:** *Proposal to encode Malayalam Dot-Reph character*
2. Requester's name: *US National Body*
3. Requester type (Member body/Liaison/Individual contribution): *Member body*
4. Submission date: *2009 May 1*
5. Requester's reference (if applicable):
6. Choose one of the following:
   This is a complete proposal: *Yes*
   (or) More information will be provided later: *No*

B. Technical – General

1. Choose one of the following:
   a. This proposal is for a new script (set of characters): *No*
      Proposed name of script:
   b. The proposal is for addition of character(s) to an existing block: *Yes*
      Name of the existing block: *Malayalam*
2. Number of characters in proposal: *1*
3. Proposed category (select one from below - see section 2.2 of P&P document):
   A-Contemporary   *X*   B.1-Specialized (small collection) _____   B.2-Specialized (large collection) _____
   C-Major extinct _____   D-Attested extinct _____   E-Minor extinct _____
   F-Archaic Hieroglyphic or Ideographic _____   G-Obscure or questionable usage symbols _____
4. Is a repertoire including character names provided? *Yes*
   a. If YES, are the names in accordance with the "character naming guidelines"
      in Annex L of P&P document? *Yes*
   b. Are the character shapes attached in a legible form suitable for review? *Yes*
5. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?
   If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:
6. References:
   a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? *Yes*
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources)
   of proposed characters attached? *Yes*
7. Special encoding issues:
   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)?
   Suggested character properties and sort orders are included.

8. Additional Information:
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. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see http://www.unicode.org/Public/UNIDATA/UCD.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

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[1] Form number: N3152-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? _No_
    If YES explain
2. 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_
        If YES, with whom? _Government of India_
        If YES, available relevant documents: _L2/08-411, L2/08-306_
3. Information on the user community for the proposed characters (for example:
    size, demographics, information technology use, or publishing use) is included?
    Reference: _See section D_
4. The context of use for the proposed characters (type of use; common or rare) _rare_
    Reference: _See section A_
5. Are the proposed characters in current use by the user community? _Yes_
    If YES, where? Reference: _See section D_
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely
    in the BMP? _Yes_
        If YES, is a rationale provided?
        If YES, reference: _If possible, should be kept in the BMP since the rest of the script is in the BMP_
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)? _Yes_
8. Can any of the proposed characters be considered a presentation form of an existing
    character or character sequence? _Yes_
        If YES, is a rationale for its inclusion provided? _Yes_
        If YES, reference: _See section B_
9. Can any of the proposed characters be encoded using a composed character sequence of either
    existing characters or other proposed characters? _No_
        If YES, is a rationale for its inclusion provided?
        If YES, reference:
10. Can any of the proposed character(s) be considered to be similar (in appearance or function)
    to an existing character? _No_
        If YES, is a rationale for its inclusion provided?
        If YES, reference:
11. Does the proposal include use of combining characters and/or use of composite sequences? _Yes_
    If YES, is a rationale for such use provided? _Yes_
        If YES, reference: _See section C_
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? _Yes_
        If YES, reference: _See section F_
12. Does the proposal contain characters with any special properties such as
    control function or similar semantics? _No_
        If YES, describe in detail (include attachment if necessary)

13. Does the proposal contain any Ideographic compatibility character(s)? _No_
    If YES, is the equivalent corresponding unified ideographic character(s) identified?
        If YES, reference:

A.   Introduction

Dot-Reph is used to represent Malayalam letter RA_dead, as a dot over the consonant following it. That is, in the sequence <Malayalam Akshara X, Malayalam consonant R, Akshara Y>, the consonant 'R' is represented as a dot over Akshara Y. As of Unicode 5.1, there is no representation for Dot-Reph.

B.   Rationale for encoding

The sequence <RA, VIRAMA, ZWJ> would have been the natural choice for Dot-Reph as in Indic scripts like Gurmukhi. However, that sequence has considerable existing usage, predating Unicode 5.1, to represent MALAYALAM CHILLU RR.

We could have opted for <RA, VIRAMA, Consonant> to be rendered with Dot-Reph while <RA, ZWJ, VIRAMA, Consonant> displaying RA with C2-conjoining form of the other consonant. For example, cluster ൠ (/rya/) represented as <RA, ZWJ, VIRAMA, YA>.

However, sequences like <RA, VIRAMA, YA> is currently being used for the cluster ൠ (/rya/) in very common words like സൂര്യൻ (/sooryan/ meaning 'sun') and ഭാര്യ (/bhaarya/ meaning 'wife'). Changing the rendering for those common sequences would be disastrous.

Another potential sequence is <RRA, VIRAMA> with or without a joiner. However, in Malayalam, the underlying base character for Dot-Reph is almost always <RA>. That would prevent us from using any sequence with <RRA> for Dot-Reph.

A sequence involving <CHILLU RR> and joiners would be particularly attractive choice since a native user understands Dot-Reph that way. However, that does not always hold good. For example, in very common words like സൂര്യൻ (/sooryan/ meaning 'sun') and ഭാര്യ (/bhaarya/ meaning 'wife'), their respective forms without Dot-Reph does not involve Chillu-RR. They are respectively സൂര്യൻ and ഭാര്യ .

Given the above observations, atomically encoding Dot-Reph may the only plausible choice. Conceptually, Dot-Reph is analogous to C1-conjoining cluster <RA, Virama> (but not interchangeable with). However, the Malayalam cluster <RA, Virama, C2> can assume C2-conjoining form. For example: ൠ (/rya/) cluster in the word ഭാര്യ (/bhaarya/) meaning wife. When C1-conjoining form needs to be specified - that is, the Dot-Reph form - the proposed Dot-Reph character needs to be used as <DOT-REPH, C2>.

Common Malayalam input keyboards would need to add one more key to support this character. It could be positioned in the third or fourth plane since its contemporary usage is minimal.

C.   Usage

Dot-Reph would be a spacing character and would be analogous to C1-conjoining <RA, VIRAMA> (but not interchangeable with). It would get displayed as a dot over the subsequent Malayalam consonant or cluster. Example:

ഓ

<DOT-REPH, VA>

D.   Demographics and usage

Dot-Reph was in common print usage untill 1970. After that its usage has receded from print. Currently it is nowhere to be seen in contemporary publishing. The words that were using Dot-Reph are now transcribed using Chillu-RR or respective C2-conjoining forms. Those who have completed their elementary education in Malayalam prior to 1970, predominantly use this form for writing. Total number of Malayalam users is more than 35 million (1997) (Reference: Ethnologue).

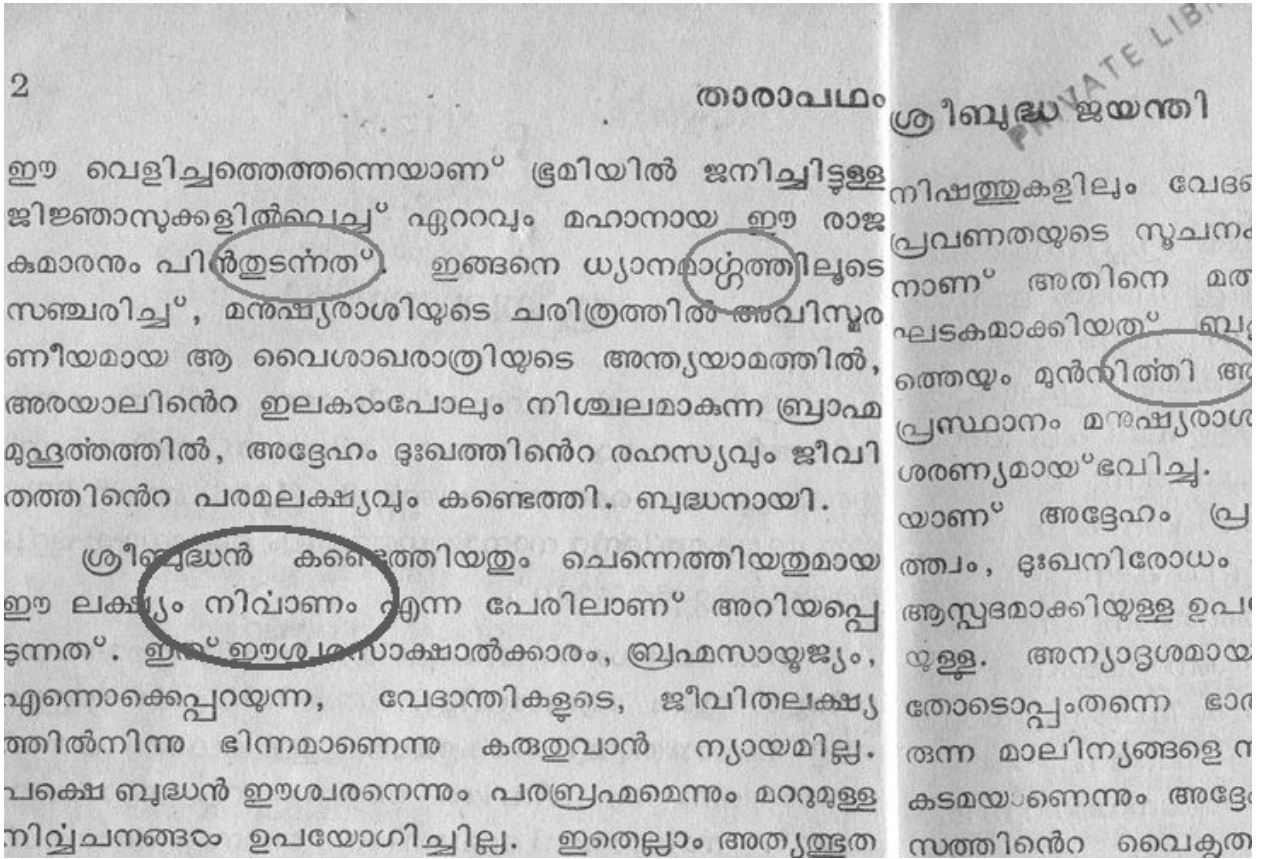## E.   Character Name, position, collation and properties

0D78   MALAYALAM LETTER DOT REPH

For collation, DOT REPH could be used placed with primary weight equal to Chillu-RR and secondary weight less than that.

Properties:
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0D78;MALAYALAM LETTER DOT REPH;Lo;0;L;;;;;N;;;;;
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ഈ വെളിച്ചത്തെത്തന്നെയാണ് ഭൂമിയിൽ ജനിച്ചിട്ടുള്ള ജിജ്ഞാസുക്കളിൽവെച്ച് ഏറ്റവും മഹാനായ ഈ രാജകുമാരനും പിൻതുടർന്നത്. ഇങ്ങനെ ധ്യാനമാർഗ്ഗത്തിലൂടെ സഞ്ചരിച്ച്, മനുഷ്യരാശിയുടെ ചരിത്രത്തിൽ അവിസ്മരണീയമായ ആ വൈശാഖരാത്രിയുടെ അന്ത്യയാമത്തിൽ, അരയാലിന്റെ ഇലകംപോലും നിശ്ചലമാകുന്ന ബ്രാഹ്മമുഹൂർത്തത്തിൽ, അദ്ദേഹം ദുഃഖത്തിന്റെ രഹസ്യവും ജീവിതത്തിന്റെ പരമലക്ഷ്യവും കണ്ടെത്തി. ബുദ്ധനായി.

ശ്രീബുദ്ധൻ കണ്ടെത്തിയതും ചെന്നെത്തിയതുമായ ഈ ലക്ഷ്യം നിർവാണം എന്ന പേരിലാണ് അറിയപ്പെടുന്നത്. ഇത് ഈശ്വരസാക്ഷാൽക്കാരം, ബ്രഹ്മസായൂജ്യം, എന്നൊക്കെപ്പറയുന്ന, വേദാന്തികളുടെ, ജീവിതലക്ഷ്യത്തിൽനിന്നു ഭിന്നമാണെന്നു കരുതുവാൻ ന്യായമില്ല. പക്ഷെ ബുദ്ധൻ ഈശ്വരനെന്നും പരബ്രഹ്മമെന്നും മറ്റുമുള്ള നിർവ്വചനങ്ങളും ഉപയോഗിച്ചില്ല. ഇതെല്ലാം അത്യുത്തമ

നിഷ്ഠകളിലും വേദ... പ്രവണതയുടെ സൂചന... നാണ് അതിനെ മത... ഘടകമാക്കിയത് ബു... ത്തെയും മുൻനിർത്തി അ... പ്രസ്ഥാനം മനുഷ്യരാശ... ശരണ്യമായ് ഭവിച്ചു. യാണ് അദ്ദേഹം പ്ര... ത്വം, ദുഃഖനിരോധം... ആസ്പദമാക്കിയുള്ള ഉപ... യുള്ള. അന്യാദൃശമായ... തോടൊപ്പംതന്നെ ഭാ... ന്ന മാലിന്യങ്ങളെ... കടമയാണെന്നും അദ്ദേ... സത്തിന്റെ വൈകൃത...

Malayalam language textbook for the grade 10; year 1966; published by Government of Kerala.

പാര്‍വ്വണം **pārvaṇam** S. Connected with പ

ര്‍വ്വം, as പാ'ണെന്റ the full-moon.

പാര്‍വ്വതി **pārvaḍi** S.(പാര്‍വ്വണം)=മലമാള്‍; N.pr. f.

പാര്‍വത്ത്യം **pārvatyam** (Tdbh. of പ്രാവര്‍ത്ത്യം? as

if fr. പ്രവൃത്തി q. v.; but T. Te. V1. have pā-

rapatyam, C. pā -

nagement, as if fr. പാക്ക). 1. Local govern-

ment, administration മോര്‍ വില്ലുന്ന തായേ ഉറ

രിലേ പാരപത്ത്യം എന്തിന prov., also പാരോ

ത്ത്യം; നാട്ടില്‍ ഓരോരുത്തര്‍ പാരോവത്തി ചെ

യ്യ, പാറവത്ത്യം ചെയ്യന്നവന്‍ TR. 2. Trav.

a subordinate revenue situation.

പാര്‍വത്ത്യക്കാരന്‍ a subordinate Collector & Ma-

gistrate (Trav. = അധികാരി). സുല്‍ത്ത മാന്റെ

പാര്‍വ്വത്ത്യക്കാരവന്മാര്‍, പാര്‍വ്വത്തിക്കാരന്‍ TR.(In

Mal. a district about as large as 4 amšams

(അംശം 2) together, was formerly under 1

പാര്‍വത്ത്യക്കാരന്‍: f. i. പാര്‍വ്വതിക്കാര്‍ പണ

ത്തിന വരാറായി No. said only by very

old people).

പാര്‍ശാവു P. **Pādshāh,** The Mogul emperor