Malayalam: Comparison of Dot-Reph Proposals

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Introduction

Dot style Reph is used to represent Malayalam letter \(<RA>\) as a dot over the consonant following it. That is, in the sequence \(<\text{Malayalam Akshara X, r, Akshara Y}>\), The consonant 'r' is represented as a dot over Y. Please see scans below. As of Unicode 5.1, there is no stable mechanism to represent dot-reph. Following are the various proposals had been put forward.

Proposals

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>A</td>
<td>RA, VIRAMA, ZWJ, Consonant</td>
</tr>
<tr>
<td>B</td>
<td>RRA, VIRAMA, ZWJ, Consonant</td>
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<tr>
<td>C</td>
<td>Chillu-RR, VIRAMA, Consonant</td>
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<tr>
<td>D</td>
<td>Consonant, Dot-Reph combining mark (need to be encoded for this proposal)</td>
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<tr>
<td>E</td>
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<tr>
<td>F</td>
<td>RRA, VIRAMA, Consonant</td>
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Problems

Above proposals share some common problems. They are listed below.

1. **C1-conjoining and C2-conjoining forms need to be differentiated (applicable to E, F)**

Both C1-conjoining and C2-conjoining forms of the cluster needs to be supported and differentiated in plain text. These proposals would make C2-conjoining form unable to be represented. Example: C2-conjoining ligature of \(<RA, Virama, YA>\) is a very common cluster found in Malayalam words for sun, wife, subject etc.

2. **Deviation from standard definition of Virama (applicable to C)**

It is violating the common understanding that ‘The virama sign nominally serves to suppress the inherent vowel of the consonant to which it is applied’. However, this is a phonetic property. In Malayalam, Virama is used with different phonetic properties as well. For example, Samvruthokaram sequence is \(<U-sign, Virama>\) in which there is no inherent vowel to be removed. Also, Chillus are new entities not found in rest of the Indic. The interaction of Virama with Chillus is yet to be defined.

4. **Deviation from common-man's understanding about Dot-reph (applicable to A, B, E, F)**

Common man's understanding of dot-reph is that it is a short form of Chillu-RR.
5. Deviation from etymology of Dot-reph (applicable to B, C, F)

Etymologically dot-reph is a short form for <RA, VIRAMA>.

6. Uses ignorable characters (applicable to A, B)

Using ignorable characters would be problematic when they get ignored in many usages or implementations. That would make the text illegible.

7. Collation issues (applicable to D)

In the cluster involving dot-reph, users expect dot-reph to be the first component. However, Unicode can only have a combining mark as the second component of the cluster. This would require, all clusters involving dot-reph to be listed in the collation tables explicitly as contraction-expansion sequences. Approximate count of such clusters present in existing texts are around 40.

8. Conflicts with existing data (applicable to A)

<RA, Virama, ZWJ> would be forming Chillu-RR to support existing data.

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**Scans**

"Dot-Reph over single VA - from Malayalam textbook for Grade 10 in the year 1966"
pārvatam S. Connected with the full-moon.

pārvatī S. (पारवती) = माझी; N.pr. f.

pārvatam (Tābh. of ग़रवतो) as if fr. ग़रवती q.v.; but T. Te. V1. have pār- rapatyam, C. pār- management, as if fr. ग़रवती.

1. Local government, administration ग़रवताचा अर्थ ग़रवतीप्रमाणेच ग़रवती प्राप्ती; also ग़रवती TR. 2. Trav. a subordinate revenue situation.

a. pārvatam a subordinate Collector & Magistrate (Trav. = ग़रवतीप्रमाणेच ग़रवतीप्राप्ती TR. (In Mal. a district about as large as 4 ammans (मातंस) together, was formerly under 1 मातंसप्राप्ती: f.i. ग़रवतीप्राप्ती ग़रवती प्राप्ती No. said only by very old people).

Pādshāh, The Mogul emperor

Dot-Reph over single VA, SSA - year 1872
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v. n. To be distressed.
v. n. To extend.
s. m. A man servant, a courtier.
s. n. A translation.
s. n. A remedy, a means of averting.
s. n. Ridicule.
v. a. To try, to test.
adj. Coarse.
s. n. A mountain.
s. n. A weight of gold or silver, the
100 part of a Toolam.

Dot-Reph over single VA from year 1851