

Reordering virama

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Proposal

This document proposes:

- To add a new property value `Reordering_Virama` to the Indic syllabic category (InSC) property.
- To change the InSC property values for the Batak viramas U+1BF2 ᮊ BATAK PANGOLAT and U+1BF3 ᮋ BATAK PANONGONAN from `Pure_Killer` to `Reordering_Virama`.
- To clarify the descriptions of the existing virama-like InSC property values to distinguish them from the new property value.

Current and proposed new descriptions for the four virama-like categories are shown in the section *Descriptions of virama-like categories* below.

Batak viramas

The Batak viramas U+1BF2 ᮊ BATAK PANGOLAT and U+1BF3 ᮋ BATAK PANONGONAN currently have Indic syllabic category `Pure_Killer`. This category is documented as “killing of inherent vowel in consonant sequence, with no consonant stacking behavior”. While the Batak viramas have no “consonant stacking behavior”, they trigger a different behavior: In a sequence of a dependent vowel, a consonant, and a virama, the dependent vowel and consonant are swapped in rendering. For example, the syllable consisting of ᮊ *ta*, ᮊ *i*, ᮊ *pa*, ᮊ *virama* is rendered as ᮊᮊ *tip*. This implies that the entire (phonetic) syllable is considered a single orthographic syllable, as documented in the Unicode Standard, section [17.6 Batak](#).¹

¹ For some time after the encoding of Batak in the Unicode Standard it wasn’t clear how to implement this in a font because the Universal Shaping Engine treats the syllable as two separate clusters. However, [Constructing fonts for the Batak script](#) introduced a solution, and the widely disseminated Noto Sans Batak font has picked up that solution.

The reordering behavior distinguishes the Batak viramas from all other characters classified as Pure_Killer. In general, pure killers behave just like regular combining marks: They always remain visible, they don't create conjunct forms, and they don't cause special shaping behavior. They may, however, form ligatures with other characters.²

It's therefore appropriate to separate the Batak viramas from the other vowel killers in the Pure_Killer category and give them their own category, Reordering_Virama.

Descriptions of virama-like categories

The following changes to the descriptions of virama-like categories in IndicSyllabicCategory.tx are proposed:

Pure_Killer	<i>Current:</i> killing of inherent vowel in consonant sequence, with no consonant stacking behavior <i>New:</i> kills inherent vowel of consonant; always visible; has no conjunct formation, stacking, or reordering behavior; may form ligatures
Invisible_Stacker	<i>Current:</i> invisible consonant stacker virama <i>New:</i> kills inherent vowel of consonant; should never be visible by itself; has conjunct formation or stacking behavior
Virama	<i>Current:</i> killing of inherent vowel in consonant sequence or consonant stacker. Only includes characters that can act both as visible killer viramas and consonant stackers. Separate property values exist for characters that can only act as pure killers or only as consonant stackers. <i>New:</i> kills inherent vowel of consonant; may act like Pure_Killer or like Invisible_Stacker, depending on context and font
Reordering_Virama	<i>Current:</i> — <i>New:</i> kills inherent vowel of consonant; always visible; has reordering behavior; may form ligatures

² In another special case, the Myanmar kinzi, a Pure_Killer is part of the encoding of a repha-like form with stacking behavior, but the behavior can be explained by the Invisible_Stacker that also participates in the creation of the repha-like form.