

Unicode request for schwa with right hook

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The proposal follows on [L2/21-156](#).

Unicode support is needed by the British and Foreign Bible Society (BFBS) for an enormous back catalogue of published translations of Scripture. In L2/21-156, we requested the consonant letters <ɖ ɗ ɳ ɾ ʂ ʈ> for BFBS Romanized Malayalam. That orthography also requires a number of unencoded vowel letters, namely <ɤ ɨ ʉ ɐ ɐ̃>, but those were deferred because they were letters of the English Phonotypic Alphabet and had complications with casing. Although there are no capital letters in BFBS Romanized Malayalam (an asterisk marks proper names), encoding the lower-case letters without considering their eventual casing requirements might have caused problems. Karl Pentzlin's request [L2/24-136](#), which is scheduled for adoption with Unicode 18, covers all the vowel letters needed for Romanized Malayalam but one, the <ɐ̃> requested here, which is used in Sanskrit loans. <ɐ̃> is also found in Sinological material. A capital form is unknown.

Character

We suggest the name SCHWA WITH RIGHT HOOK, though U+AB34 ɐ̃ (E WITH FLOURISH) suggests **SCHWA WITH FLOURISH** as another possibility.

ɐ̃ 1DF8A LATIN SMALL LETTER SCHWA WITH RIGHT HOOK.

Properties

1DF8A;LATIN SMALL LETTER SCHWA WITH RIGHT HOOK;Ll;O;L;;;;;N;;;;;

Annotations

Schwa with flourish/right hook is treated as distinct from IPA schwa with rhotic hook by the Chinese Universal Phonetic Symbol Set.

025A LATIN SMALL LETTER SCHWA WITH HOOK

→ 1DF8A LATIN SMALL LETTER SCHWA WITH RIGHT HOOK

1DF8A LATIN SMALL LETTER SCHWA WITH RIGHT HOOK

→ 025A LATIN SMALL LETTER SCHWA WITH HOOK

References

- Wu Zongji (2011): *Century Masters Road, Sound of footsteps: Wu Zongji memorial collection* (世纪声路大师足音：吴宗济先生纪念文集). The Commercial Press, Beijing.
- FounderFX (2011). *Bookmaker: 使用指南 [User Guide]*. Beijing Founder Electronics Co.
- *markkø's erutiya suviḷḷsam (Gospel of Matthew) in Romanized Malayalam. W.H. Christian, Eastbourne, 1909.
- Sinolingua (2013) Wall Chart for Teaching Chinese as a Second Language · Pinyin (<http://www.sinolingua.com.cn/uploadfile/2013/0906/20130906050909616.pdf>)
- The Universal Phonetic Symbol Set in China (2006) [中国通用音标符号集]. Ministry of Education of the People's Republic of China, Language and Writing Standards no. GF 3007-2006.

Charts

Latin Extended-G

1DF00

1DFFF

	1DF0	1DF1	1DF2	1DF3	1DF4	1DF5	1DF6	1DF7	1DF8	1DF9	1DFA	1DFB	1DFC	1DFD	1DFE	1DFF
0	ᄀ	ᄁ	ᄂ	ᄃ	ᄄ	ᄅ	ᄆ	ᄇ	ᄈ					ᄉ	ᄊ	ᄋ
1	ᄌ	ᄍ	ᄎ	ᄏ	ᄐ	ᄑ	ᄒ	ᄓ	ᄔ					ᄕ	ᄖ	ᄗ
2	ᄘ	ᄙ	ᄚ	ᄛ	ᄜ	ᄝ	ᄞ	ᄟ	ᄠ					ᄡ	ᄣ	ᄤ
3	ᄥ	ᄦ	ᄧ	ᄨ	ᄩ	ᄪ	ᄫ	ᄬ	ᄭ					ᄮ	ᄯ	ᄰ
4	ᄱ	ᄲ	ᄳ	ᄴ	ᄵ	ᄶ	ᄷ	ᄸ	ᄹ					ᄺ	ᄻ	ᄼ
5	ᄽ	ᄾ	ᄿ	ᅀ	ᅁ	ᅂ	ᅃ	ᅄ	ᅅ					ᅆ	ᅇ	ᅈ
6	ᅉ	ᅊ	ᅋ	ᅌ	ᅍ	ᅎ	ᅏ	ᅐ	ᅑ					ᅒ	ᅓ	ᅔ
7	ᅕ	ᅖ	ᅗ	ᅘ	ᅙ	ᅚ	ᅛ	ᅜ	ᅝ					ᅞ	ᅟ	ᅠ
8	ᅡ	ᅢ	ᅣ	ᅤ	ᅥ	ᅦ	ᅧ	ᅨ	ᅩ					ᅪ	ᅫ	ᅬ
9	ᅭ	ᅮ	ᅯ	ᅰ	ᅱ	ᅲ	ᅳ	ᅴ	ᅵ					ᅶ	ᅷ	ᅸ
A	ᅹ	ᆀ	ᆁ	ᆂ	ᆃ	ᆄ	ᆅ	ᆆ	ᆇ					ᆈ	ᆉ	ᆊ
B	ᆋ	ᆌ	ᆍ	ᆎ	ᆏ	ᆐ	ᆑ	ᆒ	ᆓ					ᆔ	ᆕ	ᆖ
C	ᆗ	ᆘ	ᆙ	ᆚ	ᆛ	ᆜ	ᆝ	ᆞ	ᆟ					ᆠ	ᆡ	ᆢ
D	ᆣ	ᆤ	ᆥ	ᆦ	ᆧ	ᆨ	ᆩ	ᆪ	ᆫ					ᆬ	ᆭ	ᆮ
E	ᆯ	ᆰ	ᆱ	ᆲ	ᆳ	ᆴ	ᆵ	ᆶ	ᆷ					ᆸ	ᆹ	ᆺ
F	ᆻ	ᆼ	ᆽ	ᆾ	ᆿ	ᇀ	ᇁ	ᇂ	ᇃ					ᇄ	ᇅ	ᇆ

Figures

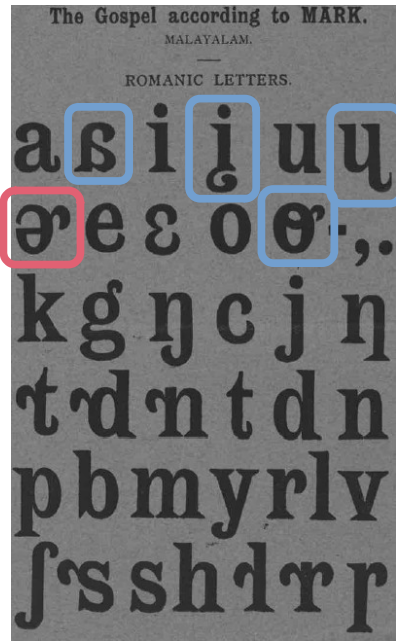


Figure 1. Back cover of the Malayalam gospel displaying the five vowel letters needed to complete Unicode coverage of its alphabet: <ɛ j ʊ ə ʊ>. All but <ə> (red) were adopted as part of Pentzlin's proposal. The rest of the alphabet is already covered: <a i u e ε o k g ŋ c j ŋ t d n t d n p b m y r l v ʃ s h l r r>.

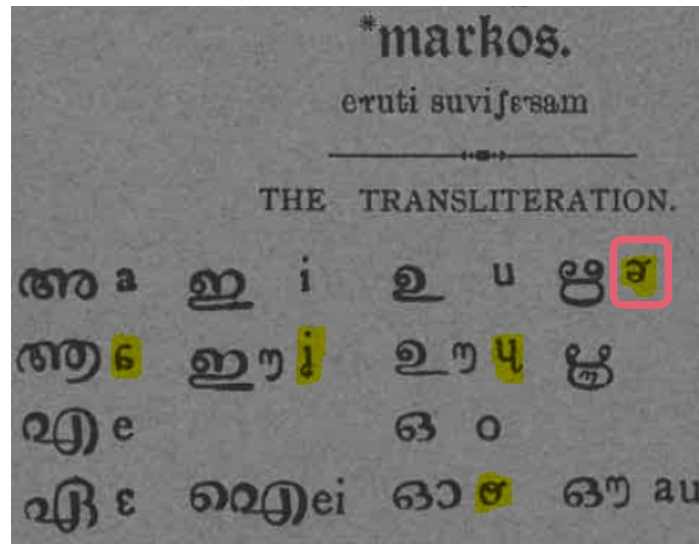


Figure 2. Front cover of the Malayalam gospel (1909), displaying the correspondences with Malayalam script. The requested letter <ə> transcribes the Sanskrit rhotic ഋ ṛ. Recently accepted are the other highlighted letters for long vowels, ആ ā <ɛ>, ഈ ī <i>, ഊ ū <u> and ഓ ʊ <ə>.

13 entu ceyysnam? avane kruḷḷikka ennu avar vintum
 14 nila-viliccu. *pilsttes avarōtu : avan entu darsam ceytu
 ennu parāṇṇare, avane kruḷḷikka ennu adhikam-syi nila-
 15 viliccu. *pilsttes puruṣarattinnu tēpti varuttuvān icchi-
 ccu *barabāsine avarkku vittu-kōtuttu *yeṣuvine camma-
 tti-kontu atippiccu kruḷḷippaṇ ḷpikkayum ceytu.

Figure 3. Malayalam gospel, p. 46, illustrating Phonotypic <ɿ j ʊ ɐ> and the requested letter <ɐ> (blue), which is found only in Sanskrit loans.

ie yé 爷 [iɛ] grandfather	üe yuè 月 [yɛ] moon, month	er ér 儿 [ɐ] son	an ān 安 [an] safe, calm; to install	en ēn 恩 [ən] favour, kindness
un chūn 春 [uən] spring	ün yún 云 [yn] cloud	üan yuán 圆 [yan] round; circle	ang fáng 房 [aŋ] house	eng dēng 灯 [əŋ] lamp
ong dōng 冬 [uŋ] winter	iong yòng 用 [yŋ] to use	ia yá 牙 [iA] tooth	iao yào 药 [iau] medicine	ian yǎn 眼 [iɛn] eye

Figure 4. Sinolingua (2013). Requested <ɐ> along with another Sinological para-IPA letter, small-cap <A>.

表 1 普通话元音区别特征矩阵(吴宗济, 1980b)										
	a	o	ə	e	i	u	y	ɿ	ʌ	ɐ
开/合	+	+	+			-				+

Figure 5. Zongji (2011: 219). <ɐ> along with Sinological para-IPA <ɿ ʌ>.

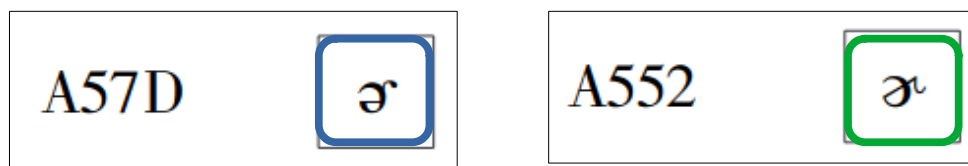


Figure 6. FounderFX (2011: 351–352). Contrast between Sinological <ə> and IPA <ə̃>.




031※		央卷舌元音	611	
			612	

Figure 7. *The Universal Phonetic Symbol Set in China* (2006: 6, 16). Sinological <ə> (left) is distinct from IPA <ə̃> (right). The note ‘※’ on 031 marks phonetic symbols used by Chinese linguists but not officially recognized by IPA (中国语言学家使用，但 IPA 尚未正式认可的音标符号). <ə> is the norm in Sinological material; the IPA letters are listed in a section of ‘less-common symbols.’

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹.

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.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://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	<i>Schwa with right hook</i>
2. Requester's name:	<i>Kirk Miller, Neil Rees</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>individual</i>
4. Submission date:	<i>2025 April 23</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>yes</i>
(or) More information will be provided later:	

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<i>no</i>
Proposed name of script:	
b. The proposal is for addition of character(s) to an existing block:	<i>yes</i>
Name of the existing block: <i>Latin Extended-G</i>	
2. Number of characters in proposal:	<i>1</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary <input type="checkbox"/>	B.1-Specialized (small collection) <input checked="" type="checkbox"/>
C-Major extinct <input type="checkbox"/>	B.2-Specialized (large collection) <input type="checkbox"/>
D-Attested extinct <input type="checkbox"/>	E-Minor extinct <input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/>	G-Obscure or questionable usage symbols <input type="checkbox"/>
4. Is a repertoire including character names provided?	
<i>yes</i>	
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	
<i>yes</i>	
b. Are the character shapes attached in a legible form suitable for review?	
<i>yes</i>	
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	
<i>Kirk Miller</i>	
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	
<i>SIL (Gentium Release)</i>	
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	
<i>yes</i>	
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	
<i>yes</i>	
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)?	
<i>no</i>	

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 Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N4502-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, 2009-11, 2011-03, 2012-01)

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?	
Rees is involved in a digitization project.	
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	
Reference:	
4. The context of use for the proposed characters (type of use; common or rare)	republication
Reference:	
5. Are the proposed characters in current use by the user community?	no
If YES, where? Reference:	
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	no
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	no
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	no
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
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, or could be confused with, 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?	no
If YES, is a rationale for such use provided?	
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	no
If YES, reference:	
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 characters?	no
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	