To: **Unicode Technical Committee**
**From:** **Andrij Rovenchak and Charles Riley (via Debbie Anderson, SEI, UC Berkeley)**
Subject: Feedback on Garay
Date: **Feb. 11, 2019**

A conference call was held on January 19, 2019 to discuss outstanding questions on Garay. Participants included Andrij Rovenchak, Charles Riley, Souleiman Faye, and Mamadou Diaw. The questions were listed in the Script Ad Hoc recommendations L2/18-168. (The latest version of the Garay proposal is L2/16-069.)
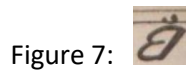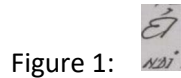
1. Script Ad Hoc Comments:
> Based upon the evidence presented, the VOWEL SIGN E and above-comma diacritical mark on lowercase MBA , NGGA , and NDA are graphically the same. As a result, we recommend the characters MBA, NGGA, and NDA be removed, and instead they be represented as a base letter and VOWEL SIGN E.

Response: It is ok to remove MBA, NGGA, and NDA and document that they should be represented with base letter and VOWEL SIGN E.

Note: The glyphs in the code charts are incorrect for NJA (cf. figures 1 and 7, vs. Dalby in figure 2, which appears to be incorrect).

Code chart: 10D57   10D77   Dalby (figure 2):

Figure 1:   Figure 7:

As a result, NJA should be added to the set of characters that should be removed; NJA should instead be represented with base letter and VOWEL SIGN E.

2. Script Ad Hoc Comments:
> Based on the evidence, the dot above should be separately encoded. Besides NJA and NGA, the examples show other letters with a dot above.

Figure 24: and (in caption) and in the image, above the left leg of GA:

Hence, we recommend the removal of NJA and NGA , and instead they be represented as a base letter and combining dot above.

Response: We are ok with this change. Q: Would the following name and location be acceptable: GARAY COMBINING DOT ABOVE at U+10D6E (above GARAY COMBINING GEMINATION MARK)?

3. Script Ad Hoc Comments:
> In §2.2.3 Gemination, the text reads:
>> "The gemination mark (◌̊) is written above a consonant letter and above the VOWEL SIGN E where that applies to a letter (⟨⟩). In encoded text, for searching and matching, perhaps the best practice would be to encode the gemination mark (bound to the consonant) first and the VOWEL SIGN E afterward, even though the presentation form appears to be the opposite."
>
> The wording in the second sentence should be revised, as the vowel mark should be encoded first, followed by the COMBINING GEMINATION MARK.
>
> In §9 Unicode Properties, The canonical combining class for VOWEL SIGN E and COMBINING GEMINATION MARK should be 230.

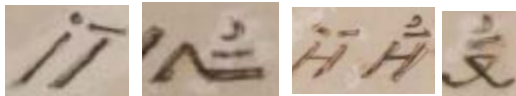**Response**: We agree to make these changes.

4. Script Ad Hoc Comments:
> In §4 Digits (and §9 Unicode Properties), explain why the Bidi_Class is AN (Arabic_Number), instead of EN (European_Number) or L (Left-To_Right).

Response: We need help understanding the difference between AN and EN (or L).

5. Script Ad Hoc Comments:
> Discuss the use of the macron in the following (figure 24)

Response:
(Below is Fallou Ngom's translation of the response from Assane Faye on the macron):

> "[The macron] is not part of the alphabet. The sign is used for those who want to write foreign languages with sounds different from ours (Wolof). The alphabet has 25 letters, which are the basic ones. The line added on top indicates nasality. Because many Arabs use nasality when they speak, we have added the line for those who wish one day to translate Arabic and show the nasality. The nasality line is for those people. But the 25 consonants are the basic ones for anyone writing Garay. Therefore, they cannot be increased and reduced. But if you were to add the nasality line on each of the 25 consonants, you will obviously get 50 consonants."

Based on the response from Assane Faye, it sounds like a combining overline may be required. Would the name GARAY SIGN OVERLINE (or GARAY COMBINING OVERLINE) be acceptable and would U+10D6D be an appropriate location?

6. Script Ad Hoc Comments:
> Document the various uses of the squiggle in Garay in the proposal (i.e., based on comments from Jack Merrill, in vowel-initial words before the vowel mark; to host the vowel /e/ (or /é/) after voiced stops; to mark the +ATR vowels /ë/, /ó/, /é/ [likely inspired by the use of diacritics in the official orthography]; and used after the sign for /i/, when intended to mark the sound [ü]).

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[Comments from Jack Merrill]
a) In vowel-initial words the squiggle appears before the vowel mark. Incidentally this makes distinguishing /a/ and /ë/ impossible in word-initial position, since /ë/ is written as a squiggle followed by <a>.

Response:
I suppose that the squiggle is used before word-initial consonants in a role similar to 'alef in Arabic (one can treat it as a form of glottal stop or something similar, null consonant). So, word-initially "a" would be ⸌ʃ, while "ë" (schwa?) would be ⸌ʃʃ. No confusion.

[Comments from Jack Merrill]
b) To host the vowel /e/ (or /é/) after voiced stops— this is because the "apostrophe" used to mark prenasalization on the voiced stops looks identical to the diacritic symbol used to mark the vowel /e/ on other letters. /e/ is actually the only vowel marked as a diacritic, so no other vowel needs to use the squiggle as a host.

Response:
We have clarified it in the discussion.

[Comments from Jack Merrill]
c) To mark the +ATR vowels /ë/, /ó/, /é/, likely inspired by the use of diacritics in the official orthography. Confusingly, it is placed *before* (right of) <a> to mark /ë/, *after* (left of) <e> to mark /é/, and *in between* two copies of <o> to mark /ó/.

Response:
As we clarified in the discussion, this last notation corresponds to some long /o/, something like oó. From Figure 1 here, https://unicode.org/L2/L2016/16069-n4709-garay-revision.pdf, we see that
"u" [written in the French manner as "ou"] is ⸍ʃ
"o" [written as "au"] is ʃ⸐
"ɔ" [open-o, written as "o"] is ⸐
"i" [written just as "i"] is ⸜
"ü" [written in the French manner as "u", I mean German u-umlaut] is ⸜ʃ
(the comment on "ü" is given below under "d)").
The "e" variants are hard to type, but here I see no confusion as well.
There is a well-known tradition in Brahmi-derived scripts, where vowel marks are placed before and after the base consonants, for instance.

[Comments from Jack Merrill]
d) The squiggle is also used after the sign for /i/, when intended to mark the sound [ü]. This is a somewhat odd choice, since Wolof does not make use of [ü] contrastively. In the one example of it from the text I transliterated, <süuwël> is written for *siiwal*, so I assume that in Fay's own pronunciation the vowel /i/ sounds like [ü] before /w/.