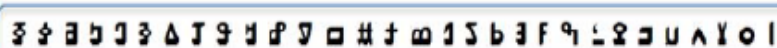TO: Unicode Technical Committee
FROM: Debbie Anderson (SEI, UC Berkeley) and Michael Everson
DATE: 31 October 2015
TITLE: Comments on N'Ko Additions

Below are several requests for N'Ko additions. Feedback from the UTC is requested on items 2-6. (Item 1 is included as input for font creators.)

Request 1 from user community (Baba Mamadi Diane, Mamady Doumbouya, Boubacar Diakite)

1). "Sebeden teketekenin" (disconnected capital): We need Nko disconnected characters to go along with the linked ones because they are used in the titles i.e. [Ābḷḍ īɔ̄ḋɔ̄ɡ̄ꝺ] and as alternative to the:

Response from Michael Everson:

N'Ko disconnected capitals will not be added as unique characters. The correct way to represent these is in a font which does not have the joining line between letters. To produce such a font all you have to do is replace the initial, medial, and final form glyphs with glyphs that simply don't have the connecting line.

Why is this important? Let's say you had a web page that had the text ꤕꓦꝺꓒꝺꝏ ꝺꓡꓧꓬꓲꓯ (maykal eversyn) on it. If we encoded "disconnected" N'Ko letters, you would not be able to search for both the connected and the disconnected version. But as I say, you do not need to encode letters for this: it is just a font style.

Response from users:

Ok. Though we need a different font for the disconnected ones just like in Latin. We want various appearances for the same characters such as:

Request 2 from user community

2). **Character name:** "Dantayalan" (symbol for units) [ ]: this symbol is added to the first letter of a unit name such as killos, grams, etc.

Bibliography:

lonko bolon12/ 2003

Cairo

2012 Cairo — Sebesun suu n'a sekoya

Response from Michael Everson:

The DANTAYALAN is an abbreviation mark for units of measure. In the evidence you have shown it appears on the letters CHA, SA, GBA, FA, and KA. I need to see these written out as well as abbreviated. Is one of them used for gram? For metre? Are these five letters the *only* ones the sign combines with? We need to know this because the marks fuse with the joining line, and font developers need to know what to do. Please be exhaustive in your response.

(See also Andrij Rovenchak's revised proposal L2/15-126)

Response from users:

Our understanding of DANTAYALAN is that it is an independent character, just like a tone, that can be added to any letter to make it a symbol for a unit. This is very important because we are a people with a new writing system; and it is going to be very difficult to enumerate every potential unit making letters.

examples: ⵣ ⴰ ⴱ ⴲ ⴳ ⴴ ⴵ ⴶ ⴷ ⴸ ⴹ ⴺ ⴻ ⴼ ⴽ ⴾ

Ka, Fa, Gba, Sa,   Cha

Request 3 from user community

3). **Character name: "Te-kerende" (dash) [_]** This is what links parts of a compound word as in words such as "every one" [ⵣⴰ_ⵉ_ⵣⴰ] "each thing" [ⴶⴼ_ⵓ_ⵓⴼ], etc.

Bibliography:

Kurana 2000 Saudia Arabia

Response from Michael Everson:

The TA-KERENDE is a sort of low hyphen that breaks joining behaviour. What is its relation to the LAJANYALAN? Could U+005F LOW LINE be used for this?

Response from users:

TE-KERENDE is different from the LAJANYALAN in that it is used to join two parts of the same word like in compound words, which are abundant in Nko. It is always above the line.

ṃ̇ɔ-u-ṃ̇ɔ · ɜ̣ɔ-ɔ-ɔ̣ɔ · ʌ̃ɔɹ૫-ʌ̃ɔɹ૫ · Īɛ̃ɔ̃ɔ-IɛÑɔF ✔

ṃ̇ɔ-u-ṃ̇ɔ · ɜ̣ɔ-ɔ-ɔ̣ɔ · ʌ̃ɔɹ૫-ʌ̃ɔɹ૫ · Īɛ̃ɔ̃ɔ-IɛÑɔF ✗

Su:-u-su: , so-o-so , konen-konen , bu:da-bu:da

LAJANYALAN is used to add to the joining behavior of the letters and it is always on the same line as the letters. Ц੭ɔ੭ d° = Ц੭ɔd° ‹ɔ੭૧੭F = ɔ੭૧੭F

Requests 4-5 from user community

4). "Fadankamasere" (Currency symbol) We used to write the whole money name before using these symbols. Now we just use the symbols.
    "dorome & taman" [우 , ь]: these symbols are used to denote currency.

Character name: 4

- "dorome": The first one [우] is a symbol for 1 "dorome" as "$" is a symbol for 1 dollar;

- "taman" the second [ь] is a symbol for "taman" as "c" is a symbol for 1 cent.   5

Response from Michael Everson:

The DOROME SIGN and the TAMAN SIGN are currency symbols like the DOLLAR SIGN and the CENT SIGN. What is not clear is how the characters are drawn when they are used with digits. How high or low are they? Are they written before or after the figure? Are both used together (like $5¢95) or are they only used as in English ($5.00, 95¢) I need to see examples of them used with numbers.

Response from users:

The symbols for DOROME and TAMAN (i.e English $ and c) are independent and are used before the numbers as in the following examples:

ū੭ɔ੭੭ Ⴀ੭ ੭̃ɔ੭ɔ੭੭HYF ĪΔⅠb Ⴀ੭ ū੭ɔ੭੭ ʌ̃ΔႶɔ

$5¢95 = Ⱶ੭ь·Ⱶ우 =   Ⱶ   ੭   ь · Ⱶ   우

ū੭ɔ੭੭ Ⴀ੭ ੭̃ɔ੭ɔ੭੭HYF ĪΔⅠb Ⴀ੭ ū੭ɔ੭੭ʌ̃ΔႶ ʌ̃ΔႶɔ

$5,00 ¢95 = Ⱶ੭ь 00·Ⱶ우 =   Ⱶ   ੭   ь · 00·Ⱶ   우

Requests 6-7 from user community

The rest of classic letters in Nko including:

Character name:

- Lasandi "top-headed apostrophe" [~] → **6**
- Lakiso "bottom-headed apostrophy " [_] → **7**

Response from Michael Everson:

I do not have enough information about these. These look like Arabic characters used with numbers or dates. What are they used for? I need examples written out, with transliteration and translation, please, and an explanation of what they are used for. If these are very rare, it may be appropriate to use already-encoded combining marks (especially if they are used in Arabic).

Response from users:

These are the classic ways of showing the omitted tones, LASANDI (') for omitting the high tone and LAKISO (') for omitting the low tone. All the other classical symbols were encoded the first time, but we forgot about these ones. These are different from the Arabic ones and they don't have similar functions.

ߘߍ ߯ߓ ߁ ، ߘߍ ߯ߓ ߁

Here are some examples: كهيعص ① ، زَكَرِيَّآ ②

(See further examples on next page.)

Requests 8-9 from user community

The rest of classic letters in Nko including:

- Layelemannen "converted la" [߯] → **8**
- Yayelemannen "converted ya" [߰] → **9**

(See further examples of 8 CONVERTED LA on next page.)

Response from Michael Everson:

These clearly look like the same combining mark, used with LA and YA. What is it for? It looks like it spans the LA and YA and also some other character? Please supply example words with transliterations and translations.

Response from users:

These are classical letters used to symbolize nasal neutralization they were also forgotten the first time.

Here are some examples:

ߐ ߓ ߕ ߕ ① كدد : ! ߯ ⑥ ، ߓߘ ߯ߓ ! : كدد ⑦

Examples of (6) LASANDI, (7) LAKISO, and (8) CONVERTED YA: