

## Update on implementation status of African scripts

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The following is a list showing the current status of implementations of African scripts, which may encourage development. If you have corrections or additional information, please contact Charles Riley ([zenodotus@gmail.com](mailto:zenodotus@gmail.com)) cc'ing Debbie Anderson ([dwanders@sonic.net](mailto:dwanders@sonic.net)).

*Note: Noto fonts are freely available from <https://github.com/googlefonts/noto-fonts> . To see coverage of Noto fonts across Unicode blocks, see the handy Noto overview at: <https://notofonts.github.io/overview/> . However, Neil Patel reports that Noto fonts are often not accessible within Google Docs.*

A short section at the end of this document (page 4) discusses outstanding needs for extended Latin and extended Arabic in representing African languages.

**Adinkra** (alphabet, symbols): An encoding proposal has been submitted by the community. More evidence of actual usage through time is needed before the proposal can progress. Latest document: [L2/21-020](#) (with more information in [L2/21-237](#))

**ADLaM** (encoded in Unicode): supported across multiple platforms, although not yet enabled in some library cataloging software. CLDR has been well propagated. Layout requirements may need some attention, as with N'ko. Third-party keyboard applications are available for Android ([link](#)), iOS ([link](#)), and MacOS ([link](#)) through JamraPatel. Windows has native OS support with both virtual and touch keyboard layouts available as well as an Adlam complement in the Ebrima system font. iOS and MacOS have native support with a system keyboard and Noto Sans Adlam. Android also has native support with Gboard and Noto Sans Adlam. Users of the free web version of Office and the subscription desktop version can use Kigelia for Adlam texts. Richard Ishida has a character picker ([link](#)). There is also a freely accessible Noto font available.

**Bamum** (encoded in Unicode as two blocks, [Bamum](#) and [Old Bamum](#)): newly supported at the system level in Windows. On Macs and in the iOS, Google's Noto fonts have been enabled for some time. Tapiwanashe Garikayi has a font for the modern range. In addition, Richard Ishida has a character picker for Bamum ([link](#)). Note: Diacritic placement in various text processing software needs attention. Input methods are available but establishing a keyboard layout in LDML is still needed. CLDR work hasn't started yet, and a library romanization table is also needed.

**Bassa Vah** (encoded in Unicode): Support is mainly web-based, through a Google Noto font and Richard Ishida's web-based visual character picker ([link](#)). Little integration into operating systems thus far. Tapiwanashe Garikayi and students of Johannes Bergerhausen have worked on fonts to support the range.

**Beria**: An encoding proposal has been submitted. Consensus amongst community members on the repertoire is needed in order for the proposal to progress. Latest proposal: [L2/08-265](#)

**Bété**: Preliminary encoding proposals have been put forth, and work with the community is ongoing. Latest document: [L2/19-044](#)

**Borama**: No Unicode encoding proposal has yet been put forth.

**Coptic** ([Coptic block](#) in Unicode / [Coptic in Greek block](#)): well-supported in operating systems. Third-party keyboards and fonts are available for download, including a Google Noto font and one from Everttype ([Antinoou](#)).

**Diteme tsa Dinoko**: No Unicode encoding proposal has yet been put forth.

**Dogon pictographs**: No Unicode encoding proposal has yet been put forth.

**Eghap (Bagam)**: A preliminary encoding proposal has been put forth. Further documents are needed and/or digitization projects requiring encoding of the characters. Latest proposal: [L2/12-229](#)

**Egyptian Demotic**: No Unicode encoding proposal has yet been put forth.

**Egyptian Hieratic**: No Unicode encoding proposal has yet been put forth.

**Egyptian Hieroglyphs**: The character range is supported with system fonts across multiple platforms. On Windows, the phallic characters used to be disabled by default in certain contexts, but on newer versions of Windows the restriction has been lifted. A web-based character picker is available from Richard Ishida ([link](#)). There is also a freely accessible Noto font available. Certain improvements in implementation of layout have been enabled for the display of cartouches. Note that new format controls will appear in Unicode 15.0, scheduled for release in September 2022, which will allow improved positioning of characters (see [L2/21-248](#)). A major expansion of the repertoire is planned (see [L2/21-108](#)).

**Ethiopic** (encoded in Unicode [in several blocks](#)): supported across multiple platforms. Characters are largely encoded, with some ranges due to remain in the Private Use Area (PUA) permanently. Ethiopic Manuscript Unicode Font Initiative is hosted here: <https://github.com/geezorg/emufi> . There is also a freely accessible Noto font available. Gurage additions made in Unicode 14.0 have been added to Noto Sans Ethiopic and Noto Serif Ethiopic. System fonts from Apple (Kefa) and Microsoft (Nyala) have not been updated.

**Fula scripts (Dita, Ba)**: To the best of my knowledge, no Unicode encoding proposal has been put forth for either the Dita or Ba scripts referred to by David Dalby in his 1969 article.

**Garay**: Work toward encoding is reaching finalization with the community. Latest document: [L2/22-048](#)

**Gbékoun**: No Unicode encoding proposal has yet been put forth, but JamraPatel is currently assisting the Fon community with assembling a proposal.

**Hausa (Raina Kama)**: A Unicode encoding proposal has been submitted but is very rudimentary. ([Link](#))

**Hausa (Salifou)**: A Unicode encoding proposal has been submitted but is very rudimentary. ([Link](#))

**Hausa (Tafi)**: No Unicode encoding proposal has yet been put forth.

**Kaddare**: No Unicode encoding proposal has yet been put forth.

**Kii:** No Unicode encoding proposal has yet been put forth.

**Kongo cosmograms:** No Unicode encoding proposal has yet been put forth.

**Kore Sebeli:** An encoding proposal has been submitted by the community. More evidence of widespread usage and more details on the script have been requested. Latest posted document: [L2/21-209](#)

**Kpelle:** A preliminary encoding proposal has been put forth, and community interest is growing. Latest proposal: [L2/10-063](#)

**Loma:** Preliminary encoding proposals have been submitted and ongoing work is underway with the community. Last proposal: [L2/10-005](#) (with more information in [L2/17-003](#), [L2/17-059](#), [L2/17-233](#))

**Mandombe:** Preliminary encoding proposals were submitted, but the community has decided not to go forward with Unicode encoding. There is still interest in encoding from a separate group within the community, however progress has been stalled while waiting on documentation.

**Masaba:** No Unicode encoding proposal has yet been put forth.

**Medefaidrin** ([encoded](#) in Unicode): There is a Google Noto font for the Medefaidrin range, but I don't know of other corresponding support in implementation yet.

**Mende Kikakui** ([encoded](#) in Unicode): A Google Noto font exists and limited web-based input methods are available. There is a IIIF-based project using the range. Standardized keyboard layouts and integration of the range into system fonts are still needed. Character picker by Richard Ishida ([link](#)).

**Meroitic** (encoded in Unicode as two blocks, [Meroitic Hieroglyphs](#) and [Meroitic Cursive](#)): A Google Noto font supports Meroitic Hieroglyphs and the Meroitic Cursive range. Other third-party fonts are available for Meroitic Hieroglyphs. I don't know of any specific input support on either range.

**Miriden:** No Unicode encoding proposal has yet been put forth.

**Mwangwego:** An encoding proposal with preliminary data has been submitted. More evidence of widespread usage is needed. Last proposal: [L2/12-311](#)

**N'Ko** ([encoded](#) in Unicode): supported across multiple platforms, including library cataloging software. Layout requirements may still need attention, especially in typesetting and text processing applications and in contexts where scripts of different directionality are employed by the user. Has a presence in CLDR and keyboard layouts exist. Fonts include Ebrima, Noto Sans N'Ko, and one by Tapiwanashe Garikayi. In addition, Richard Ishida has a character picker ([link](#)). Note: Diacritic placement in various text processing software needs attention.

Third-party keyboard applications are available for Android ([link](#)), iOS ([link](#)), Windows ([link](#)), and MacOS ([link](#)) through JamraPatel in partnership with NWSJ. Windows has native OS support with both virtual and touch keyboard layouts available as well as an N'Ko complement in the Ebrima system font. iOS and MacOS have native support with a system keyboard and Noto Sans N'Ko. Android also has native support with Gboard and Noto Sans N'Ko. Users of the free web version of Office ([link](#)) and the subscription desktop version can use Kigelia for N'Ko texts.

**Nsibidi:** No Unicode encoding proposal has yet been put forth.

**Nwagu Aneke:** No Unicode encoding proposal has yet been put forth.

**Oromo:** no encoding proposal yet for the orthography of Shaykh Bakri Saḩalō.

**Osmanya** ([encoded](#) in Unicode): A Windows system font exists to support Osmanya, but little further development has been done. There is also a freely accessible Noto font available. Users of the free web version of Office ([link](#)) and the subscription desktop version can use Kigelia to type Osmanya.

**Tifinagh** (encoded in Unicode): well-supported across multiple platforms. Richard Ishida has a character picker for Neo-Tifinagh ([link](#)). There is also a freely accessible Noto font available. Users of the free web version of Office ([link](#)) and the subscription desktop version can use Kigelia for Tifinagh texts.

**Vai** (encoded in Unicode): supported across multiple platforms. Fine-tuning font metrics and establishing a keyboard layout in LDML may still be needed. Used in library cataloging and has a presence in CLDR data. Richard Ishida has a character picker ([link](#)). There is also a freely accessible Noto font available. Users of the free web version of Office ([link](#)) and the subscription desktop version can use Kigelia for Vai texts.

**Wolof** (S. Mbaye): No Unicode encoding proposal has yet been put forth.

**Yoruba** (Ifa) holy writing: No Unicode encoding proposal has yet been put forth.

### **Needs for extended Latin and ‘Ajami (extended Arabic):**

Character ranges are largely encoded for these and available for use through some system fonts.

For extended Latin, the layout deficiencies in terms of diacritic rendering – especially over capitalized phonetic letters – have been largely addressed but could still use some improvement at the margins.

For extended Arabic (Ajami), a couple of fonts – Alkalami at SIL, Harmattan at Google Fonts and Kigelia at Microsoft – have appeared in the last few years that cover the characters required for African languages.

For both extended Latin and extended Arabic, the large remaining urgency is for language-specific keyboard layouts tailored to more individual languages.