Title
Revised proposal for encoding the Mende script in the SMP of the UCS

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Publication Date
2012-01-24

Peer reviewed
1. Introduction. The Mende script, also called “Kikakui” for the first three characters in the system, was devised around 1917 by Mohamed Turay, an Islamic scholar in the Sierra Leonean town of Maka, and further developed by his son-in-law and student, Kisimi Kamara, a tailor from the town of Vaama. Kamara’s contribution was an additional 150 syllabic characters to Turay’s original 42, and efforts to promote the script outside of the Barri chiefdom, in southern and eastern Sierra Leone, beginning in the 1920s. While the characters of the Mende script were inspired by an indigenous corpus of Mende graphic symbols, certain cryptographic characters, and the imaginations of Turay and Kamara, the syllabic blueprint for the script was unquestionably influenced from the neighboring Vai, who possessed a similarly organized script by 1832 or 1833. The Mende and the Vai speak related Mande languages and are neighbors in Sierra Leone and Liberia.

The Mende script was employed by missionaries in some early gospel translations dating from the 1920s, and Konrad Tuchscherer estimates that writers in the script today continue to number in the hundreds. Today Mende uses a Latin orthography based on the “Africa” alphabet of Diedrich Westermann. As of 1991, the total population of Mende speakers was estimated at just under 1.5 million in Sierra Leone and Liberia (SIL Ethnologue). The script was used for record-keeping and correspondence, and some chiefdom clerks adopted it for official use. In the 1940s, however, the British established the Protectorate Literacy Bureau in Bo, and a Latin orthography for Mende was taught. This contributed to the gradual disuse of the Mende script. The primary sources for the repertoire proposed here are the chart in Figure 3 and David Dalby’s chart in Figure 4, but the authoritative chart is that from Tuchscherer 1996 (Figures 1a-1c).

Figure 3 represents the last version of the script from Kisimi Kamara (with glosses added by S. Milburn). According to Tuchscherer 1996:237, it serves as the basis of the syllabary that appears in the current guide for Mende language teachers. David Dalby’s chart in Figure 4 was published in 1967. Figures 1a-1c come from Tuchscherer’s dissertation, based on research conducted in the field from 1990–1994, from interviews with over 100 script literates. A few annotations in the nameslist refer to the syllabary of Amara Mansaray, who was a prominent practitioner of the Mende script. Samples of these syllabaries and others are contained in Tuchscherer 1996, which provides the best and most complete overview and synthesis of all other materials.

2. Structure. Mende is a syllabary, written from right to left.
3. Ordering. The only traditional order which exists for the syllabary is given in the first part, the 42 characters devised by Mohamed Turay. In Figure 3 below, it can be seen that the first 42 characters are ordered "sensibly" according to sound and shape, but the remaining 150 characters created by Kisimi Kamara are more or less randomly ordered. (There are reports that at least some of the sequences correspond to words of phrases in Mende.) It seems unlikely that such an ordering would be "useful" in practical terms, such as dictionary look-up. The ordering here has been based on Turay’s original scheme, but filling out the pattern with complete runs of syllables based on their initial sound. The assignments have been made thus:

Traditional k- w- wv- m- b- Ø- s- l- d- t- j- y- f- n- h-
Supplement ŋg- g- ṭ- p- mb- kp- gb- r- nd- nj- v- ŋ-

Thus the whole range is:

k-, w-, wv-, m-, b-, Ø-, s-, l-, d-, t-, j-, y-, f-, n-, h-

The traditional order is given in a run from k- to h-; the supplementary initials have been ordered in a secondary run according to the same place of articulation (3 velars, 4 labials, a liquid, a pre-nasalized dental and palatal, a labiodental, a nasal). This provides a certain mnemonicity which is, in fact, present in the structure of the script: compare the shapes of ŋg- g- ṭ- p- mb- kp- gb- r- nd- nj- v-

In Figure 4, Dalby’s chart gives numbers which indicate the order Dalby found in the materials he was analysing (numbers 196 and 197 were not in Dalby’s sources); these are given in the table below. Of interest are the first 42 characters, which form the basis for the ordering proposed here. Although the vowels in he ha ho depart from the ki ka ku pattern, these are still taken as the last of the “orderly” order, though hi ha hu has been used for the whole series. Note that the relative order of the d-, s-, and l- series matches that found in Tuchscherer (Figure 1a), but differs from Kamara’s order given in Figure 3, which has s-, l-, d-, and Dalby (Figure 4), which has l-, d-, s-. This is a normal variation as both orders are found in various sources. The order proposed for encoding has been settled on in consultation with Konrad Tuchscherer for standardization, and follows Kamara’s order (s-, l-, d-).

| 001 | ki | 023 | ta | 045 | wo | 067 | ndo | 089 | de | 111 | ga | 133 | fo | 155 | gi | 177 | ṭg̃a |
| 002 | ka | 024 | tu | 046 | hũa | 068 | pi | 090 | ṭg̃i | 112 | kpo | 134 | njo | 156 | ṭg̃o | 178 | l |
| 003 | ku | 025 | li | 047 | mbe | 069 | to | 091 | te | 113 | je | 135 | t | 157 | je | 179 | kua |
| 004 | wi | 026 | ja | 048 | ko | 070 | gbu | 092 | kpa | 114 | wo | 136 | so | 158 | kpo | 180 | do |
| 005 | wa | 027 | ju | 049 | wva | 071 | gbo | 093 | gbe | 115 | ṭge | 137 | ti | 159 | ṭgaa | 181 | do |
| 006 | wu | 028 | ji | 050 | pu | 072 | mbe | 094 | m̃ | 116 | se | 138 | bo | 160 | jo | 182 | vi |
| 007 | mĩ | 029 | ja | 051 | p̃ | 073 | le | 095 | ke | 117 | ñe | 139 | w̃e | 161 | mbe | 183 | ṭg̃o |
| 008 | m̃a | 030 | ju | 052 | hẽ | 074 | kpu | 096 | he | 118 | w̃e | 140 | ho | 162 | se | 184 | ẽ |
| 009 | m̃u | 031 | yi | 053 | hĩ | 075 | fe | 097 | be | 119 | nde | 141 | yo | 163 | e | 185 | va |
| 010 | bi | 032 | ya | 054 | lo | 076 | ko | 098 | nyẽ | 120 | ṭg̃o | 142 | mboo | 164 | nyĩ | 186 | hu |
| 011 | ba | 033 | yu | 055 | te | 077 | vo | 099 | pa | 121 | yo | 143 | w̃i | 165 | o | 187 | mboo |
| 012 | bũ | 034 | fi | 056 | gba | 078 | fe | 100 | e | 122 | mbu | 144 | vo | 166 | guĩ | 188 | mbe |
| 013 | i | 035 | fa | 057 | ṭũ | 079 | so | 101 | f̃a | 123 | ndi | 145 | mb̃i | 167 | gua | 189 | mũe |
| 014 | a | 036 | fu | 058 | nyã | 080 | ye | 102 | po | 124 | gbi | 146 | ṭg̃e | 168 | gu | 190 | ge |
| 015 | u | 037 | ni | 059 | mẽ | 081 | pe | 103 | bo | 125 | ndu | 147 | o | 169 | ñã | 191 | nde |
| 016 | īs | 038 | ñã | 060 | nyũ | 082 | ṭg̃u | 104 | to | 126 | we | 148 | gbu | 170 | nyũ | 192 | ñu |
| 017 | da | 039 | ñũ | 061 | w̃i | 083 | heĩ | 105 | mboo | 127 | ṭg̃u | 149 | nje | 171 | ra | 193 | hon |
| 018 | du | 040 | he | 062 | mba | 084 | le | 106 | ṭg̃o | 128 | hou | 150 | be | 172 | mbo | 194 | w̃i |
| 019 | si | 041 | ha | 063 | ja | 085 | ve | 107 | gbe | 129 | nda | 151 | vu | 173 | ve | 195 | ā |
| 020 | sa | 042 | ho | 064 | ndo | 086 | ṭg̃e | 108 | kpe | 130 | hã | 152 | nja | 174 | mbo | 196 | sia |
| 021 | su | 043 | ñgã | 065 | ke | 087 | hũ | 109 | ye | 131 | i | 153 | lo | 175 | joo | 197 | fua |
| 022 | ti | 044 | kpe | 066 | po | 088 | fo | 110 | lẽ | 132 | kpi | 154 | m̃ãa | 176 | hĩ |
4. Glyph variants. Dalby’s chart in Figure 4 shows a number of glyph variants in parentheses. These should be treated as Vai and Bamum glyph variants have been: that if they are required, either a dedicated font for them should be used, or OpenType tables to invoke alternate forms. The forms used in the chart tend to be similar to the primary ones given in Dalby, though Tuchscherer’s chart has in some cases taken precedence. Dalby’s chart includes two characters not reflected in the repertoire here: his 193 ŋge and 195 hɔ̃ are not included for want of attestation elsewhere.

5. Character names. The names reflect those given in Tuchscherer 1996, but with the usual UCS conventions, with E representing e, EE representing e, o representing o, and oo representing o, and NG representing y. The standard catalogue number is given alongside the phonetic name of the character because the phonetic name may differ from source to source while there is general agreement on the number assignment. There are two characters with the name MBEE, U+1E896 and U+1E897, and two with the name IN, U+1E82A and U+1E82B. These are distinguished in their names by the unique catalogue number ( نط MENDE SYLLABLE M047 MBEE, اط MENDE SYLLABLE M188 MBEE, ن MENDE SYLLABLE M131 IN, and ط MENDE SYLLABLE M135 IN). According to Tuchscherer (1996:59), it is conceivable that the two MBEE characters originally referred to different sounds, but the distinction has since been lost; the other pair is distinguished functionally, where the second is used for a negative particle.

6. Linebreaking. Syllables and digits behave as do the syllables and numbers and in Vai and Bamum and should have the same properties. Evidently this is AL for the syllables and NU for the numbers.

7. Punctuation. To date, no script-specific punctuation has been seen. In Tuchscherer 1996. Mende is shown to have three separate traditions of writing numbers: European digits, Arabic digits, and the autochthonous Mende system, described here. Mention is made of “a single dot used for punctuation”; examples available at present do not show such a dot, but it must be either U+002E FULL STOP or U+2E31 WORD SEPARATOR MIDDLE DOT.

8. Digits. Digits and numbers exist, and have been described in Tuchscherer 2007 on the basis of his own work and analysis of the work of Eberl-Elber (1936, 1937), Klinghenheben (1934), and Dalby (1967). Some of these may have been originally derived from the syllables used to represent the names of the numbers:

\[
\begin{align*}
1 & \text{ itaa } & \text{ may be related to the syllable } & i \\
> 4 & \text{ naani } & \text{ may be related to the syllable } & nan \\
\overset{\text{}}{6} & \text{ weita } & \text{ may be related to the syllable } & \text{wei} \\
\vec{8} & \text{ wafela } & \text{ may be related to the syllable } & \text{wo} \\
\vec{9} & \text{ wayakpa } & \text{ may be related to the syllable } & \text{wa} \\
\vec{10} & \text{ taalu } & \text{ may be related to the syllable } & \text{ta} \\
\vec{11} & \text{ puu } & \text{ may be related to the syllable } & \text{pu}.
\end{align*}
\]

There would be no benefit in trying to unify these with the base letters, however, and other numbers (≤ 2 fele, ω 3 sawa, 8 5 lolu) have no obvious analogue in the syllabary.

At present no digit zero exists, so decimal calculation appears not to be made in Mende. The Mende number system makes use of a variety of base characters and some modifier digits which are used to build larger numbers. The basic units are:

\[
\begin{align*}
1, & \leq 2, \omega 3, \geq 4, \vec{8}, 5, \vec{6}, \vec{8}, \vec{9}, \vec{10}
\end{align*}
\]
The teens are expressed as a combination of a digit over top of a base that indicates the teens:

\[
\begin{align*}
&11, 12, 13, 14, 15, 16, 17, 18, 19 \\
&\text{The tens are expressed as a combination of a digit over top of a base that indicates the tens:} \\
&\text{The hundreds are expressed as a combination of a digit over top of a base that indicates the hundreds:} \\
&\text{The thousands are expressed as a combination of a digit over top of a base that indicates the thousands:} \\
&\text{The ten thousands are expressed as a combination of a digit over top of a base that indicates the ten thousands:} \\
&\text{The hundred thousands are expressed as a combination of a digit over top of a base that indicates the hundred thousands:} \\
&\text{The millions are expressed as a combination of a digit over top of a base that indicates the millions:} \\
\end{align*}
\]

Consideration was given to attempting to “decompose” these numbers with a combining element above or below. The three options are outlined here:

8.1 Atomic encoding. This is the preferred method for encoding Mende numbers. The script is otherwise simple and requires no special ligation or OpenType behaviour. Encoded atomically, Mende numbers’ character properties can have the correct values and, again, rendering will be as simple for the numbers as it is for the main syllabary.

8.2 Combining character encoding. It could be possible to encode a set of combining superscript units, as \( \text{二百} \), \( \text{二百} \), \( \text{二百} \) and use them with a number of base characters, but this is problematic for several reasons. First, it requires expert diacritic positioning in fonts, particularly over very wide bases like those of the hundreds and above. Such support may not be available in, for example, fonts used for display of filenames at an OS level. Second, it complicates the encoding and/or representation of the tens and twenties because \( \text{十} \) 10 has an inherent dot (or is it a second superscript unit? *\( \text{十} \) does not occur and neither does *\( \text{十} \)); \( \text{Teen} \) has no independent existence, and the numbers \( \text{十} \) 20 and above have no dot.
8.3 Ligature encoding. It has been suggested to encode numbers as typographic ligatures, but this encoding model would be without precedent for numbers of this kind. In the first place, typographic ligatures are essentially optional, and it can be stipulated that legibility must not be compromised if the ligatures are broken. But the Mende number 9,999,999 is correctly written \(\text{abcdefgh}\), and never \(\text{hello}\), which is simply incorrect and unrecognizable to readers of Mende. Whether “optional” ligatures or “required” ligatures are considered is irrelevant; as noted above, both ligature encoding and combining character encoding force complex rendering requirements on Mende, which otherwise does not need it.

8.4 Precedent. “Pre-composed” complex numbers have already been encoded for Cuneiform, Egyptian hieroglyphs, and the Aegean scripts, and many of these could, in principle, be “composed”. No advantage to users or implementors of Mende would obtain from composition; it would simply make the script harder to work with. Accordingly, we reiterate our strong preference for atomic encoding.

8.5 Directionality of numbers. Numbers, like syllables, have right-to-left directionality, and because the system is positional, the numbers are combined with the larger unit first with the smaller units following:

\[
\begin{align*}
\text{abcdefgh} & \quad 27 & \quad \text{i} & \quad 101 \\
\text{abcdefgh} & \quad 35 & \quad \text{j} & \quad 206 \\
\text{abcdefgh} & \quad 48 & \quad \text{k} & \quad 417 \\
\text{abcdefgh} & \quad 51 & \quad \text{l} & \quad 594 \\
\text{abcdefgh} & \quad 63 & \quad \text{m} & \quad 620 \\
\text{abcdefgh} & \quad 72 & \quad \text{n} & \quad 787 \\
\text{abcdefgh} & \quad 86 & \quad \text{o} & \quad 833 \\
\text{abcdefgh} & \quad 94 & \quad \text{p} & \quad 999 \\
\end{align*}
\]


1E800;MENDE SYLLABLE M001 KI;Lo;0;R;;;;;N;;;;;
1E801;MENDE SYLLABLE M002 KA;Lo;0;R;;;;;N;;;;;
1E802;MENDE SYLLABLE M003 KU;Lo;0;R;;;;;N;;;;;
1E803;MENDE SYLLABLE M065 KEE;Lo;0;R;;;;;N;;;;;
1E804;MENDE SYLLABLE M095 KE;Lo;0;R;;;;;N;;;;;
1E805;MENDE SYLLABLE M076 KO;Lo;0;R;;;;;N;;;;;
1E806;MENDE SYLLABLE M048 KO;Lo;0;R;;;;;N;;;;;
1E807;MENDE SYLLABLE M179 KUA;Lo;0;R;;;;;N;;;;;
...
1E8C0;MENDE SYLLABLE M164 NYIN;Lo;0;R;;;;;N;;;;;
1E8C1;MENDE SYLLABLE M058 NYAN;Lo;0;R;;;;;N;;;;;
1E8C2;MENDE SYLLABLE M170 NYUN;Lo;0;R;;;;;N;;;;;
1E8C3;MENDE SYLLABLE M098 NYEN;Lo;0;R;;;;;N;;;;;
1E8C4;MENDE SYLLABLE M060 NYON;Lo;0;R;;;;;N;;;;;
1E8D1;MENDE DIGIT ONE;No;0;R;;;;1;N;;;;;
1E8D2;MENDE DIGIT TWO;No;0;R;;;;2;N;;;;;
1E8D3;MENDE DIGIT THREE;No;0;R;;;;3;N;;;;;
1E8D4;MENDE DIGIT FOUR;No;0;R;;;;4;N;;;;;
1E8D5;MENDE DIGIT FIVE;No;0;R;;;;5;N;;;;;
1E8D6;MENDE DIGIT SIX;No;0;R;;;;6;N;;;;;
1E8D7;MENDE DIGIT SEVEN;No;0;R;;;;7;N;;;;;
1E8D8;MENDE DIGIT EIGHT;No;0;R;;;;8;N;;;;;
1E8D9;MENDE DIGIT NINE;No;0;R;;;;9;N;;;;;
1E8DA;MENDE NUMBER TEN;No;0;R;;;;10;N;;;;;
1E8DB;MENDE NUMBER ELEVEN;No;0;R;;;;11;N;;;;;
1E8DC;MENDE NUMBER TWELVE;No;0;R;;;;12;N;;;;;
1E8DD;MENDE NUMBER THIRTEEN;No;0;R;;;;13;N;;;;;
1E8DE;MENDE NUMBER FOURTEEN;No;0;R;;;;14;N;;;;;
1E8DF;MENDE NUMBER FIFTEEN;No;0;R;;;;15;N;;;;;
1E8E0;MENDE NUMBER SIXTEEN;No;0;R;;;;16;N;;;;;
1E8E1;MENDE NUMBER SEVENTEEN;No;0;R;;;;17;N;;;;;
1E8E2;MENDE NUMBER EIGHTEEN;No;0;R;;;;18;N;;;;;
8. Acknowledgements. This project was made possible in part by a grant from the U.S. National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at UC Berkeley) in respect of the Mende encoding. Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the National Endowment for the Humanities.

9. Bibliography


Tuchscherer, Konrad. 1996. The Kikakui (Mende) syllabary and number writing system: Descriptive, historical and ethnographic accounts of a West African tradition of writing. A dissertation submitted to the Faculty of Arts in candidacy for the degree of Doctor of Philosophy, in the Department of the Languages and Cultures of Africa, The School of Oriental and African Studies, University of London.

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Syllables in k-
1E800 𑚐 MENDE SYLLABLE M001 KI
1E801 𑚑 MENDE SYLLABLE M002 KA
1E802 𑚒 MENDE SYLLABLE M003 KU
1E803 𑚓 MENDE SYLLABLE M065 KEE
1E804 𑚔 MENDE SYLLABLE M095 KE
1E805 𑚕 MENDE SYLLABLE M076 KOO
1E806 𑚖 MENDE SYLLABLE M048 KO
1E807 𑚗 MENDE SYLLABLE M179 KUA
  = Dalby M177

Syllables in w-
1E808 𑚘 MENDE SYLLABLE M004 WI
1E809 𑚙 MENDE SYLLABLE M005 WA
1E80A 𑚚 MENDE SYLLABLE M006 WU
1E80B 𑚛 MENDE SYLLABLE M126 WEE
1E80C 𑚜 MENDE SYLLABLE M118 WE
1E80D 𑚝 MENDE SYLLABLE M114 WOO
1E80E 𑚞 MENDE SYLLABLE M045 WO
1E80F 𑚟 MENDE SYLLABLE M194 WUI
1E810 𑚠 MENDE SYLLABLE M143 WEI

Syllables in wv-
1E811  MENDE SYLLABLE M061 WVI
1E812  MENDE SYLLABLE M049 WVA
1E813  MENDE SYLLABLE M139 WVE

Syllables in m-
1E814  MENDE SYLLABLE M007 MIN
1E815  MENDE SYLLABLE M008 MAN
1E816  MENDE SYLLABLE M009 MUN
1E817  MENDE SYLLABLE M059 MEN
1E818  MENDE SYLLABLE M094 MON
1E819  MENDE SYLLABLE M154 MUAN
1E81A  MENDE SYLLABLE M189 MUEN

Syllables in b-
1E81B  MENDE SYLLABLE M010 BI
1E81C  MENDE SYLLABLE M011 BA
1E81D  MENDE SYLLABLE M012 BU
1E81E  MENDE SYLLABLE M150 BEE
1E81F  MENDE SYLLABLE M097 BE
1E820 𑚤 MENDE SYLLABLE M103 BOO
1E821 𑚥 MENDE SYLLABLE M138 BO

Vowels
1E822  MENDE SYLLABLE M013 I
1E823  MENDE SYLLABLE M014 A
1E824  MENDE SYLLABLE M015 U
1E825 𑚦 MENDE SYLLABLE M163 EE
1E826 𑚧 MENDE SYLLABLE M100 E
1E827 𑚨 MENDE SYLLABLE M165 OO
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1E829 𑚪 MENDE SYLLABLE M137 EI
1E82A 𑚫 MENDE SYLLABLE M131 IN
1E82B 𑚬 MENDE SYLLABLE M135 IN
  * used for the negative particle
1E82C 𑚭 MENDE SYLLABLE M195 AN
  • Dalby’s M195 HO has different shape and value
1E82D 𑚮 MENDE SYLLABLE M178 EN
  = Dalby M182

Syllables in s-
1E82E 𑚯 MENDE SYLLABLE M019 SI
1E82F 𑚰 MENDE SYLLABLE M020 SA
1E830 𑚱 MENDE SYLLABLE M021 SU
1E831 𑚲 MENDE SYLLABLE M162 SEE
1E832 𑚳 MENDE SYLLABLE M116 SE
1E833 𑚴 MENDE SYLLABLE M136 SOO
1E834 𑚵 MENDE SYLLABLE M079 SO
1E835 𑚶 MENDE SYLLABLE M196 SIA
  * not in Dalby or in Mansaray

Syllables in l-
1E836 𑚷 MENDE SYLLABLE M025 LI
  = Dalby and Mansaray M022
1E837 𑚸 MENDE SYLLABLE M026 LA
  = Dalby and Mansaray M023
1E838 𑚹 MENDE SYLLABLE M027 LU
  = Dalby and Mansaray M024
1E839 𑚺 MENDE SYLLABLE M084 LE
1E83A 𑚻 MENDE SYLLABLE M073 LE
1E83B 𑚼 MENDE SYLLABLE M055 LOO
1E83C 𑚽 MENDE SYLLABLE M153 LO
1E83D 𑚾 MENDE SYLLABLE M110 LONG LE

Syllables in d-
1E83E 𑚿 MENDE SYLLABLE M016 DI
1E83F 𑚺 MENDE SYLLABLE M017 DA
1E840 𑚼 MENDE SYLLABLE M018 DU
1E841 𑚽 MENDE SYLLABLE M089 DEE
1E842 𑚾 MENDE SYLLABLE M180 DOO
  = Dalby M178
1E843 𑚿 MENDE SYLLABLE M181 DO
  = Dalby M179

Syllables in t-
1E844 𑚺 MENDE SYLLABLE M022 TI
  = Dalby and Mansaray M025
1E845 𑚽 MENDE SYLLABLE M023 TA
  = Dalby and Mansaray M026
1E846 𑚾 MENDE SYLLABLE M024 TU
  = Dalby and Mansaray M027
1E847 𑚿 MENDE SYLLABLE M091 TEE
1E848 𑚺 MENDE SYLLABLE M055 TE
1E849 𑚽 MENDE SYLLABLE M104 TOO
1E84A 𑚼 MENDE SYLLABLE M069 TO

Syllables in j-
1E84B 𑚺 MENDE SYLLABLE M028 JJ
  = Mansaray M034
1E84C 𑚽 MENDE SYLLABLE M029 JA
  = Mansaray M035
1E84D 𑚾 MENDE SYLLABLE M030 JU
  = Mansaray M036
1E84E 𑚿 MENDE SYLLABLE M157 JEE
1E84F 𑚺 MENDE SYLLABLE M113 JE
1E850 𑚽 MENDE SYLLABLE M126 JIO
1E851 𑚼 MENDE SYLLABLE M063 JU
1E852 𑚽 MENDE SYLLABLE M175 LONG JO

Syllables in y-
1E853 𑚺 MENDE SYLLABLE M031 YI
1E854 𑚽 MENDE SYLLABLE M032 YA
1E855 𑚾 MENDE SYLLABLE M033 YU
1E856 𑚿 MENDE SYLLABLE M009 YEE
1E857 𑚺 MENDE SYLLABLE M080 YE
1E858 𑚽 MENDE SYLLABLE M141 YOO
1E859 𑚼 MENDE SYLLABLE M121 YO
Syllables in f-

MENDE SYLLABLE M086 LONG NGGE

MENDE SYLLABLE M127 NGGUA

Syllables in p-

MENDE SYLLABLE M088 FO

MENDE SYLLABLE M127 NGGUA

Syllables in mb-

MENDE SYLLABLE M105 LONG MBOO

MENDE SYLLABLE M145 MBI

Syllables in kp-

MENDE SYLLABLE M105 LONG MBOO

MENDE SYLLABLE M145 MBI

Syllables in gb-

MENDE SYLLABLE M105 LONG MBOO

MENDE SYLLABLE M145 MBI

Syllables in r-

MENDE SYLLABLE M117 NEN

MENDE SYLLABLE M117 NEN

Syllables in ng-

MENDE SYLLABLE M088 FO

MENDE SYLLABLE M127 NGGUA

Syllables in ngg-

MENDE SYLLABLE M197 FO

MENDE SYLLABLE M197 FO

Syllables in ng-

MENDE SYLLABLE M145 MBI

MENDE SYLLABLE M145 MBI

Syllables in ng-

MENDE SYLLABLE M145 MBI

MENDE SYLLABLE M145 MBI

Syllables in g-

MENDE SYLLABLE M117 NEN

MENDE SYLLABLE M117 NEN

Syllables in g-

MENDE SYLLABLE M117 NEN

MENDE SYLLABLE M117 NEN

Syllables in ng-

MENDE SYLLABLE M145 MBI

MENDE SYLLABLE M145 MBI

Syllables in ng-

MENDE SYLLABLE M145 MBI

MENDE SYLLABLE M145 MBI

Date: 2012-01-24

Printed using UniBook™
Syllables in v-

- 1E8B9  ⊆ MENDE SYLLABLE M182 VI
- 1E8BA  ⊇ MENDE SYLLABLE M185 VA
- 1E8BB  ⊈ MENDE SYLLABLE M151 VU
- 1E8BC  ⊉ MENDE SYLLABLE M173 VEE
- 1E8BD  ⊊ MENDE SYLLABLE M085 VE
- 1E8BE  ⊋ MENDE SYLLABLE M144 VOO
- 1E8BF  ⊌ MENDE SYLLABLE M077 VO

Syllables in ny-

- 1E8C0  ⊆ MENDE SYLLABLE M164 NYIN
- 1E8C1  ⊇ MENDE SYLLABLE M058 NYAN
- 1E8C2  ⊈ MENDE SYLLABLE M170 NYUN
- 1E8C3  ⊉ MENDE SYLLABLE M098 NYEN
- 1E8C4  ⊊ MENDE SYLLABLE M060 NYON

Digits

- 1E8D1  ⊆ MENDE DIGIT ONE
- 1E8D2  ⊇ MENDE DIGIT TWO
- 1E8D3  ⊈ MENDE DIGIT THREE
- 1E8D4  ⊉ MENDE DIGIT FOUR
- 1E8D5  ⊊ MENDE DIGIT FIVE
- 1E8D6  ⊋ MENDE DIGIT SIX
- 1E8D7  ⊌ MENDE DIGIT SEVEN
- 1E8D8  ⊍ MENDE DIGIT EIGHT
- 1E8D9  ⊎ MENDE DIGIT NINE

Teens

- 1E8DA  ⊆ MENDE NUMBER TEN
- 1E8DB  ⊇ MENDE NUMBER ELEVEN
- 1E8DC  ⊈ MENDE NUMBER TWELVE
- 1E8DD  ⊉ MENDE NUMBER THIRTEEN
- 1E8DE  ⊊ MENDE NUMBER FOURTEEN
- 1E8DF  ⊋ MENDE NUMBER FIFTEEN
- 1E8E0  ⊌ MENDE NUMBER SIXTEEN
- 1E8E1  ⊍ MENDE NUMBER SEVENTEEN
- 1E8E2  ⊎ MENDE NUMBER EIGHTEEN
- 1E8E3  ⊏ MENDE NUMBER NINETEEN

Tens

- 1E8E4  ⊆ MENDE NUMBER TWENTY
- 1E8E5  ⊇ MENDE NUMBER THIRTY
- 1E8E6  ⊈ MENDE NUMBER FORTY
- 1E8E7  ⊉ MENDE NUMBER FIFTY
- 1E8E8  ⊊ MENDE NUMBER SIXTY
- 1E8E9  ⊋ MENDE NUMBER SEVENTY
- 1E8EA  ⊌ MENDE NUMBER EIGHTY
- 1E8EB  ⊍ MENDE NUMBER NINETY

Hundreds

- 1E8EC  ⊆ MENDE NUMBER ONE HUNDRED
- 1E8ED  ⊇ MENDE NUMBER TWO HUNDRED
- 1E8EE  ⊈ MENDE NUMBER THREE HUNDRED
- 1E8EF  ⊉ MENDE NUMBER FOUR HUNDRED
- 1E8F0  ⊊ MENDE NUMBER FIVE HUNDRED
- 1E8F1  ⊋ MENDE NUMBER SIX HUNDRED
- 1E8F2  ⊌ MENDE NUMBER SEVEN HUNDRED
- 1E8F3  ⊍ MENDE NUMBER EIGHT HUNDRED
- 1E8F4  ⊎ MENDE NUMBER NINE HUNDRED

Thousands

- 1E8F5  ⊆ MENDE NUMBER ONE THOUSAND
- 1E8F6  ⊇ MENDE NUMBER TWO THOUSAND
- 1E8F7  ⊈ MENDE NUMBER THREE THOUSAND
- 1E8F8  ⊉ MENDE NUMBER FOUR THOUSAND

Ten thousands

- 1E8F9  ⊊ MENDE NUMBER FIVE THOUSAND
- 1E8FA  ⊋ MENDE NUMBER SIX THOUSAND
- 1E8FB  ⊌ MENDE NUMBER SEVEN THOUSAND
- 1E8FC  ⊍ MENDE NUMBER EIGHT THOUSAND
- 1E8FD  ⊎ MENDE NUMBER NINE THOUSAND

Hundred thousands

- 1E8FE  ⊆ MENDE NUMBER TEN THOUSAND
- 1E8FF  ⊇ MENDE NUMBER TWENTY THOUSAND
- 1E900  ⊈ MENDE NUMBER THIRTY THOUSAND
- 1E901  ⊉ MENDE NUMBER FORTY THOUSAND
- 1E902  ⊊ MENDE NUMBER FIFTY THOUSAND
- 1E903  ⊋ MENDE NUMBER SIXTY THOUSAND
- 1E904  ⊌ MENDE NUMBER SEVENTY THOUSAND
- 1E905  ⊍ MENDE NUMBER EIGHTY THOUSAND
- 1E906  ⊎ MENDE NUMBER NINETY THOUSAND

Millions

- 1E907  ⊆ MENDE NUMBER ONE MILLION
- 1E908  ⊇ MENDE NUMBER TWO MILLION
- 1E909  ⊈ MENDE NUMBER THREE MILLION
- 1E90A  ⊉ MENDE NUMBER FOUR MILLION
- 1E90B  ⊊ MENDE NUMBER FIVE MILLION
- 1E90C  ⊋ MENDE NUMBER SIX MILLION
- 1E90D  ⊌ MENDE NUMBER SEVEN MILLION
- 1E90E  ⊍ MENDE NUMBER EIGHT MILLION
- 1E90F  ⊎ MENDE NUMBER NINE MILLION
10. Figures.

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Figure 1a. Table of Mende syllables from Tuchscherer 1996.
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**Figure 1b.** Table of Mende syllables from Tuchscherer 1996.
### Figure 1c. Table of Mende syllables from Tuchscherer 1996.

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<th>nasal</th>
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*[*for negusion]*

### Figure 2. Letter of introduction in Kikakui (Mende) written by Alpha Yewa (Tuchscherer 1996).
Figure 3. Syllabary key of Kisimi Kamara, collected by S. Milburn in 1942 or 1943 (Tuchscherer 1996:248). The chart reads from right to left. The first forty-two characters, from KI KA KU to HE HA HO are the ones first devised by Mohamed Turay.
Figure 4. Table of Mende syllables from Dalby.
Figure 5. Tax receipt from Sierra Leone in Mende script, from Tuchscherer 2007.

Figure 6. An example of a Mende sign, made in 1993, intended to be put up in Potoru, headquarters of Barri Chiefdom. The text reads kpotolu bali.
Figure 7. Text from Bokari Kanneh’s Kikakui (Mende) notebooks (Tuchscherer 1996).
A. Administrative
1. Title
Proposal for encoding the Mende script in the SMP of the UCS
2. Requester’s name
UC Berkeley Script Encoding Initiative (Universal Scripts Project)
3. Requester type (Member body/Liaison/Individual contribution)
Liaison contribution.
4. Submission date
2012-01-24
5. Requester’s reference (if applicable)
6. Choose one of the following:
6a. This is a complete proposal
No.
6b. More information will be provided later
Yes.

B. Technical – General
1. Choose one of the following:
1a. This proposal is for a new script (set of characters)
Yes.
Proposed name of script
Mende.
1b. The proposal is for addition of character(s) to an existing block
No.
Name of the existing block
2. Number of characters in proposal
269.
3. Proposed category (select one from below – see section 2.2 of P&P document): (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)
Category A.
4a. Is a repertoire including character names provided?
Yes.
4b. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?
Yes.
4c. Are the character shapes attached in a legible form suitable for review?
Yes.
5a. Font related: Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?
Jason Glavy and Michael Everson.
5b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.)
Michael Everson
6a. References. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?
Yes.
6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?
Yes.
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)?
Yes.
8. 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://wwwunicode.org/reports/tr44/) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.
See above.

C. Technical – Justification
1. Has this proposal for addition of character(s) been submitted before? If YES, explain.
Yes. N3863 (L2/10-252), N3757 (L2/10-006)
2a. 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.
2b. If YES, with whom?
Konrad Tuchscherer (co-author).
2c. 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?
See above.
4a. The context of use for the proposed characters (type of use; common or rare)

**Relatively rare, but with potential for revival.**

4b. Reference

5a. Are the proposed characters in current use by the user community?

**Yes.**

5b. If **YES**, where?

**Scholars and some local use in Sierra Leone.**

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

**No.**

6b. If **YES**, is a rationale provided?

6c. If **YES**, reference

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

**Yes.**

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

**No.**

8b. If **YES**, is a rationale for its inclusion provided?

8c. If **YES**, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

**No.**

9b. If **YES**, is a rationale for its inclusion provided?

9c. If **YES**, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

**No.**

10b. If **YES**, is a rationale for its inclusion provided?

10c. If **YES**, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

**No.**

11b. If **YES**, is a rationale for such use provided?

11c. If **YES**, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

**No.**

11e. If **YES**, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

**No.**

12b. If **YES**, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

**No.**

13b. If **YES**, is the equivalent corresponding unified ideographic character(s) identified?