

UC Berkeley

Proposals from the Script Encoding Initiative

Title

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

Permalink

<https://escholarship.org/uc/item/2387q2gr>

Authors

Everson, Michael
Tuchscherer, Konrad

Publication Date

2012-01-24

Peer reviewed

Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

Doc Type: Working Group Document

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

Source: UC Berkeley Script Encoding Initiative (Universal Scripts Project)

Author: Michael Everson and Konrad Tuchscherer

Status: Liaison Contribution

Action: For consideration by JTC1/SC2/WG2 and UTC

Date: 2012-01-24

Replaces: N3863 (L2/10-252), N3757 (L2/10-006), N4133R (L2/11/301R)

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 or 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-	ŋ-	p-	mb-	kp-	gb-	r-	nd-	nj-	v-	ɲ-			

Thus the whole range is:

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

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 \Rightarrow DI, \Leftarrow DA, \Leftarrow DU with \Leftarrow NDU, \Leftarrow NDEE and the shapes of \odot FI, \odot FA, \odot FU, \odot FEE, with \odot VI, \odot VA, \odot VU, \odot VEE. This is the order used in the code chart, and the order recommended for collation.

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 wɔ	067 ndo	089 de	111 ga	133 fo	155 gi	177 ŋgūa
002 ka	024 tu	046 hūa	068 pi	090 ŋgi	112 kpo	134 njo	156 ŋgo	178 ɛ
003 ku	025 li	047 mbe	069 tɔ	091 te	113 je	135 i	157 je	179 kua
004 wi	026 la	048 kɔ	070 gbɔ	092 kpa	114 wo	136 so	158 kpo	180 do
005 wa	027 lu	049 wva	071 gbo	093 gbe	115 ŋge	137 ɛi	159 ŋgaa	181 do
006 wu	028 ji	050 pu	072 mbɛ	094 mɔ	116 sɛ	138 bo	160 jo	182 vi
007 mī	029 ja	051 pɛ	073 lɛ	095 kɛ	117 nɛ	139 wvɛ	161 mbɛɛ	183 ŋgɔɔ
008 mā	030 ju	052 hɛ	074 kpu	096 hɛ	118 wɛ	140 ho	162 se	184 ŋɛ
009 mū	031 yi	053 hī	075 fɛ	097 bɛ	119 ndɛ	141 yo	163 e	185 va
010 bi	032 ya	054 lo	076 ko	098 nyɛ	120 ŋgɔ	142 mbɔɔ	164 nyī	186 hu
011 ba	033 yu	055 tɛ	077 vɔ	099 pa	121 yo	143 wɛi	165 o	187 mbuu
012 bu	034 fi	056 gba	078 fe	100 ɛ	122 mbu	144 vo	166 guɛi	188 mbe
013 i	035 fa	057 ŋɔ	079 sɔ	101 fā	123 ndi	145 mbi	167 gūa	189 mūɛ
014 a	036 fu	058 nyā	080 yɛ	102 po	124 gbi	146 ŋgɛ	168 gu	190 ge
015 u	037 nī	059 mɛ	081 pe	103 bo	125 ndu	147 ɔ	169 nɔ	191 nde
016 di	038 nā	060 nyɔ	082 ŋgu	104 to	126 we	148 gbu	170 nyū	192 nju
017 da	039 nū	061 wvi	083 hei	105 mboo	127 ŋgua	149 nje	171 ra	193 hon
018 du	040 he	062 mba	084 le	106 ŋgoo	128 hou	150 be	172 mbo	194 wui
019 si	041 ha	063 jɔ	085 vɛ	107 gbe	129 nda	151 vu	173 ve	195 ā
020 sa	042 ho	064 ndɔ	086 ŋgɛɛ	108 kpe	130 hā	152 nja	174 mbɔ	196 sia
021 su	043 ŋgā	065 ke	087 hū	109 ye	131 i	153 lo	175 jɔɔ	197 fua
022 ti	044 kpe	066 pɔ	088 fɔ	110 lɛɛ	132 kpi	154 mūa	176 hi	

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 *ηge* and 195 *h̄s* 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 *ε*, EE representing *e*, O representing *o*, and OO representing *o*, and NG representing *η*. 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 (⌘ MENDE SYLLABLE M047 MBEE, ⌘ MENDE SYLLABLE M188 MBEE, ⌘ MENDE SYLLABLE M131 IN, and ⌘ 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), Klingenheben (1934), and Dalby (1967). Some of these may have been originally derived from the syllables used to represent the names of the numbers:

1 <i>itaa</i>	may be related to the syllable	<i>i</i>
⤴ 4 <i>naani</i>	may be related to the syllable	⤴ <i>nan</i>
∂ 6 <i>weita</i>	may be related to the syllable	∂ <i>wei</i>
∂̄ 7 <i>w̄fela</i>	may be related to the syllable	∂̄ <i>wo</i>
∂̄̄ 8 <i>wayakpa</i>	may be related to the syllable	∂̄̄ <i>wa</i>
f 9 <i>taalu</i>	may be related to the syllable	f <i>ta</i>
Ɔ̄ 10 <i>puu</i>	may be related to the syllable	Ɔ̄ <i>pu</i> .

There would be no benefit in trying to unify these with the base letters, however, and other numbers (< 2 *fele*, ⌘ 3 *sawa*, 8 5 *l̄ɔlu*) 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:

| 1, < 2, ⌘ 3, ⤴ 4, 8 5, ∂ 6, ∂̄ 7, ∂̄̄ 8, f 9, Ɔ̄ 10

The teens are expressed as a combination of a digit over top of a base that indicates the teens:

𑌱 11, 𑌲 12, 𑌳 13, 𑌴 14, 𑌵 15, 𑌶 16, 𑌷 17, 𑌸 18, 𑌹 19

The tens are expressed as a combination of a digit over top of a base that indicates the tens:

𑌺 20, 𑌻 30, 𑌼 40, 𑌽 50, 𑌾 60, 𑌿 70, 𑍀 80, 𑍁 90

The hundreds are expressed as a combination of a digit over top of a base that indicates the hundreds:

𑍂 100, 𑍃 200, 𑍄 300, 𑍅 400, 𑍆 500, 𑍇 600, 𑍈 700, 𑍉 800, 𑍊 900

The thousands are expressed as a combination of a digit over top of a base that indicates the thousands:

𑍋 1,000, 𑍌 2,000, 𑍍 3,000, 𑍎 4,000, 𑍏 5,000, 𑍐 6,000, 𑍑 7,000, 𑍒 8,000, 𑍓 9,000

The ten thousands are expressed as a combination of a digit over top of a base that indicates the ten thousands:

𑍔 10,000, 𑍕 20,000, 𑍖 30,000, 𑍗 40,000, 𑍘 50,000, 𑍙 60,000, 𑍚 70,000, 𑍛 80,000, 𑍜 90,000

The hundred thousands are expressed as a combination of a digit over top of a base that indicates the hundred thousands:

𑍝 100,000, 𑍞 200,000, 𑍟 300,000, 𑍠 400,000, 𑍡 500,000,
𑍢 600,000, 𑍣 700,000, 𑍤 800,000, 𑍥 900,000

The millions are expressed as a combination of a digit over top of a base that indicates the millions:

𑍦 1,000,000, 𑍧 2,000,000, 𑍨 3,000,000, 𑍩 4,000,000, 𑍪 5,000,000,
𑍫 6,000,000, 𑍬 7,000,000, 𑍭 8,000,000, 𑍮 9,000,000

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 𑌱 𑌲 𑌳 𑌴 𑌵 𑌶 𑌷 𑌸 𑌹 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 𑌺 10 has an inherent dot (or is it a second superscript unit? *𑌺 does not occur and neither does *𑌻); 𑌱 *teen* has no independent existence, and the numbers 𑌺 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 $\text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗}$, and never $*\text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗} \text{𑌗}$, 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:

$\text{𑌗} \text{𑌗}$	27	$\text{𑌗} \text{𑌗}$	101
$\text{𑌗} \text{𑌗}$	35	$\text{𑌗} \text{𑌗}$	206
$\text{𑌗} \text{𑌗}$	48	$\text{𑌗} \text{𑌗}$	417
$\text{𑌗} \text{𑌗}$	51	$\text{𑌗} \text{𑌗}$	594
$\text{𑌗} \text{𑌗}$	63	$\text{𑌗} \text{𑌗}$	620
$\text{𑌗} \text{𑌗}$	72	$\text{𑌗} \text{𑌗}$	787
$\text{𑌗} \text{𑌗}$	86	$\text{𑌗} \text{𑌗}$	833
$\text{𑌗} \text{𑌗}$	94	$\text{𑌗} \text{𑌗}$	999

9. Unicode Character Properties.

```

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 KOO;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;

```


1E8E3;MENDE NUMBER NINETEEN;No;0;R;;;19;N;;;;;
 1E8E4;MENDE NUMBER TWENTY;No;0;R;;;20;N;;;;;
 1E8E5;MENDE NUMBER THIRTY;No;0;R;;;30;N;;;;;
 1E8E6;MENDE NUMBER FORTY;No;0;R;;;40;N;;;;;
 1E8E7;MENDE NUMBER FIFTY;No;0;R;;;50;N;;;;;
 1E8E8;MENDE NUMBER SIXTY;No;0;R;;;60;N;;;;;
 1E8E9;MENDE NUMBER SEVENTY;No;0;R;;;70;N;;;;;
 1E8EA;MENDE NUMBER EIGHTY;No;0;R;;;80;N;;;;;
 1E8EB;MENDE NUMBER NINETY;No;0;R;;;90;N;;;;;
 1E8EC;MENDE NUMBER ONE HUNDRED;No;0;R;;;100;N;;;;;
 1E8ED;MENDE NUMBER TWO HUNDRED;No;0;R;;;200;N;;;;;
 1E8EE;MENDE NUMBER THREE HUNDRED;No;0;R;;;300;N;;;;;
 1E8EF;MENDE NUMBER FOUR HUNDRED;No;0;R;;;400;N;;;;;
 1E8F0;MENDE NUMBER FIVE HUNDRED;No;0;R;;;500;N;;;;;
 1E8F1;MENDE NUMBER SIX HUNDRED;No;0;R;;;600;N;;;;;
 1E8F2;MENDE NUMBER SEVEN HUNDRED;No;0;R;;;700;N;;;;;
 1E8F3;MENDE NUMBER EIGHT HUNDRED;No;0;R;;;800;N;;;;;
 1E8F4;MENDE NUMBER NINE HUNDRED;No;0;R;;;900;N;;;;;
 1E8F5;MENDE NUMBER ONE THOUSAND;No;0;R;;;1000;N;;;;;
 1E8F6;MENDE NUMBER TWO THOUSAND;No;0;R;;;2000;N;;;;;
 1E8F7;MENDE NUMBER THREE THOUSAND;No;0;R;;;3000;N;;;;;
 1E8F8;MENDE NUMBER FOUR THOUSAND;No;0;R;;;4000;N;;;;;
 1E8F9;MENDE NUMBER FIVE THOUSAND;No;0;R;;;5000;N;;;;;
 1E8FA;MENDE NUMBER SIX THOUSAND;No;0;R;;;6000;N;;;;;
 1E8FB;MENDE NUMBER SEVEN THOUSAND;No;0;R;;;7000;N;;;;;
 1E8FC;MENDE NUMBER EIGHT THOUSAND;No;0;R;;;8000;N;;;;;
 1E8FD;MENDE NUMBER NINE THOUSAND;No;0;R;;;9000;N;;;;;
 1E8FE;MENDE NUMBER TEN THOUSAND;No;0;R;;;10000;N;;;;;
 1E8FF;MENDE NUMBER TWENTY THOUSAND;No;0;R;;;20000;N;;;;;
 1E900;MENDE NUMBER THIRTY THOUSAND;No;0;R;;;30000;N;;;;;
 1E901;MENDE NUMBER FORTY THOUSAND;No;0;R;;;40000;N;;;;;
 1E902;MENDE NUMBER FIFTY THOUSAND;No;0;R;;;50000;N;;;;;
 1E903;MENDE NUMBER SIXTY THOUSAND;No;0;R;;;60000;N;;;;;
 1E904;MENDE NUMBER SEVENTY THOUSAND;No;0;R;;;70000;N;;;;;
 1E905;MENDE NUMBER EIGHTY THOUSAND;No;0;R;;;80000;N;;;;;
 1E906;MENDE NUMBER NINETY THOUSAND;No;0;R;;;90000;N;;;;;
 1E907;MENDE NUMBER ONE HUNDRED THOUSAND;No;0;R;;;100000;N;;;;;
 1E908;MENDE NUMBER TWO HUNDRED THOUSAND;No;0;R;;;200000;N;;;;;
 1E909;MENDE NUMBER THREE HUNDRED THOUSAND;No;0;R;;;300000;N;;;;;
 1E90A;MENDE NUMBER FOUR HUNDRED THOUSAND;No;0;R;;;400000;N;;;;;
 1E90B;MENDE NUMBER FIVE HUNDRED THOUSAND;No;0;R;;;500000;N;;;;;
 1E90C;MENDE NUMBER SIX HUNDRED THOUSAND;No;0;R;;;600000;N;;;;;
 1E90D;MENDE NUMBER SEVEN HUNDRED THOUSAND;No;0;R;;;700000;N;;;;;
 1E90E;MENDE NUMBER EIGHT HUNDRED THOUSAND;No;0;R;;;800000;N;;;;;
 1E90F;MENDE NUMBER NINE HUNDRED THOUSAND;No;0;R;;;900000;N;;;;;
 1E910;MENDE NUMBER ONE MILLION;No;0;R;;;1000000;N;;;;;
 1E911;MENDE NUMBER TWO MILLION;No;0;R;;;2000000;N;;;;;
 1E912;MENDE NUMBER THREE MILLION;No;0;R;;;3000000;N;;;;;
 1E913;MENDE NUMBER FOUR MILLION;No;0;R;;;4000000;N;;;;;
 1E914;MENDE NUMBER FIVE MILLION;No;0;R;;;5000000;N;;;;;
 1E915;MENDE NUMBER SIX MILLION;No;0;R;;;6000000;N;;;;;
 1E916;MENDE NUMBER SEVEN MILLION;No;0;R;;;7000000;N;;;;;
 1E917;MENDE NUMBER EIGHT MILLION;No;0;R;;;8000000;N;;;;;
 1E918;MENDE NUMBER NINE MILLION;No;0;R;;;9000000;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

- Dalby, David. 1967. *A survey of the indigenous scripts of Liberia and Sierra Leone: Vai, Mende, Loma, Kpelle and Bassa*. African Language Studies 8. 1-51.
- Milburn, S. 1964. "Kisimi Kamara and the Mende script", in *Sierra Leone Language Review* 3. 20-23.
- 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.
- Tuchscherer, Konrad. 2007. "Recording, Communicating and Making Visible: A History of Writing and Systems of Graphic Symbolism in Africa", in *Inscribing Meaning: Writing and Graphic Systems in African Art*, ed. By Christine Mullen Kreamer et al., Smithsonian: National Museum of African Art, pp. 37-53.

	1E80	1E81	1E82	1E83	1E84	1E85	1E86	1E87	1E88
0	1E800	1E810	1E820	1E830	1E840	1E850	1E860	1E870	1E880
1	1E801	1E811	1E821	1E831	1E841	1E851	1E861	1E871	1E881
2	1E802	1E812	1E822	1E832	1E842	1E852	1E862	1E872	1E882
3	1E803	1E813	1E823	1E833	1E843	1E853	1E863	1E873	1E883
4	1E804	1E814	1E824	1E834	1E844	1E854	1E864	1E874	1E884
5	1E805	1E815	1E825	1E835	1E845	1E855	1E865	1E875	1E885
6	1E806	1E816	1E826	1E836	1E846	1E856	1E866	1E876	1E886
7	1E807	1E817	1E827	1E837	1E847	1E857	1E867	1E877	1E887
8	1E808	1E818	1E828	1E838	1E848	1E858	1E868	1E878	1E888
9	1E809	1E819	1E829	1E839	1E849	1E859	1E869	1E879	1E889
A	1E80A	1E81A	1E82A	1E83A	1E84A	1E85A	1E86A	1E87A	1E88A
B	1E80B	1E81B	1E82B	1E83B	1E84B	1E85B	1E86B	1E87B	1E88B
C	1E80C	1E81C	1E82C	1E83C	1E84C	1E85C	1E86C	1E87C	1E88C
D	1E80D	1E81D	1E82D	1E83D	1E84D	1E85D	1E86D	1E87D	1E88D
E	1E80E	1E81E	1E82E	1E83E	1E84E	1E85E	1E86E	1E87E	1E88E
F	1E80F	1E81F	1E82F	1E83F	1E84F	1E85F	1E86F	1E87F	1E88F

	1E89	1E8A	1E8B	1E8C	1E8D	1E8E	1E8F	1E90	1E91
0	1E890	1E8A0	1E8B0	1E8C0	1E8D0	1E8E0	1E8F0	1E900	1E910
1	1E891	1E8A1	1E8B1	1E8C1	1E8D1	1E8E1	1E8F1	1E901	1E911
2	1E892	1E8A2	1E8B2	1E8C2	1E8D2	1E8E2	1E8F2	1E902	1E912
3	1E893	1E8A3	1E8B3	1E8C3	1E8D3	1E8E3	1E8F3	1E903	1E913
4	1E894	1E8A4	1E8B4	1E8C4	1E8D4	1E8E4	1E8F4	1E904	1E914
5	1E895	1E8A5	1E8B5	1E8C5	1E8D5	1E8E5	1E8F5	1E905	1E915
6	1E896	1E8A6	1E8B6	1E8C6	1E8D6	1E8E6	1E8F6	1E906	1E916
7	1E897	1E8A7	1E8B7	1E8C7	1E8D7	1E8E7	1E8F7	1E907	1E917
8	1E898	1E8A8	1E8B8	1E8C8	1E8D8	1E8E8	1E8F8	1E908	1E918
9	1E899	1E8A9	1E8B9	1E8C9	1E8D9	1E8E9	1E8F9	1E909	1E919
A	1E89A	1E8AA	1E8BA	1E8CA	1E8DA	1E8EA	1E8FA	1E90A	1E91A
B	1E89B	1E8AB	1E8BB	1E8CB	1E8DB	1E8EB	1E8FB	1E90B	1E91B
C	1E89C	1E8AC	1E8BC	1E8CC	1E8DC	1E8EC	1E8FC	1E90C	1E91C
D	1E89D	1E8AD	1E8BD	1E8CD	1E8DD	1E8ED	1E8FD	1E90D	1E91D
E	1E89E	1E8AE	1E8BE	1E8CE	1E8DE	1E8EE	1E8FE	1E90E	1E91E
F	1E89F	1E8AF	1E8BF	1E8CF	1E8DF	1E8EF	1E8FF	1E90F	1E91F

Syllables in k-

1E800	𐌗	MENDE SYLLABLE M001 KI
1E801	𐌘	MENDE SYLLABLE M002 KA
1E802	𐌙	MENDE SYLLABLE M003 KU
1E803	𐌚	MENDE SYLLABLE M065 KEE
1E804	𐌛	MENDE SYLLABLE M095 KE
1E805	𐌜	MENDE SYLLABLE M076 KOO
1E806	𐌝	MENDE SYLLABLE M048 KO
1E807	𐌞	MENDE SYLLABLE M179 KUA = Dalby M177

Syllables in w-

1E808	𐌟	MENDE SYLLABLE M004 WI
1E809	𐌠	MENDE SYLLABLE M005 WA
1E80A	𐌡	MENDE SYLLABLE M006 WU
1E80B	𐌢	MENDE SYLLABLE M126 WEE
1E80C	𐌣	MENDE SYLLABLE M118 WE
1E80D	𐌤	MENDE SYLLABLE M114 WOO
1E80E	𐌥	MENDE SYLLABLE M045 WO
1E80F	𐌦	MENDE SYLLABLE M194 WUI
1E810	𐌧	MENDE SYLLABLE M143 WEI

Syllables in ww-

1E811	𐌨	MENDE SYLLABLE M061 WV1
1E812	𐌩	MENDE SYLLABLE M049 WVA
1E813	𐌪	MENDE SYLLABLE M139 WVE

Syllables in m-

1E814	𐌫	MENDE SYLLABLE M007 MIN
1E815	𐌬	MENDE SYLLABLE M008 MAN
1E816	𐌭	MENDE SYLLABLE M009 MUN
1E817	𐌮	MENDE SYLLABLE M059 MEN
1E818	𐌯	MENDE SYLLABLE M094 MON
1E819	𐌰	MENDE SYLLABLE M154 MUAN
1E81A	𐌱	MENDE SYLLABLE M189 MUEN

Syllables in b-

1E81B	𐌲	MENDE SYLLABLE M010 BI
1E81C	𐌳	MENDE SYLLABLE M011 BA
1E81D	𐌴	MENDE SYLLABLE M012 BU
1E81E	𐌵	MENDE SYLLABLE M150 BEE
1E81F	𐌶	MENDE SYLLABLE M097 BE
1E820	𐌷	MENDE SYLLABLE M103 BOO
1E821	𐌸	MENDE SYLLABLE M138 BO

Vowels

1E822	𐌹	MENDE SYLLABLE M013 I
1E823	𐌺	MENDE SYLLABLE M014 A
1E824	𐌻	MENDE SYLLABLE M015 U
1E825	𐌼	MENDE SYLLABLE M163 EE
1E826	𐌽	MENDE SYLLABLE M100 E
1E827	𐌾	MENDE SYLLABLE M165 OO
1E828	𐌿	MENDE SYLLABLE M147 O
1E829	𐍀	MENDE SYLLABLE M137 EI
1E82A	𐍁	MENDE SYLLABLE M131 IN
1E82B	𐍂	MENDE SYLLABLE M135 IN • used for the negative particle
1E82C	𐍃	MENDE SYLLABLE M195 AN • Dalby's M195 HO has different shape and value
1E82D	𐍄	MENDE SYLLABLE M178 EN = Dalby M182

Syllables in s-

1E82E	𐍅	MENDE SYLLABLE M019 SI
1E82F	𐍆	MENDE SYLLABLE M020 SA

1E830	𐍇	MENDE SYLLABLE M021 SU
1E831	𐍈	MENDE SYLLABLE M162 SEE
1E832	𐍉	MENDE SYLLABLE M116 SE
1E833	𐍊	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	𐍏	MENDE SYLLABLE M026 LA = Dalby and Mansaray M023
1E838	𐍐	MENDE SYLLABLE M027 LU = Dalby and Mansaray M024
1E839	𐍑	MENDE SYLLABLE M084 LEE
1E83A	𐍒	MENDE SYLLABLE M073 LE
1E83B	𐍓	MENDE SYLLABLE M054 LOO
1E83C	𐍔	MENDE SYLLABLE M153 LO
1E83D	𐍕	MENDE SYLLABLE M110 LONG LE

Syllables in d-

1E83E	𐍖	MENDE SYLLABLE M016 DI
1E83F	𐍗	MENDE SYLLABLE M017 DA
1E840	𐍘	MENDE SYLLABLE M018 DU
1E841	𐍙	MENDE SYLLABLE M089 DEE
1E842	𐍚	MENDE SYLLABLE M180 DOO = Dalby M178
1E843	𐍛	MENDE SYLLABLE M181 DO = Dalby M179

Syllables in t-

1E844	𐍜	MENDE SYLLABLE M022 TI = Dalby and Mansaray M025
1E845	𐍝	MENDE SYLLABLE M023 TA = Dalby and Mansaray M026
1E846	𐍞	MENDE SYLLABLE M024 TU = Dalby and Mansaray M027
1E847	𐍟	MENDE SYLLABLE M091 TEE
1E848	𐍠	MENDE SYLLABLE M055 TE
1E849	𐍡	MENDE SYLLABLE M104 TOO
1E84A	𐍢	MENDE SYLLABLE M069 TO

Syllables in j-

1E84B	𐍣	MENDE SYLLABLE M028 JI = Mansaray M034
1E84C	𐍤	MENDE SYLLABLE M029 JA = Mansaray M035
1E84D	𐍥	MENDE SYLLABLE M030 JU = Mansaray M036
1E84E	𐍦	MENDE SYLLABLE M157 JEE
1E84F	𐍧	MENDE SYLLABLE M113 JE
1E850	𐍨	MENDE SYLLABLE M160 JOO
1E851	𐍩	MENDE SYLLABLE M063 JO
1E852	𐍪	MENDE SYLLABLE M175 LONG JO

Syllables in y-

1E853	𐍫	MENDE SYLLABLE M031 YI
1E854	𐍬	MENDE SYLLABLE M032 YA
1E855	𐍭	MENDE SYLLABLE M033 YU
1E856	𐍮	MENDE SYLLABLE M109 YEE
1E857	𐍯	MENDE SYLLABLE M080 YE
1E858	𐍰	MENDE SYLLABLE M141 YOO
1E859	𐍱	MENDE SYLLABLE M121 YO

Syllables in f-

1E85A	⊙	MENDE SYLLABLE M034 FI = Mansaray M028
1E85B	⊙	MENDE SYLLABLE M035 FA = Mansaray M029
1E85C	⊙	MENDE SYLLABLE M036 FU = Mansaray M030
1E85D	⊙	MENDE SYLLABLE M078 FEE
1E85E	⊙	MENDE SYLLABLE M075 FE
1E85F	⊙	MENDE SYLLABLE M133 FOO
1E860	⊙	MENDE SYLLABLE M088 FO
1E861	⊙	MENDE SYLLABLE M197 FUA • not in Dalby or in Mansaray
1E862	⊙	MENDE SYLLABLE M101 FAN

Syllables in n-

1E863	∇	MENDE SYLLABLE M037 NIN
1E864	∇	MENDE SYLLABLE M038 NAN
1E865	∇	MENDE SYLLABLE M039 NUN
1E866	∇	MENDE SYLLABLE M117 NEN
1E867	∇	MENDE SYLLABLE M169 NON

Syllables in h-

1E868	⊙	MENDE SYLLABLE M176 HI
1E869	⊙	MENDE SYLLABLE M041 HA
1E86A	⊙	MENDE SYLLABLE M186 HU
1E86B	⊙	MENDE SYLLABLE M040 HEE
1E86C	⊙	MENDE SYLLABLE M096 HE
1E86D	⊙	MENDE SYLLABLE M042 HOO
1E86E	⊙	MENDE SYLLABLE M140 HOO
1E86F	⊙	MENDE SYLLABLE M083 HEEI
1E870	⊙	MENDE SYLLABLE M128 HOOU
1E871	⊙	MENDE SYLLABLE M053 HIN
1E872	⊙	MENDE SYLLABLE M130 HAN
1E873	⊙	MENDE SYLLABLE M087 HUN
1E874	⊙	MENDE SYLLABLE M052 HEN
1E875	⊙	MENDE SYLLABLE M193 HON • Dalby's M193 NGGEE has different shape and value
1E876	⊙	MENDE SYLLABLE M046 HUAN

Syllables in ngg-

1E877	⊙	MENDE SYLLABLE M090 NGGI
1E878	⊙	MENDE SYLLABLE M043 NGGA
1E879	⊙	MENDE SYLLABLE M082 NGGU
1E87A	⊙	MENDE SYLLABLE M115 NGGEE
1E87B	⊙	MENDE SYLLABLE M146 NGGE
1E87C	⊙	MENDE SYLLABLE M156 NGGOO
1E87D	⊙	MENDE SYLLABLE M120 NGGO
1E87E	⊙	MENDE SYLLABLE M159 NGGAA
1E87F	⊙	MENDE SYLLABLE M127 NGGUA
1E880	⊙	MENDE SYLLABLE M086 LONG NGGE
1E881	⊙	MENDE SYLLABLE M106 LONG NGGOO
1E882	⊙	MENDE SYLLABLE M183 LONG NGGO

Syllables in g-

1E883	⊙	MENDE SYLLABLE M155 GI
1E884	⊙	MENDE SYLLABLE M111 GA
1E885	⊙	MENDE SYLLABLE M168 GU
1E886	⊙	MENDE SYLLABLE M190 GEE
1E887	⊙	MENDE SYLLABLE M166 GUEI
1E888	⊙	MENDE SYLLABLE M167 GUAN

Syllables in ng-

1E889	⊙	MENDE SYLLABLE M184 NGEN
1E88A	⊙	MENDE SYLLABLE M057 NGON

1E88B ⊙ MENDE SYLLABLE M177 NGUAN
= Dalby M181

Syllables in p-

1E88C	⊙	MENDE SYLLABLE M068 PI
1E88D	∇	MENDE SYLLABLE M099 PA
1E88E	⊙	MENDE SYLLABLE M050 PU
1E88F	⊙	MENDE SYLLABLE M081 PEE
1E890	⊙	MENDE SYLLABLE M051 PE
1E891	⊙	MENDE SYLLABLE M102 POO
1E892	⊙	MENDE SYLLABLE M066 PO

Syllables in mb-

1E893	⊙	MENDE SYLLABLE M145 MBI
1E894	⊙	MENDE SYLLABLE M062 MBA
1E895	⊙	MENDE SYLLABLE M122 MBU
1E896	⊙	MENDE SYLLABLE M047 MBEE
1E897	⊙	MENDE SYLLABLE M188 MBEE
1E898	⊙	MENDE SYLLABLE M072 MBE
1E899	⊙	MENDE SYLLABLE M172 MBOO
1E89A	⊙	MENDE SYLLABLE M174 MBO
1E89B	⊙	MENDE SYLLABLE M187 MBUU
1E89C	⊙	MENDE SYLLABLE M161 LONG MBE
1E89D	⊙	MENDE SYLLABLE M105 LONG MBOO
1E89E	⊙	MENDE SYLLABLE M142 LONG MBO

Syllables in kp-

1E89F	⊙	MENDE SYLLABLE M132 KPI
1E8A0	∇	MENDE SYLLABLE M092 KPA
1E8A1	⊙	MENDE SYLLABLE M074 KPU
1E8A2	⊙	MENDE SYLLABLE M044 KPPE
1E8A3	⊙	MENDE SYLLABLE M108 KPE
1E8A4	⊙	MENDE SYLLABLE M112 KPOO
1E8A5	⊙	MENDE SYLLABLE M158 KPO → 1313D ⊙ egyptian hieroglyph f052 → 1F4A9 ⊙ pile of poo

Syllables in gb-

1E8A6	⊙	MENDE SYLLABLE M124 GBI
1E8A7	⊙	MENDE SYLLABLE M056 GBA
1E8A8	⊙	MENDE SYLLABLE M148 GBU
1E8A9	⊙	MENDE SYLLABLE M093 GBEE
1E8AA	⊙	MENDE SYLLABLE M107 GBE
1E8AB	⊙	MENDE SYLLABLE M071 GBOO
1E8AC	⊙	MENDE SYLLABLE M070 GBO

Syllable in r-

1E8AD ⊙ MENDE SYLLABLE M171 RA

Syllables in nd-

1E8AE	⊙	MENDE SYLLABLE M123 NDI
1E8AF	∇	MENDE SYLLABLE M129 NDA
1E8B0	⊙	MENDE SYLLABLE M125 NDU
1E8B1	⊙	MENDE SYLLABLE M191 NDEE
1E8B2	⊙	MENDE SYLLABLE M119 NDE
1E8B3	⊙	MENDE SYLLABLE M067 NDOO
1E8B4	⊙	MENDE SYLLABLE M064 NDO

Syllables in nj-

1E8B5	⊙	MENDE SYLLABLE M152 NJA
1E8B6	⊙	MENDE SYLLABLE M192 NJU
1E8B7	⊙	MENDE SYLLABLE M149 NJEE
1E8B8	⊙	MENDE SYLLABLE M134 NJOO

Syllables in v-

1E8B9	⊙	MENDE SYLLABLE M182 VI = Dalby M180
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	8	MENDE DIGIT FIVE
1E8D6	6	MENDE DIGIT SIX
1E8D7	7	MENDE DIGIT SEVEN
1E8D8	8	MENDE DIGIT EIGHT
1E8D9	9	MENDE DIGIT NINE

Teens

1E8DA	10	MENDE NUMBER TEN
1E8DB	11	MENDE NUMBER ELEVEN
1E8DC	12	MENDE NUMBER TWELVE
1E8DD	13	MENDE NUMBER THIRTEEN
1E8DE	14	MENDE NUMBER FOURTEEN
1E8DF	15	MENDE NUMBER FIFTEEN
1E8E0	16	MENDE NUMBER SIXTEEN
1E8E1	17	MENDE NUMBER SEVENTEEN
1E8E2	18	MENDE NUMBER EIGHTEEN
1E8E3	19	MENDE NUMBER NINETEEN

Tens

1E8E4	20	MENDE NUMBER TWENTY
1E8E5	30	MENDE NUMBER THIRTY
1E8E6	40	MENDE NUMBER FORTY
1E8E7	50	MENDE NUMBER FIFTY
1E8E8	60	MENDE NUMBER SIXTY
1E8E9	70	MENDE NUMBER SEVENTY
1E8EA	80	MENDE NUMBER EIGHTY
1E8EB	90	MENDE NUMBER NINETY

Hundreds

1E8EC	100	MENDE NUMBER ONE HUNDRED
1E8ED	200	MENDE NUMBER TWO HUNDRED
1E8EE	300	MENDE NUMBER THREE HUNDRED
1E8EF	400	MENDE NUMBER FOUR HUNDRED
1E8F0	500	MENDE NUMBER FIVE HUNDRED
1E8F1	600	MENDE NUMBER SIX HUNDRED
1E8F2	700	MENDE NUMBER SEVEN HUNDRED
1E8F3	800	MENDE NUMBER EIGHT HUNDRED
1E8F4	900	MENDE NUMBER NINE HUNDRED

Thousands

1E8F5	1000	MENDE NUMBER ONE THOUSAND
1E8F6	2000	MENDE NUMBER TWO THOUSAND
1E8F7	3000	MENDE NUMBER THREE THOUSAND
1E8F8	4000	MENDE NUMBER FOUR THOUSAND

1E8F9	5000	MENDE NUMBER FIVE THOUSAND
1E8FA	6000	MENDE NUMBER SIX THOUSAND
1E8FB	7000	MENDE NUMBER SEVEN THOUSAND
1E8FC	8000	MENDE NUMBER EIGHT THOUSAND
1E8FD	9000	MENDE NUMBER NINE THOUSAND

Ten thousands

1E8FE	10000	MENDE NUMBER TEN THOUSAND
1E8FF	20000	MENDE NUMBER TWENTY THOUSAND
1E900	30000	MENDE NUMBER THIRTY THOUSAND
1E901	40000	MENDE NUMBER FORTY THOUSAND
1E902	50000	MENDE NUMBER FIFTY THOUSAND
1E903	60000	MENDE NUMBER SIXTY THOUSAND
1E904	70000	MENDE NUMBER SEVENTY THOUSAND
1E905	80000	MENDE NUMBER EIGHTY THOUSAND
1E906	90000	MENDE NUMBER NINETY THOUSAND

Hundred thousands

1E907	100000	MENDE NUMBER ONE HUNDRED THOUSAND
1E908	200000	MENDE NUMBER TWO HUNDRED THOUSAND
1E909	300000	MENDE NUMBER THREE HUNDRED THOUSAND
1E90A	400000	MENDE NUMBER FOUR HUNDRED THOUSAND
1E90B	500000	MENDE NUMBER FIVE HUNDRED THOUSAND
1E90C	600000	MENDE NUMBER SIX HUNDRED THOUSAND
1E90D	700000	MENDE NUMBER SEVEN HUNDRED THOUSAND
1E90E	800000	MENDE NUMBER EIGHT HUNDRED THOUSAND
1E90F	900000	MENDE NUMBER NINE HUNDRED THOUSAND

Millions

1E910	1000000	MENDE NUMBER ONE MILLION
1E911	2000000	MENDE NUMBER TWO MILLION
1E912	3000000	MENDE NUMBER THREE MILLION
1E913	4000000	MENDE NUMBER FOUR MILLION
1E914	5000000	MENDE NUMBER FIVE MILLION
1E915	6000000	MENDE NUMBER SIX MILLION
1E916	7000000	MENDE NUMBER SEVEN MILLION
1E917	8000000	MENDE NUMBER EIGHT MILLION
1E918	9000000	MENDE NUMBER NINE MILLION

10. Figures.

Table 5: Phonetic identifications of characters in the *Kikakui* Mende Syllabary

non-nasal syllables	i	a	u	e	ε	ɔ	o	vowel diphthongs	long vowels
p	68 	99 	50 	81 	51 	66 	102 		
b	10 	11 	12 	150 	97 	138 	103 		
mb	145 	62 	122 	47 	72 	172 	174 		187 mbuu
				188 					161 mbee
f	34 	35 	36 	78 	73 	88 	133 	197 fua 	
v	182 	185 	151 	173 	85 	77 	144 		
t	22 	23 	24 	91 	55 	69 	104 		
d	16 	17 	18 	89 		181 	180 		
nd	123 	129 	125 	191 	119 	64 	67 		
s	19 	20 	21 	162 	116 	79 	136 	196 sia 	
l	25 	26 	27 	84 	73 	153 	54 		110 lee
		171 ra 							
nj		152 	192 	149 			134 		

Figure 1a. Table of Mende syllables from Tuchscherer 1996.

nasal syllables	ĩ	ã	ũ	ẽ	ẽ̃	õ	õ̃	vowel diphthongs	other nasals
h̃	⁵³	¹³⁰	⁸⁷		⁵²	¹⁹³		⁴⁶ h̃ua 	
m	⁷	⁸	⁹		⁵⁹	⁹⁴		¹⁵⁴ mua ¹⁸⁹ mue 	¹⁶⁷ gãa
n	³⁷	³⁸	³⁹		¹¹⁷	¹⁶⁹			¹⁰¹ fã
ny	¹⁶⁴	⁵⁸	¹⁷⁰		⁹⁸	⁶⁰			
ŋ					¹⁸⁴	⁵⁷		¹⁷⁷ gua 	
-	¹³¹ ¹³⁵ ! [*for negation]	¹⁹⁵			¹⁷⁸				

Figure 1c. Table of Mende syllables from Tuchscherer 1996.

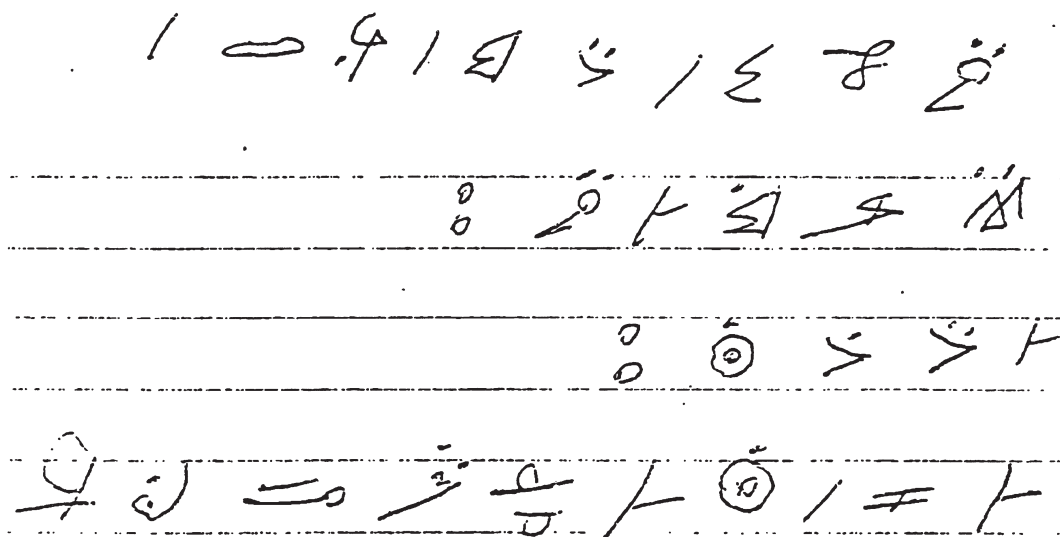


Figure 2. Letter of introduction in Kikakui (Mende) written by Alpha Yewa (Tuchscherer 1996).

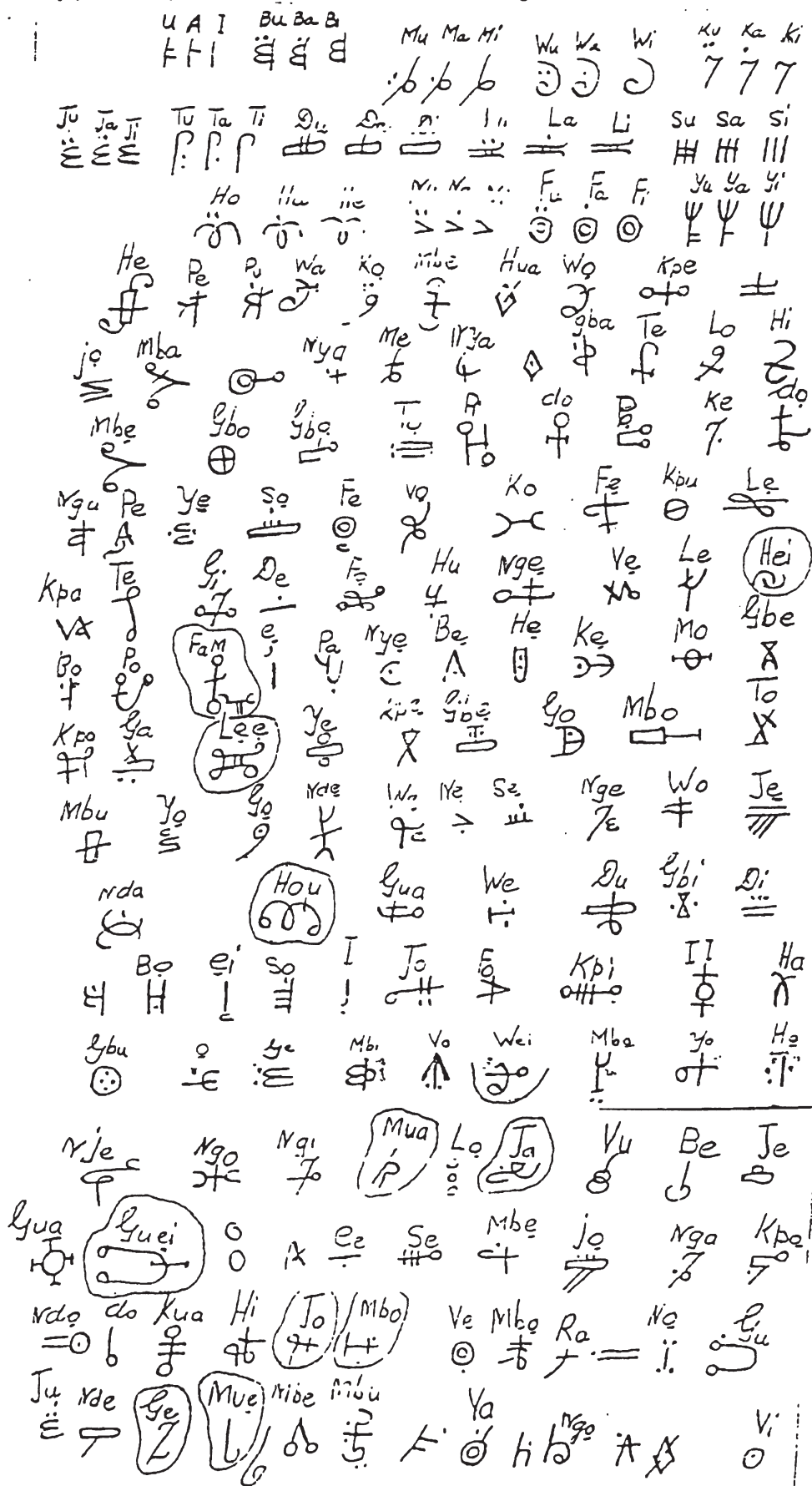


Figure 3. Syllabary key of Kisimi Kamara, collected by S. Milburn in 1942 or 1943 (Tuchscherer 1996:248). The chart reads from right to left. The first forty-two characters, from KI KA KU to HE HA HO are the ones first devised by Mohamed Turay.

Table II The Mende Syllabary										
	i	a	u	e	ɛ	ɔ	o	ua	ɛi	OTHER VOWELS
p	⁶⁸ 𐎗 (p)	⁹⁹ 𐎕 (u)	⁵⁰ 𐎗 (a)	⁸¹ 𐎗 (e)	⁵¹ 𐎗 (ɛ)	⁶⁶ 𐎗 (ɔ)	¹⁰² 𐎗 (o)			
w	⁴ 𐎗 (w)	⁵ 𐎗 (w)	⁶ 𐎗 (w)	¹²⁶ 𐎗 (w)	¹¹⁸ 𐎗 (w)	⁴⁵ 𐎗 (w)	¹¹⁴ 𐎗 (w)		¹⁴³ 𐎗 (w)	
mb	¹⁴⁵ 𐎗 (mb)	⁶² 𐎗 (mb)	¹²² 𐎗 (mb)	¹⁸⁸ 𐎗 (mb)	⁷² 𐎗 (mb)	¹⁴² 𐎗 (mb)	¹⁰⁵ 𐎗 (mb)			
b	¹⁰ 𐎗 (b)	¹¹ 𐎗 (b)	¹² 𐎗 (b)	¹⁵⁰ 𐎗 (b)	⁹⁷ 𐎗 (b)	¹³⁸ 𐎗 (b)	¹⁰³ 𐎗 (b)			
kp	¹³² 𐎗 (kp)	⁹² 𐎗 (kp)	⁷⁴ 𐎗 (kp)	⁴⁴ 𐎗 (kp)	¹⁰⁸ 𐎗 (kp)	¹⁵⁸ 𐎗 (kp)	¹¹² 𐎗 (kp)			
gb	¹²⁴ 𐎗 (gb)	⁵⁶ 𐎗 (gb)	¹⁴⁸ 𐎗 (gb)	⁹³ 𐎗 (gb)	¹⁰⁷ 𐎗 (gb)	⁷⁰ 𐎗 (gb)	⁷¹ 𐎗 (gb)			
f	³⁴ 𐎗 (f)	³⁵ 𐎗 (f)	³⁶ 𐎗 (f)	⁷⁸ 𐎗 (f)	⁷⁵ 𐎗 (f)	⁸⁸ 𐎗 (f)	¹³³ 𐎗 (f)			¹⁰¹ 𐎗 (f)
v	¹⁸⁰ 𐎗 (v)	¹⁸⁵ 𐎗 (v)	¹⁵¹ 𐎗 (v)	¹⁷³ 𐎗 (v)	⁸⁵ 𐎗 (v)	⁷⁷ 𐎗 (v)	¹⁴⁴ 𐎗 (v)			
t	²⁵ 𐎗 (t)	²⁶ 𐎗 (t)	²⁷ 𐎗 (t)	⁹¹ 𐎗 (t)	⁵⁵ 𐎗 (t)	⁶⁹ 𐎗 (t)	¹⁰⁴ 𐎗 (t)			
l	²² 𐎗 (l)	²³ 𐎗 (l)	²⁴ 𐎗 (l)	⁸⁴ 𐎗 (l)	⁷³ 𐎗 (l)	¹⁵³ 𐎗 (l)	⁵⁴ 𐎗 (l)			¹¹⁰ 𐎗 (l)
nd	¹²³ 𐎗 (nd)	¹²⁹ 𐎗 (nd)	¹²⁵ 𐎗 (nd)	¹⁹¹ 𐎗 (nd)	¹¹⁹ 𐎗 (nd)	¹⁷⁹ 𐎗 (nd)	⁶⁷ 𐎗 (nd)			
d	¹⁶ 𐎗 (d)	¹⁷ 𐎗 (d)	¹⁸ 𐎗 (d)	⁸⁹ 𐎗 (d)		⁶⁴ 𐎗 (d)	¹⁷⁸ 𐎗 (d)			

s	¹⁹ 𐎗 (s)	²⁰ 𐎗 (s)	²¹ 𐎗 (s)	¹⁶² 𐎗 (s)	¹¹⁶ 𐎗 (s)	⁷⁹ 𐎗 (s)	¹³⁶ 𐎗 (s)			
j	²⁸ 𐎗 (j)	²⁹ 𐎗 (j)	³⁰ 𐎗 (j)	¹⁵⁷ 𐎗 (j)	¹¹³ 𐎗 (j)	⁶³ 𐎗 (j)	¹⁷⁵ 𐎗 (j)			
nj		¹⁵² 𐎗 (nj)	¹⁹² 𐎗 (nj)	¹⁴⁹ 𐎗 (nj)		¹⁶⁰ 𐎗 (nj)	¹³⁴ 𐎗 (nj)			
y	³¹ 𐎗 (y)	³² 𐎗 (y)	³³ 𐎗 (y)	¹⁰⁹ 𐎗 (y)	⁸⁰ 𐎗 (y)	¹²¹ 𐎗 (y)	¹⁴¹ 𐎗 (y)			
ɲg	¹⁵⁵ 𐎗 (ɲg)	¹⁵⁹ 𐎗 (ɲg)	⁸² 𐎗 (ɲg)	¹¹⁵ 𐎗 (ɲg)	⁸⁶ 𐎗 (ɲg)	¹⁸³ 𐎗 (ɲg)	¹⁵⁶ 𐎗 (ɲg)	¹²⁷ 𐎗 (ɲg)		
g	⁹⁰ 𐎗 (g)	¹¹¹ 𐎗 (g)	¹⁶⁸ 𐎗 (g)	¹⁹⁰ 𐎗 (g)	¹⁴⁶ 𐎗 (g)	¹²⁰ 𐎗 (g)	¹⁰⁶ 𐎗 (g)	¹⁶⁷ 𐎗 (g)	¹⁶⁶ 𐎗 (g)	
k	¹ 𐎗 (k)	² 𐎗 (k)	³ 𐎗 (k)	⁶⁵ 𐎗 (k)	⁹⁵ 𐎗 (k)	⁴⁸ 𐎗 (k)	⁷⁶ 𐎗 (k)	¹⁷⁷ 𐎗 (k)		
h	¹⁷⁶ 𐎗 (h)	⁴¹ 𐎗 (h)	¹⁸⁶ 𐎗 (h)	⁴⁰ 𐎗 (h)	⁹⁶ 𐎗 (h)	¹⁴⁰ 𐎗 (h)	⁴² 𐎗 (h)			⁸³ hei (h) ¹²⁸ hou (h)
-	¹³ 𐎗 (-)	¹⁴ 𐎗 (-)	¹⁵ 𐎗 (-)	¹⁶³ 𐎗 (-)	¹⁰⁰ 𐎗 (-)	¹⁴⁷ 𐎗 (-)	¹⁶⁵ 𐎗 (-)		¹³⁷ 𐎗 (-)	
NASAL SYLLABLES	ĩ	ã	ũ	ẽ	ɛ̃	õ				
ĩ	⁵³ 𐎗 (ĩ)	¹³⁰ 𐎗 (ĩ)	⁸⁷ 𐎗 (ĩ)		⁵² 𐎗 (ĩ)	⁵⁷ 𐎗 (ĩ)	⁴⁶ 𐎗 (ĩ)			
m	⁷ 𐎗 (m)	⁸ 𐎗 (m)	⁹ 𐎗 (m)		⁵⁹ 𐎗 (m)	⁹⁴ 𐎗 (m)	¹⁵⁴ 𐎗 (m)			¹⁸⁹ mūc (m)
n	³⁷ 𐎗 (n)	³⁸ 𐎗 (n)	³⁹ 𐎗 (n)		¹¹⁷ 𐎗 (n)	¹⁶⁹ 𐎗 (n)				
ny	¹⁶⁴ 𐎗 (ny)	⁵⁸ 𐎗 (ny)	¹⁷⁰ 𐎗 (ny)		⁹⁸ 𐎗 (ny)	⁶⁰ 𐎗 (ny)				
ŋ		⁴³ 𐎗 (ŋ)			¹⁸⁴ 𐎗 (ŋ)		¹⁸¹ 𐎗 (ŋ)			
-	¹³⁵ 𐎗 (-)			¹⁸² 𐎗 (-)	¹³¹ 𐎗 (-)					

Figure 4. Table of Mende syllables from Dalby .

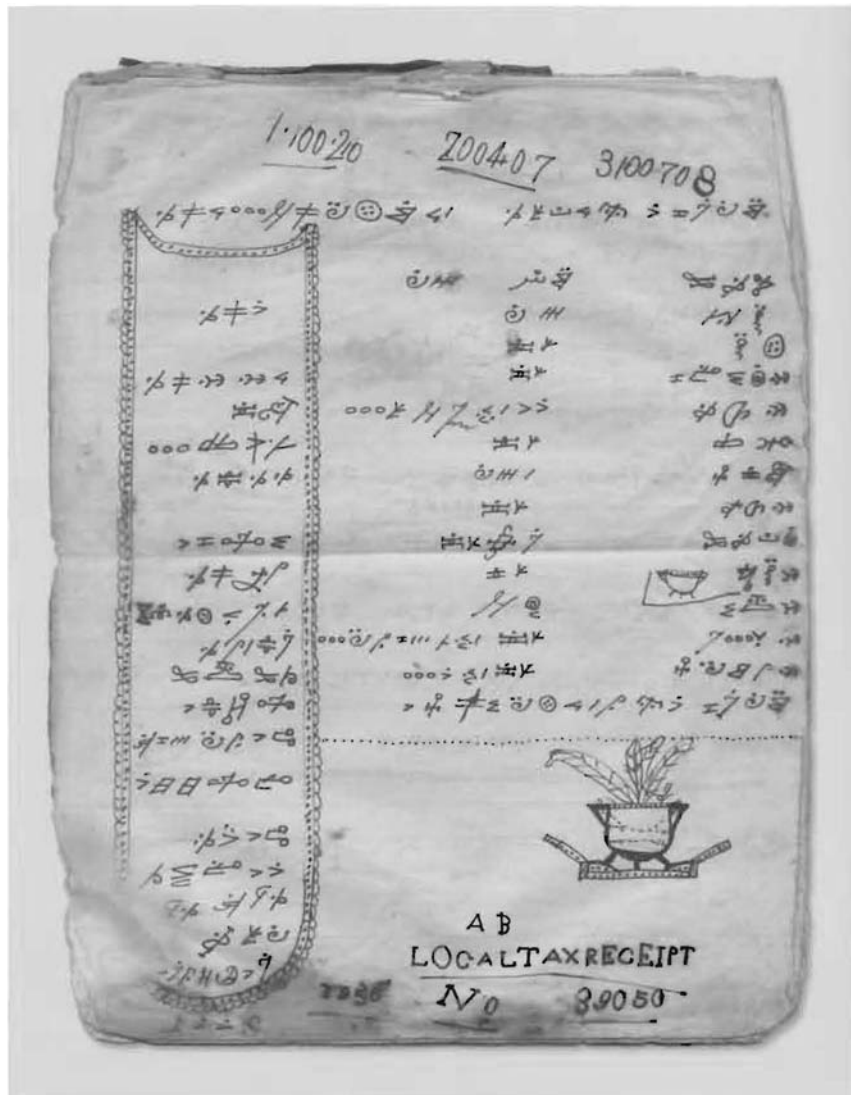


Figure 5. Tax receipt from Sierra Leone in Mende script, from Tuchscherer 2007.



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*.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

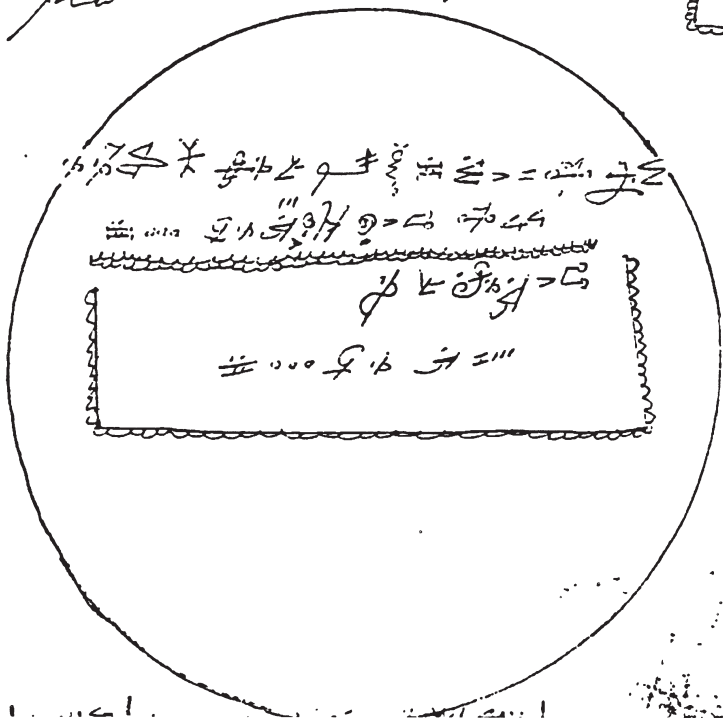


Figure 7. Text from Bokari Kanneh's Kikakui (Mende) notebooks (Tuchscherer 1996).

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://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.

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?