

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

Doc Type: Working Group Document**Title: Preliminary proposal for encoding the Adlam script in the SMP of the UCS****Source: UC Berkeley Script Encoding Initiative (Universal Scripts Project)****Author: Michael Everson****Status: Liaison Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Date: 2012-10-28**

1. Introduction. An alphabetic script for the Fulani language began to be devised in the 1980s by brothers Ibrahima Barry and Abdoulaye Barry, when they were children in Guinea. One of them asked their father why they could not write their language, and when their father wrote a few words in Fulani in Arabic script, he said “That’s not our script. We should have our own.” Some time later the boys proved to their father that they had devised by engaging in blind testing—similar to the way in which Sequoyah proved the efficacy of the Cherokee syllabary to his colleagues. One wrote a text and left the room; his brother came in and read it aloud, and then wrote down something else that he was told to write. Then he left the room and his sister, who had learned the script, came in to read what he had written. Over the next few years the Adlam script continued development. It is currently in use in Guinea and in other countries, and its use is increasing.

2. Structure. Adlam is a casing script with right-to-left directionality. Its letters can be written separately or can be joined together cursively. In terms of joining behaviour each letter has four possible forms (like Arabic س)—but joining behaviour is optional not obligatory; it is a question of font style.

3. Diacritical marks. A range of diacritical marks is used.

3.1. The ADLAM ALIF LENGTHENER is used only on the letter ALIF; it has a different glyph shape when used with the capital ALIF than when it is used with the small ALIF. Alif is a very frequent vowel, which accounts for it having its own sign. ɓɓ is *da*; ɓ̄ɓ *dā* can also be written ɓ̄ *dā*.

3.2. The ADLAM VOWEL LENGTHENER is used with other vowels: ɗɗ *du* is lengthened to ɗ̄ɗ *dū*.

3.3. The ADLAM VOWEL LENGTHENER BELOW has been encoded in order to represent an older orthography in which this vowel lengthener was placed below the word: ɗ̄ɗ *dū*. In some modern texts, both lengtheners can be found alongside one another.

3.4. The ADLAM GEMINATION MARK marks long consonants; compare ɓ̄ɓ̄ɗɗ *luke* with ɓ̄ɓ̄ɗ̄ɗ̄ *lukke*. In some modern texts, both lengtheners can be found alongside one another.

3.5. The ADLAM HAMZA is used atop a consonant when a glottal stop occurs between it and the following vowel; compare ɓ̄ɓ̄ɗ̄ɗ̄ *qurān* with ɓ̄ɓ̄ɗ̄ɗ̄ *qur’ān*.

3.6. The ADLAM CONSONANT MODIFIER-1 and ADLAM CONSONANT MODIFIER-2 are used to indicate foreign sounds. When the first is used with ADLAM LETTER SINNYIYHE, it indicates Arabic ش: ش.

3.7. The ADLAM DOT ABOVE and ADLAM DOT BELOW are used to indicate both native and borrowed sounds. The DOT ABOVE is used with the vowels ʀ E ε and ʀ O ɔ to indicate ʀ e and ʀ o respectively. When either of those vowels is lengthened, however, the DOT BELOW is used to indicate the quality change: thus vowels ʀ̄ ē and ʀ̄ ɔ to indicate ʀ̄ ē and ʀ̄ ɔ.

4. Collating order. Basic collation order follows the order of letters in the code chart, with capital and small letters interfiled. A full specification is forthcoming.

5. Character names. The usual UCS conventions are used, with BH representing *b*, and B representing *b*. Long vowels are doubled.

6. Linebreaking. Letters behave as in N’Ko.

7. Digits. Ten digits are used in Adlam; their directionality is also right-to-left, like the digits in N’Ko.

8. Punctuation. Adlam makes use of European punctuation, alongside U+061F ARABIC QUESTION MARK and U+2E41 REVERSED COMMA. While ARABIC QUESTION MARK and U+0021 EXCLAMATION MARK are used at the ends of sentences, two script specific characters, ʀ ADLAM QUESTION MARK and ʀ ADLAM EXCLAMATION MARK, are used at the beginnings of those sentences.

9. Unicode Character Properties.

1E900;ADLAM CAPITAL LETTER ALIF;Lu;0;R;;;N;;;1E920;;1E920
1E901;ADLAM CAPITAL LETTER DAALI;Lu;0;R;;;N;;;1E921;;1E921
1E902;ADLAM CAPITAL LETTER LAAM;Lu;0;R;;;N;;;1E922;;1E922
1E903;ADLAM CAPITAL LETTER MIIM;Lu;0;R;;;N;;;1E923;;1E923
1E904;ADLAM CAPITAL LETTER BA;Lu;0;R;;;N;;;1E924;;1E924
1E905;ADLAM CAPITAL LETTER SINNYIYHE;Lu;0;R;;;N;;;1E925;;1E925
1E906;ADLAM CAPITAL LETTER PE;Lu;0;R;;;N;;;1E926;;1E926
1E907;ADLAM CAPITAL LETTER BHE;Lu;0;R;;;N;;;1E927;;1E927
1E908;ADLAM CAPITAL LETTER RA;Lu;0;R;;;N;;;1E928;;1E928
1E909;ADLAM CAPITAL LETTER E;Lu;0;R;;;N;;;1E929;;1E929
1E90A;ADLAM CAPITAL LETTER FA;Lu;0;R;;;N;;;1E92A;;1E92A
1E90B;ADLAM CAPITAL LETTER I;Lu;0;R;;;N;;;1E92B;;1E92B
1E90C;ADLAM CAPITAL LETTER O;Lu;0;R;;;N;;;1E92C;;1E92C
1E90D;ADLAM CAPITAL LETTER DHA;Lu;0;R;;;N;;;1E92D;;1E92D
1E90E;ADLAM CAPITAL LETTER YHE;Lu;0;R;;;N;;;1E92E;;1E92E
1E90F;ADLAM CAPITAL LETTER WA;Lu;0;R;;;N;;;1E92F;;1E92F
1E910;ADLAM CAPITAL LETTER NUN;Lu;0;R;;;N;;;1E930;;1E930
1E911;ADLAM CAPITAL LETTER KAF;Lu;0;R;;;N;;;1E931;;1E931
1E912;ADLAM CAPITAL LETTER YA;Lu;0;R;;;N;;;1E932;;1E932
1E913;ADLAM CAPITAL LETTER U;Lu;0;R;;;N;;;1E933;;1E933
1E914;ADLAM CAPITAL LETTER JIIM;Lu;0;R;;;N;;;1E934;;1E934
1E915;ADLAM CAPITAL LETTER TEHI;Lu;0;R;;;N;;;1E935;;1E935
1E916;ADLAM CAPITAL LETTER HA;Lu;0;R;;;N;;;1E936;;1E936
1E917;ADLAM CAPITAL LETTER QAAF;Lu;0;R;;;N;;;1E937;;1E937
1E918;ADLAM CAPITAL LETTER GA;Lu;0;R;;;N;;;1E938;;1E938
1E919;ADLAM CAPITAL LETTER NYA;Lu;0;R;;;N;;;1E939;;1E939
1E91A;ADLAM CAPITAL LETTER TU;Lu;0;R;;;N;;;1E93A;;1E93A
1E91B;ADLAM CAPITAL LETTER NHA;Lu;0;R;;;N;;;1E93B;;1E93B
1E91C;ADLAM CAPITAL LETTER KPE;Lu;0;R;;;N;;;1E93C;;1E93C
1E91D;ADLAM CAPITAL LETTER VA;Lu;0;R;;;N;;;1E93D;;1E93D
1E91E;ADLAM CAPITAL LETTER XA;Lu;0;R;;;N;;;1E93E;;1E93E
1E91F;ADLAM CAPITAL LETTER GBA;Lu;0;R;;;N;;;1E93F;;1E93F
1E920;ADLAM SMALL LETTER ALIF;Ll;0;R;;;N;;;1E900;
1E921;ADLAM SMALL LETTER DAALI;Ll;0;R;;;N;;;1E901;
1E922;ADLAM SMALL LETTER LAAM;Ll;0;R;;;N;;;1E902;
1E923;ADLAM SMALL LETTER MIIM;Ll;0;R;;;N;;;1E903;
1E924;ADLAM SMALL LETTER BA;Ll;0;R;;;N;;;1E904;
1E925;ADLAM SMALL LETTER SINNYIYHE;Ll;0;R;;;N;;;1E905;
1E926;ADLAM SMALL LETTER PE;Ll;0;R;;;N;;;1E906;
1E927;ADLAM SMALL LETTER BHE;Ll;0;R;;;N;;;1E907;
1E928;ADLAM SMALL LETTER RA;Ll;0;R;;;N;;;1E908;
1E929;ADLAM SMALL LETTER E;Ll;0;R;;;N;;;1E909;
1E92A;ADLAM SMALL LETTER FA;Ll;0;R;;;N;;;1E90A;
1E92B;ADLAM SMALL LETTER I;Ll;0;R;;;N;;;1E90B;

1E92C;ADLAM SMALL LETTER O;Ll;0;R;;;N;;;1E90C;
1E92D;ADLAM SMALL LETTER DHA;Ll;0;R;;;N;;;1E90D;
1E92E;ADLAM SMALL LETTER YHE;Ll;0;R;;;N;;;1E90E;
1E92F;ADLAM SMALL LETTER WA;Ll;0;R;;;N;;;1E90F;
1E930;ADLAM SMALL LETTER NUN;Ll;0;R;;;N;;;1E910;
1E931;ADLAM SMALL LETTER KAF;Ll;0;R;;;N;;;1E911;
1E932;ADLAM SMALL LETTER YA;Ll;0;R;;;N;;;1E912;
1E933;ADLAM SMALL LETTER U;Ll;0;R;;;N;;;1E913;
1E934;ADLAM SMALL LETTER JIIM;Ll;0;R;;;N;;;1E914;
1E935;ADLAM SMALL LETTER TEHI;Ll;0;R;;;N;;;1E915;
1E936;ADLAM SMALL LETTER HA;Ll;0;R;;;N;;;1E916;
1E937;ADLAM SMALL LETTER QAAF;Ll;0;R;;;N;;;1E917;
1E938;ADLAM SMALL LETTER GA;Ll;0;R;;;N;;;1E918;
1E939;ADLAM SMALL LETTER NYA;Ll;0;R;;;N;;;1E919;
1E93A;ADLAM SMALL LETTER TU;Ll;0;R;;;N;;;1E91A;
1E93B;ADLAM SMALL LETTER NHA;Ll;0;R;;;N;;;1E91B;
1E93C;ADLAM SMALL LETTER KPE;Ll;0;R;;;N;;;1E91C;
1E93D;ADLAM SMALL LETTER VA;Ll;0;R;;;N;;;1E91D;
1E93E;ADLAM SMALL LETTER XA;Ll;0;R;;;N;;;1E91E;
1E93F;ADLAM SMALL LETTER GBA;Ll;0;R;;;N;;;1E91F;
1E940;ADLAM SIGN ALIF LENGTHENER;Mn;230;NSM;;;N;;;;
1E941;ADLAM SIGN VOWEL LENGTHENER;Mn;230;NSM;;;N;;;;
1E942;ADLAM SIGN VOWEL LENGTHENER BELOW;Mn;220;NSM;;;N;;;;
1E943;ADLAM SIGN GEMINATION;Mn;230;NSM;;;N;;;;
1E944;ADLAM SIGN HAMZA;Mn;230;NSM;;;N;;;;
1E945;ADLAM SIGN CONSONANT MODIFIER-1;Mn;230;NSM;;;N;;;;
1E946;ADLAM SIGN CONSONANT MODIFIER-2;Mn;230;NSM;;;N;;;;
1E947;ADLAM SIGN DOT ABOVE;Mn;230;NSM;;;N;;;;
1E948;ADLAM SIGN DOT BELOW;Mn;220;NSM;;;N;;;;
1E950;ADLAM DIGIT ZERO;Nd;0;R;;0;0;0;N;;;;
1E951;ADLAM DIGIT ONE;Nd;0;R;;1;1;1;N;;;;
1E952;ADLAM DIGIT TWO;Nd;0;R;;2;2;2;N;;;;
1E953;ADLAM DIGIT THREE;Nd;0;R;;3;3;3;N;;;;
1E954;ADLAM DIGIT FOUR;Nd;0;R;;4;4;4;N;;;;
1E955;ADLAM DIGIT FIVE;Nd;0;R;;5;5;5;N;;;;
1E956;ADLAM DIGIT SIX;Nd;0;R;;6;6;6;N;;;;
1E957;ADLAM DIGIT SEVEN;Nd;0;R;;7;7;7;N;;;;
1E958;ADLAM DIGIT EIGHT;Nd;0;R;;8;8;8;N;;;;
1E959;ADLAM DIGIT NINE;Nd;0;R;;9;9;9;N;;;;
1E95E;ADLAM INITIAL EXCLAMATION MARK;Po;0;ON;;;N;;;;
1E95F;ADLAM INITIAL QUESTION MARK;Po;0;ON;;;N;;;;

10. Acknowledgements. This project was made possible in part by a grant from the Script Encoding Initiative at UC Berkeley in respect of the Adlam encoding. Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the University of California Berkeley.

11. Bibliography

Barry, Ibrahima Ishagha. 2006. *Hè'lma wallifandè fin èkkitago'l bèbèrè Pular: Guide pratique pour apprendre l'alphabet Pulaar*. Conakry.

4

Ba	B	Ბ.Ე.Ს	Პ
siŋniyhê	S	Მ	Ჟ
pè	P	Ლ	Რ
bhè	-	Ს	Ს
ka	R	Მ	Ტ
è	è	Ლ	Უ
fa	F	Მ	Ფ
i	I	Მ	Ქ
ö	ô	Მ	Ღ
dha	-	Მ	Ყ
yhè	-	Მ	Შ
wâwou	w	Მ	Ჩ
poûn	N	Მ	Ც
kaf	K	Მ	Ძ
ya	y	Მ	Წ
ou	-	Მ	Ჭ
djim	-	Მ	Ხ

5

Figure 1b. Table of Adlam syllables from Barry 2006.

5

tchi	-	ᵛ	ɔ
ha	H	ɔ	ɔ
ghaf	-	ʒ	ʒ
ga	G	ɣ, ɣ	ɣ
gna	-	ʒ	ʒ
tou	T	ʒ	ʒ
pha	-	ʒ, ʒ	ʒ

Les cinq voyelles
uɔɔɔ ɔɔɔ ɔɔɔɔ

ɔ ɔ u ɔ ɔ
ou ô i è alif

Les 23 consonnes
ɔɔ ɔɔɔ ɔɔɔɔ

ɔ ʒ ʒ ɔ
Singniyhé ba lam dâli

ᵛ

Figure 1c. Table of Adlam syllables from Barry 2006.

ԹԵԳՐԱԿԱԳՂԱԿԸ
 ՅԿԱՌՇԿՐԱԿ
 ՔՐՏԿՅԻՆՁՊՍ

Figure 2. Sample of handwritten calligraphic Adlam capital letters. This is the most recent, and final, development in terms of character design, having been informed by courses in calligraphy.

ԹԵԳՐԼԵՏՂԱԿ
 ՅԿԱՌՇՂՐԱԿ
 ՔՐՏԿՅԻՆՁՊՍ

Figure 3. Sample of handwritten calligraphic Adlam small letters.

Թ Ճ Ձ Կ Ը Լ Խ Կ Թ
 () “ ” ‘ ’ ! Ի Գ Զ
 ‘ ˆ ˇ – օ Զ Գ Կ Կ

Figure 4. Sample of handwritten calligraphic Adlam digits, punctuation, and diacritical marks.

	1E90	1E91	1E92	1E93	1E94	1E95
0	𞞀 1E900	𞞁 1E910	𞞂 1E920	𞞃 1E930	𞞄 1E940	𞞅 1E950
1	𞞆 1E901	𞞇 1E911	𞞈 1E921	𞞉 1E931	𞞊 1E941	𞞋 1E951
2	𞞌 1E902	𞞍 1E912	𞞎 1E922	𞞏 1E932	𞞐 1E942	𞞑 1E952
3	𞞒 1E903	𞞓 1E913	𞞔 1E923	𞞕 1E933	𞞖 1E943	𞞗 1E953
4	𞞘 1E904	𞞙 1E914	𞞚 1E924	𞞛 1E934	𞞜 1E944	𞞝 1E954
5	𞞞 1E905	𞞟 1E915	𞞠 1E925	𞞡 1E935	𞞢 1E945	𞞣 1E955
6	𞞤 1E906	𞞥 1E916	𞞦 1E926	𞞧 1E936	𞞨 1E946	𞞩 1E956
7	𞞪 1E907	𞞫 1E917	𞞬 1E927	𞞭 1E937	𞞮 1E947	𞞯 1E957
8	𞞰 1E908	𞞱 1E918	𞞲 1E928	𞞳 1E938	𞞴 1E948	𞞵 1E958
9	𞞷 1E909	𞞸 1E919	𞞹 1E929	𞞺 1E939		𞞻 1E959
A	𞞼 1E90A	𞞽 1E91A	𞞾 1E92A	𞞿 1E93A		
B	𞟀 1E90B	𞟁 1E91B	𞟂 1E92B	𞟃 1E93B		
C	𞟄 1E90C	𞟅 1E91C	𞟆 1E92C	𞟇 1E93C		
D	𞟈 1E90D	𞟉 1E91D	𞟊 1E92D	𞟋 1E93D		
E	𞟌 1E90E	𞟍 1E91E	𞟎 1E92E	𞟏 1E93E		𞟐 1E95E
F	𞟑 1E90F	𞟒 1E91F	𞟓 1E92F	𞟔 1E93F		𞟕 1E95F

Capital letters

1E900	Ბ	ADLAM CAPITAL LETTER ALIF
1E901	Გ	ADLAM CAPITAL LETTER DAALI
1E902	Დ	ADLAM CAPITAL LETTER LAAM
1E903	Ე	ADLAM CAPITAL LETTER MIIM
1E904	Ვ	ADLAM CAPITAL LETTER BA
1E905	Ზ	ADLAM CAPITAL LETTER SINNYIYHE
1E906	Თ	ADLAM CAPITAL LETTER PE
1E907	Ი	ADLAM CAPITAL LETTER BHE
1E908	Კ	ADLAM CAPITAL LETTER RA
1E909	Ლ	ADLAM CAPITAL LETTER E
1E90A	Მ	ADLAM CAPITAL LETTER FA
1E90B	Ნ	ADLAM CAPITAL LETTER I
1E90C	Ო	ADLAM CAPITAL LETTER O
1E90D	Პ	ADLAM CAPITAL LETTER DHA
1E90E	Ჟ	ADLAM CAPITAL LETTER YHE
1E90F	Რ	ADLAM CAPITAL LETTER WA
1E910	Ს	ADLAM CAPITAL LETTER NUN
1E911	Ტ	ADLAM CAPITAL LETTER KAF
1E912	Უ	ADLAM CAPITAL LETTER YA
1E913	Ფ	ADLAM CAPITAL LETTER U
1E914	Ქ	ADLAM CAPITAL LETTER JIIM
1E915	Ღ	ADLAM CAPITAL LETTER TEHI
1E916	Ყ	ADLAM CAPITAL LETTER HA
1E917	Შ	ADLAM CAPITAL LETTER QAAF
1E918	Ჩ	ADLAM CAPITAL LETTER GA
1E919	Ც	ADLAM CAPITAL LETTER NYA
1E91A	Ძ	ADLAM CAPITAL LETTER TU
1E91B	Წ	ADLAM CAPITAL LETTER NHA

Supplementary letters

1E91C	Ჭ	ADLAM CAPITAL LETTER KPE
1E91D	Ხ	ADLAM CAPITAL LETTER VA
1E91E	Ჯ	ADLAM CAPITAL LETTER XA
1E91F	Ჰ	ADLAM CAPITAL LETTER GBA

Small letters

1E920	Ბ	ADLAM SMALL LETTER ALIF
1E921	Გ	ADLAM SMALL LETTER DAALI
1E922	Დ	ADLAM SMALL LETTER LAAM
1E923	Ე	ADLAM SMALL LETTER MIIM
1E924	Ვ	ADLAM SMALL LETTER BA
1E925	Ზ	ADLAM SMALL LETTER SINNYIYHE
1E926	Თ	ADLAM SMALL LETTER PE
1E927	Ი	ADLAM SMALL LETTER BHE
1E928	Კ	ADLAM SMALL LETTER RA
1E929	Ლ	ADLAM SMALL LETTER E
1E92A	Მ	ADLAM SMALL LETTER FA
1E92B	Ნ	ADLAM SMALL LETTER I
1E92C	Ო	ADLAM SMALL LETTER O
1E92D	Პ	ADLAM SMALL LETTER DHA
1E92E	Ჟ	ADLAM SMALL LETTER YHE
1E92F	Რ	ADLAM SMALL LETTER WA
1E930	Ს	ADLAM SMALL LETTER NUN
1E931	Ტ	ADLAM SMALL LETTER KAF
1E932	Უ	ADLAM SMALL LETTER YA
1E933	Ფ	ADLAM SMALL LETTER U
1E934	Ქ	ADLAM SMALL LETTER JIIM
1E935	Ღ	ADLAM SMALL LETTER TEHI
1E936	Ყ	ADLAM SMALL LETTER HA
1E937	Შ	ADLAM SMALL LETTER QAAF
1E938	Ჩ	ADLAM SMALL LETTER GA
1E939	Ც	ADLAM SMALL LETTER NYA
1E93A	Ძ	ADLAM SMALL LETTER TU
1E93B	Წ	ADLAM SMALL LETTER NHA

Supplementary letters

1E93C	Ჭ	ADLAM SMALL LETTER KPE
1E93D	Ხ	ADLAM SMALL LETTER VA
1E93E	Ჯ	ADLAM SMALL LETTER XA
1E93F	Ჰ	ADLAM SMALL LETTER GBA

Diacritical marks

1E940	Ჱ	ADLAM ALIF LENGTHENER
1E941	Ჲ	ADLAM VOWEL LENGTHENER
1E942	Ჳ	ADLAM VOWEL LENGTHENER BELOW
1E943	Ჴ	ADLAM GEMINATION MARK
1E944	Ჵ	ADLAM HAMZA
1E945	Ჶ	ADLAM CONSONANT MODIFIER-1
1E946	Ჷ	ADLAM CONSONANT MODIFIER-2
1E947	Ჸ	ADLAM DOT ABOVE
1E948	Ჹ	ADLAM DOT BELOW

Digits

1E950	Ჺ	ADLAM DIGIT ZERO
1E951	᲻	ADLAM DIGIT ONE
1E952	᲼	ADLAM DIGIT TWO
1E953	Ჽ	ADLAM DIGIT THREE
1E954	Ჾ	ADLAM DIGIT FOUR
1E955	Ჿ	ADLAM DIGIT FIVE
1E956	᳀	ADLAM DIGIT SIX
1E957	᳁	ADLAM DIGIT SEVEN
1E958	᳂	ADLAM DIGIT EIGHT
1E959	᳃	ADLAM DIGIT NINE

Punctuation mark

1E95E	᳄	ADLAM INITIAL EXCLAMATION MARK
1E95F	᳅	ADLAM INITIAL QUESTION MARK

A. Administrative

1. Title

Preliminary proposal for encoding the Adlam script in the SMP of the UCS

2. Requester's name

Script Encoding Initiative (author: Michael Everson)

3. Requester type (Member body/Liaison/Individual contribution)

Liaison contribution.

4. Submission date

2010-02-28

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.

1b. Proposed name of script

Adlam.

1c. The proposal is for addition of character(s) to an existing block

No.

1d. Name of the existing block

2. Number of characters in proposal

85.

3. Proposed category (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. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?

Michael Everson.

5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

Michael Everson, FontLab.

6a. 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. 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/Public/UNIDATA/UnicodeCharacterDatabase.html> 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.

No.

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.)?

No.

2b. If YES, with whom?

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.

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 Guinea and Nigeria.

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?