

Revised Proposal to Encode the Ndiko Jonam Script in the UCS

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To: Script Encoding Working Group (SEWG) / Unicode Technical Committee (UTC)

From: Oreen Yousuf

Subject: Proposal for encoding the Ndiko Jonam script in the UCS

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General Overview:

We propose the addition of the Ndiko Jonam script into the Unicode Standard. Below are submitted documents relevant to the script's encoding into the UCS:

- [L2/26-055](#): Proposal to Encode the Ndiko Jonam Script in the UCS
- [L2/26-027](#): Proposal to Encode the Luo Lakeside Script in the UCS
- [L2/23-238R](#): Recommendations to UTC #177 November 2023 on Script Proposals
- [L2/23-203](#): Update on Usage and Implementation Status of African Scripts
- [L2/19-268](#): "Addition of Luo Lakeside Script"
- [L2/19-286](#): "Recommendations to UTC #160 July 2019 on Script Proposals"

Our current proposal supersedes the most recent above proposal (L2/26-055) due to the following reasons:

- Better description of how joining works in the script (page 4).
- More images (Figures 18.1-22 in Section XI).

I Background

The Ndiko Jonam script (ᐃᐃᐃᐃ ᐃᐃᐃᐃ) is an alphabetical script used to write the Luo languages, specifically the Dholuo language (ISO 639-3: luo) of Kenya (which is also spoken in Tanzania). The letters of the script were created by Kefa Ombewa between 2009-2012, and the numerals were separately created by Professor Paul Sidanidi in 2012. The two met on Twitter in 2013 and combined their work. The script is used by users in Kisumu and other parts of Kenya, but is also used by Luo speakers in Botswana. The Batswana users are primarily concentrated in Lobatse. The script has grown far beyond the script inventor's social circles, causing it to become infeasible to keep precise numbering of users.

Two fonts have been created by the script community. The first font was created on June 12, 2012. These fonts have been used to create a dictionary, documents, primers, digital media, physical clocks, etc. These materials were made by people other than the script creator(s). There are no other scripts in competition among the user community. The first font was named "KefaSidandi", named after the script creators. Some specifics on how to make a font for the script can be found in Section IX.

Some Batswana script users also use the script to write Setswana (ISO 639-3: tsn). Only in isolated incidents has the proposal author observed the script being used to write Swahili (ISO 639-3: swa) and Oromo (ISO 639-3: orm) in the script (see Section XI). Both of these languages are spoken in Kenya as well, yet are linguistically unrelated to Luo.

A keyboard can be found here: https://keyman.com/keyboards/luo_lakeside. As of March 2026, 780+ people have downloaded the keyboard.

II Script Name

The proposed Unicode name for the script is “**NDIKO JONAM**”. The user community refers to the script as “Ndiko Jonam” (ᑎᑦᑎᑦᑎᑦ ᑎᑎᑎᑎᑎᑎ) in Luo and as “Luo Lakeside script” in English (many Luo people speak English as a second or third language). The community desires that the Luo term be the official Unicode name for the script. The reasoning behind the Luo (and English) name of the script is because the Luo language is predominantly spoken around Nam Lolwe (Lake Victoria) and along the waterways back to the Nile River. “Ndiko Jonam” literally translates to English as “writing of the lakeside people”.

III Structure

The Ndiko Jonam script is an alphabet that is written from left-to-right (LTR) in horizontal lines from the top of a page to the bottom of a page. The script has 33 letters. The script is bicameral, meaning it has an uppercase and lowercase form for (mostly) every letter, however it was at one point unicameral (i.e., having only one form for each sound).

Letter Name	Letter		IPA	Latin Luo Orthography
	Uppercase	Lowercase		
AA	ᑎ	ᑎ	/a/	A a
BA	ᑎ	ᑎ	/b/	B b
CHA	ᑎ	ᑎ	/tʃ/	Ch ch
DA	ᑎ	ᑎ	/d/	D d
EE	ᑎ	ᑎ	/e/	E e
FA	ᑎ	ᑎ	/f/	F f
GA	ᑎ	ᑎ	/g/	G g
NG’A	ᑎ	ᑎ	/ŋ/	Ng’ ng’
HA	ᑎ	ᑎ	/h/	H h
II	ᑎ	ᑎ	/i/	I i
JA	ᑎ	ᑎ	/j/	J j
KA	ᑎ	ᑎ	/k/	K k
LA	ᑎ	ᑎ	/l/	L l
MA	ᑎ	ᑎ	/m/	M m
MBA		ᑎ	/ᵐb/	Mb mb
NA	ᑎ	ᑎ	/n/	N n
NDA		ᑎ	/ᵐd/	Nd nd
NJA		ᑎ	/ᵐʃ/	Nj nj
NGA		ᑎ	/ᵐg/	Ng ng
NYA		ᑎ	/ᵐj/	Ny ny
OO	ᑎ	ᑎ	/o/	O o

PA	ᐁ	ᐃ	/p/	P p
SHA	ᐅ	ᐇ	/ʃ/ and /ɬ/	Sh sh*
RA	ᐉ	ᐊ	/r/	R r
SA	ᐋ	ᐍ	/s/	S s
TA	ᐏ	ᐑ	/t/	T t
THA		ᐓ	/t̪/	Th th
DHA		ᐕ	/d̪/	Dh dh
UU	ᐗ	ᐙ	/u/	U u
VA	ᐛ	ᐝ	/v/	V v
WA	ᐟ	ᐡ	/w/	W w
YA	ᐣ	ᐤ	/j/	Y y
ZA	ᐧ	ᐨ	/z/	Z z

Table 1. All letters in the Ndiko Jonam script.

Due to QWERTY keyboard limitations and English/Latin-script influence, between June-August 2017 seven letters that were once used – ᐃ /^mb/, ᐅ /ⁿd/, ᐉ /ⁿj/, ᐊ /ⁿg/, ᐋ /ⁿ/, ᐏ /^t/, ᐑ /^d/ – fell into disuse. The phonemes these letters represented are now spelled with digraphs (i.e., Ndiko Jonam letters for m+b, n+d, n+j, n+g, n+y, t+h, d+h, respectively). These letters should however still be encoded to preserve old documents as is agreed upon by the community. When the script became bicameral, the existing letters became the lowercase forms. The previously mentioned 7 letters were dropped before the transition to a bicameral script, therefore, uppercase forms were never created for them.

*In Table 1, the letter ᐅ/ᐇ is used for two different sounds. For Luo speakers in Kenya, this letter is used for the foreign sound /ʃ/ (written as <sh> in English); whereas Luo speakers in Botswana use this same letter for a palatal click /ɬ/ (written as <q> in Setswana) due to Batswana script users' exposure to Setswana which uses a palatal click.

Lowercase letters are joined at the bottom in a cursive manner, somewhat similar to other scripts (e.g., Adlam, Arabic, Nko, etc.). When typed, all letters have the ability to join on the right-side. However, 17 letters do not have the ability to join on the left-side. Below is a table showing all lowercase letters and if they are Right-Joining or Dual-Joining. No letter is only Left-Joining. The letter γ (DA) is Dual-Joining (meaning it can join on the right or the left). It is used in the table below to show the joining properties of all lowercase letters.

Letter Name	Letter Isolated	Letter Initial	Letter Medial	Letter Final	Joining Property
AA					Right-Joining
BA					Right-Joining
CHA					Dual-Joining
DA					Dual-Joining
EE					Right-Joining
FA					Right-Joining
GA					Right-Joining
NG'A					Dual-Joining
HA					Dual-Joining
II					Right-Joining
JA					Dual-Joining
KA					Dual-Joining
LA					Dual-Joining
MA					Right-Joining
MBA					Dual-Joining
NA					Dual-Joining
NDA					Right-Joining
NJA					Right-Joining
NGA					Right-Joining
NYA					Right-Joining
OO					Right-Joining
PA					Dual-Joining

SHA					Dual-Joining
RA					Dual-Joining
SA					Right-Joining
TA					Right-Joining
THA					Dual-Joining
DHA					Dual-Joining
UU					Right-Joining
VA					Dual-Joining
WA					Right-Joining
YA					Right-Joining
ZA					Dual-Joining

Table 2: Examples showing how lowercase Ndiko Jonam letters join.

Table 5 (which reflects Table 2) shows the explicit joining properties of the script. However, the community makes a distinction in the joining properties for a few letters when they are handwritten versus typed. The following letters are visually Dual-Joining when handwritten:

𐎧 AA, 𐎡 EE, 𐎢 II, 𐎣 OO, 𐎤 UU, 𐎥 GA, 𐎦 NJA, 𐎧 NYA

See Figures 19-22 in Section XI for examples of these letters visually appearing as Dual-Joining in handwritten styles. Fonts that specifically want to emulate handwriting must ensure that the letters above appear Dual-Joining. The proposal author has discussed this at length with the community

Uppercase letters never join to other uppercase nor to lowercase letters. Even when a word has uppercase among lowercase letters, the uppercase letters still do not join to other letters (see Figure 1 in Section XI).

Numbers

The Luo language uses a base-10 (decimal) system to count. The Ndiko Jonam script has unique digits/numerals.

Luo Name	Latin Transliteration	Ndiko Jonam Digit	Hindu-Arabic Equivalent
፩፪፫፬	NONO	፬	0
፭፮፯፰	ACHIEL	፭	1
፱፻፳፻	ARIYO	፮	2
፻፳፻፳	ADEK	፯	3
፻፳፻፳፻	ANG'WEN	፰	4
፻፳፻፳፻፻	ABICH	፱	5
፻፳፻፳፻፻፻	AUCHIEL	፻	6
፻፳፻፳፻፻፻፻	ABIRIYO	፻፻	7
፻፳፻፳፻፻፻፻፻	ABORO	፻፻፻	8
፻፳፻፳፻፻፻፻፻፻	OCHIKO	፻፻፻፻	9

Table 3. Ndiko Jonam script digits/numerals.

IV Character Repertoire

Character	Unicode Name
፫	1CB30 NDIKO JONAM CAPITAL LETTER AA
፬	1CB31 NDIKO JONAM CAPITAL LETTER BA
፭	1CB32 NDIKO JONAM CAPITAL LETTER CHA
፮	1CB33 NDIKO JONAM CAPITAL LETTER DA
፯	1CB34 NDIKO JONAM CAPITAL LETTER EE
፰	1CB35 NDIKO JONAM CAPITAL LETTER FA
፱	1CB36 NDIKO JONAM CAPITAL LETTER GA
፻	1CB37 NDIKO JONAM CAPITAL LETTER NGA
፻፻	1CB38 NDIKO JONAM CAPITAL LETTER HA
፻፻፻	1CB39 NDIKO JONAM CAPITAL LETTER II
፻፻፻፻	1CB3A NDIKO JONAM CAPITAL LETTER JA
፻፻፻፻፻	1CB3B NDIKO JONAM CAPITAL LETTER KA
፻፻፻፻፻፻	1CB3C NDIKO JONAM CAPITAL LETTER LA
፻፻፻፻፻፻፻	1CB3D NDIKO JONAM CAPITAL LETTER MA
፻፻፻፻፻፻፻፻	1CB3E NDIKO JONAM CAPITAL LETTER NA

ᱚ	1CB3F NDIKO JONAM CAPITAL LETTER OO
ᱛ	1CB40 NDIKO JONAM CAPITAL LETTER PA
ᱜ	1CB41 NDIKO JONAM CAPITAL LETTER SHA
ᱝ	1CB42 NDIKO JONAM CAPITAL LETTER RA
ᱞ	1CB43 NDIKO JONAM CAPITAL LETTER SA
ᱟ	1CB44 NDIKO JONAM CAPITAL LETTER TA
ᱠ	1CB45 NDIKO JONAM CAPITAL LETTER UU
ᱡ	1CB46 NDIKO JONAM CAPITAL LETTER VA
ᱢ	1CB47 NDIKO JONAM CAPITAL LETTER WA
ᱣ	1CB48 NDIKO JONAM CAPITAL LETTER YA
ᱤ	1CB49 NDIKO JONAM CAPITAL LETTER ZA
	1CB4A RESERVED
	1CB4B RESERVED
	1CB4C RESERVED
	1CB4D RESERVED
	1CB4E RESERVED
	1CB4F RESERVED
	1CB50 RESERVED
ᱥ	1CB51 NDIKO JONAM SMALL LETTER AA
ᱦ	1CB52 NDIKO JONAM SMALL LETTER BA
ᱧ	1CB53 NDIKO JONAM SMALL LETTER CHA
ᱨ	1CB54 NDIKO JONAM SMALL LETTER DA
ᱩ	1CB55 NDIKO JONAM SMALL LETTER EE
ᱪ	1CB56 NDIKO JONAM SMALL LETTER FA
ᱫ	1CB57 NDIKO JONAM SMALL LETTER GA
ᱬ	1CB58 NDIKO JONAM SMALL LETTER NGA
ᱭ	1CB59 NDIKO JONAM SMALL LETTER HA
ᱮ	1CB5A NDIKO JONAM SMALL LETTER II
ᱯ	1CB5B NDIKO JONAM SMALL LETTER JA
ᱰ	1CB5C NDIKO JONAM SMALL LETTER KA

Ⲅ	1CB5D NDIKO JONAM SMALL LETTER LA
ⲅ	1CB5E NDIKO JONAM SMALL LETTER MA
Ⲇ	1CB5F NDIKO JONAM SMALL LETTER NA
ⲇ	1CB60 NDIKO JONAM SMALL LETTER OO
Ⲉ	1CB61 NDIKO JONAM SMALL LETTER PA
ⲉ	1CB62 NDIKO JONAM SMALL LETTER SHA
Ⲋ	1CB63 NDIKO JONAM SMALL LETTER RA
ⲋ	1CB64 NDIKO JONAM SMALL LETTER SA
Ⲍ	1CB65 NDIKO JONAM SMALL LETTER TA
ⲍ	1CB66 NDIKO JONAM SMALL LETTER UU
Ⲏ	1CB67 NDIKO JONAM SMALL LETTER VA
ⲏ	1CB68 NDIKO JONAM SMALL LETTER WA
Ⲑ	1CB69 NDIKO JONAM SMALL LETTER YA
ⲑ	1CB6A NDIKO JONAM SMALL LETTER ZA
Ⲓ	1CB6B NDIKO JONAM SMALL LETTER MBA
ⲓ	1CB6C NDIKO JONAM SMALL LETTER NDA
Ⲕ	1CB6D NDIKO JONAM SMALL LETTER NJA
ⲕ	1CB6E NDIKO JONAM SMALL LETTER NGGA
Ⲍ	1CB6F NDIKO JONAM SMALL LETTER NYA
Ⲏ	1CB70 NDIKO JONAM SMALL LETTER THA
Ⲑ	1CB71 NDIKO JONAM SMALL LETTER DHA
	1CB72 RESERVED
	1CB73 RESERVED
	1CB74 RESERVED
	1CB75 RESERVED
Ⲑ	1CB76 NDIKO JONAM DIGIT ZERO
Ⲓ	1CB77 NDIKO JONAM DIGIT ONE
Ⲓ	1CB78 NDIKO JONAM DIGIT TWO
Ⲓ	1CB79 NDIKO JONAM DIGIT THREE
Ⲓ	1CB7A NDIKO JONAM DIGIT FOUR

𐒃	1CB7B NDIKO JONAM DIGIT FIVE
𐒄	1CB7C NDIKO JONAM DIGIT SIX
𐒅	1CB7D NDIKO JONAM DIGIT SEVEN
𐒆	1CB7E NDIKO JONAM DIGIT EIGHT
𐒇	1CB7F NDIKO JONAM DIGIT NINE

Table 4. Ndiko Jonam script character repertoire.

Due to Unicode not allowing apostrophes in the Unicode name for scripts nor characters, the letters for /ŋ/ (𐒃; 𐒄), which are transcribed as <NG'A> in the Latin Luo orthography, was given the Unicode name NGA.

However, the letter for /ŋg/ (𐒅) is normally transcribed as <NGA> in the Latin Luo orthography. Therefore, we suggest that the Unicode name for this letter be NGGA. Any future educational material created by persons reading this proposal should not be influenced by these Unicode names, which were chosen due to constraints, and should instead adhere to the official names of the letters listed in Table 1 in Section III.

Empty cells are reserved for potential future encoding of uppercase letters for the 7 lowercase letters discussed in Section III that were dropped due to QWERTY limitations.

Chart

	1CB30	1CB40	1CB50	1CB60	1CB70
0	ᐅ	ᐅ		ᐅ	ᐅ
1	ᐅ	ᐅ	ᐅ	ᐅ	ᐅ
2	ᐅ	ᐅ	ᐅ	ᐅ	
3	ᐅ	ᐅ	ᐅ	ᐅ	
4	ᐅ	ᐅ	ᐅ	ᐅ	
5	ᐅ	ᐅ	ᐅ	ᐅ	
6	ᐅ	ᐅ	ᐅ	ᐅ	ᐅ
7	ᐅ	ᐅ	ᐅ	ᐅ	ᐅ
8	ᐅ	ᐅ	ᐅ	ᐅ	ᐅ
9	ᐅ	ᐅ	ᐅ	ᐅ	ᐅ
A	ᐅ		ᐅ	ᐅ	ᐅ
B	ᐅ		ᐅ	ᐅ	ᐅ
C	ᐅ		ᐅ	ᐅ	ᐅ
D	ᐅ		ᐅ	ᐅ	ᐅ
E	ᐅ		ᐅ	ᐅ	ᐅ
F	ᐅ		ᐅ	ᐅ	ᐅ

Capital letters

1CB30 𐌰 NDIKO JONAM CAPITAL LETTER AA
1CB31 𐌱 NDIKO JONAM CAPITAL LETTER BA
1CB32 𐌲 NDIKO JONAM CAPITAL LETTER CHA
1CB33 𐌳 NDIKO JONAM CAPITAL LETTER DA
1CB34 𐌴 NDIKO JONAM CAPITAL LETTER EE
1CB35 𐌵 NDIKO JONAM CAPITAL LETTER FA
1CB36 𐌶 NDIKO JONAM CAPITAL LETTER GA
1CB37 𐌷 NDIKO JONAM CAPITAL LETTER NGA
1CB38 𐌸 NDIKO JONAM CAPITAL LETTER HA
1CB39 𐌹 NDIKO JONAM CAPITAL LETTER II
1CB3A 𐌺 NDIKO JONAM CAPITAL LETTER JA
1CB3B 𐌻 NDIKO JONAM CAPITAL LETTER KA
1CB3C 𐌼 NDIKO JONAM CAPITAL LETTER LA
1CB3D 𐌽 NDIKO JONAM CAPITAL LETTER MA
1CB3E 𐌾 NDIKO JONAM CAPITAL LETTER NA
1CB3F 𐌿 NDIKO JONAM CAPITAL LETTER OO
1CB40 𐍀 NDIKO JONAM CAPITAL LETTER PA
1CB41 𐍁 NDIKO JONAM CAPITAL LETTER SHA
1CB42 𐍂 NDIKO JONAM CAPITAL LETTER RA
1CB43 𐍃 NDIKO JONAM CAPITAL LETTER SA
1CB44 𐍄 NDIKO JONAM CAPITAL LETTER TA
1CB45 𐍅 NDIKO JONAM CAPITAL LETTER UU
1CB46 𐍆 NDIKO JONAM CAPITAL LETTER VA
1CB47 𐍇 NDIKO JONAM CAPITAL LETTER WA
1CB48 𐍈 NDIKO JONAM CAPITAL LETTER YA
1CB49 𐍉 NDIKO JONAM CAPITAL LETTER ZA

Small letters

1CB51 𐍊 NDIKO JONAM SMALL LETTER AA
1CB52 𐍋 NDIKO JONAM SMALL LETTER BA
1CB53 𐍌 NDIKO JONAM SMALL LETTER CHA
1CB54 𐍍 NDIKO JONAM SMALL LETTER DA
1CB55 𐍎 NDIKO JONAM SMALL LETTER EE
1CB56 𐍏 NDIKO JONAM SMALL LETTER FA
1CB57 𐍐 NDIKO JONAM SMALL LETTER GA
1CB58 𐍑 NDIKO JONAM SMALL LETTER NGA
1CB59 𐍒 NDIKO JONAM SMALL LETTER HA

1CB5A 𐍓 NDIKO JONAM SMALL LETTER II
1CB5B 𐍔 NDIKO JONAM SMALL LETTER JA
1CB5C 𐍕 NDIKO JONAM SMALL LETTER KA
1CB5D 𐍖 NDIKO JONAM SMALL LETTER LA
1CB5E 𐍗 NDIKO JONAM SMALL LETTER MA
1CB5F 𐍘 NDIKO JONAM SMALL LETTER NA
1CB60 𐍙 NDIKO JONAM SMALL LETTER OO
1CB61 𐍚 NDIKO JONAM SMALL LETTER PA
1CB62 𐍛 NDIKO JONAM SMALL LETTER SHA
1CB63 𐍜 NDIKO JONAM SMALL LETTER RA
1CB64 𐍝 NDIKO JONAM SMALL LETTER SA
1CB65 𐍞 NDIKO JONAM SMALL LETTER TA
1CB66 𐍟 NDIKO JONAM SMALL LETTER UU
1CB67 𐍠 NDIKO JONAM SMALL LETTER VA
1CB68 𐍡 NDIKO JONAM SMALL LETTER WA
1CB69 𐍢 NDIKO JONAM SMALL LETTER YA
1CB6A 𐍣 NDIKO JONAM SMALL LETTER ZA

Historic letters

1CB6B 𐍤 NDIKO JONAM SMALL LETTER MBA
1CB6C 𐍥 NDIKO JONAM SMALL LETTER NDA
1CB6D 𐍦 NDIKO JONAM SMALL LETTER NJA
1CB6E 𐍧 NDIKO JONAM SMALL LETTER NGGA
1CB6F 𐍨 NDIKO JONAM SMALL LETTER NYA
1CB70 𐍩 NDIKO JONAM SMALL LETTER THA
1CB71 𐍪 NDIKO JONAM SMALL LETTER DHA

Digits

1CB76 𐍫 NDIKO JONAM DIGIT ZERO
1CB77 𐍬 NDIKO JONAM DIGIT ONE
1CB78 𐍭 NDIKO JONAM DIGIT TWO
1CB79 𐍮 NDIKO JONAM DIGIT THREE
1CB7A 𐍯 NDIKO JONAM DIGIT FOUR
1CB7B 𐍰 NDIKO JONAM DIGIT FIVE
1CB7C 𐍱 NDIKO JONAM DIGIT SIX
1CB7D 𐍲 NDIKO JONAM DIGIT SEVEN
1CB7E 𐍳 NDIKO JONAM DIGIT EIGHT
1CB7F 𐍴 NDIKO JONAM DIGIT NINE

Additional information on characters

Phonetic value

See IPA for all letters in Table 1 in Section III above.

Joining information

Most lowercase letters join together. However, there are no positional variants in this script. See Table 2 and Section III above for details. Below is the shaping information for the Ndiko Jonam script:

1CB51;	NDIKO	JONAM	SMALL	AA;	L;	No_Joining_Group
1CB52;	NDIKO	JONAM	SMALL	BA;	L;	No_Joining_Group
1CB53;	NDIKO	JONAM	SMALL	CHA;	D;	No_Joining_Group
1CB54;	NDIKO	JONAM	SMALL	DA;	D;	No_Joining_Group
1CB55;	NDIKO	JONAM	SMALL	EE;	L;	No_Joining_Group
1CB56;	NDIKO	JONAM	SMALL	FA;	L;	No_Joining_Group
1CB57;	NDIKO	JONAM	SMALL	GA;	L;	No_Joining_Group
1CB58;	NDIKO	JONAM	SMALL	NGA;	D;	No_Joining_Group
1CB59;	NDIKO	JONAM	SMALL	HA;	D;	No_Joining_Group
1CB5A;	NDIKO	JONAM	SMALL	II;	L;	No_Joining_Group
1CB5B;	NDIKO	JONAM	SMALL	JA;	D;	No_Joining_Group
1CB5C;	NDIKO	JONAM	SMALL	KA;	D;	No_Joining_Group
1CB5D;	NDIKO	JONAM	SMALL	LA;	D;	No_Joining_Group
1CB5E;	NDIKO	JONAM	SMALL	MA;	L;	No_Joining_Group
1CB5F;	NDIKO	JONAM	SMALL	NA;	D;	No_Joining_Group
1CB60;	NDIKO	JONAM	SMALL	OO;	L;	No_Joining_Group
1CB61;	NDIKO	JONAM	SMALL	PA;	D;	No_Joining_Group
1CB62;	NDIKO	JONAM	SMALL	SHA;	D;	No_Joining_Group
1CB63;	NDIKO	JONAM	SMALL	RA;	D;	No_Joining_Group
1CB64;	NDIKO	JONAM	SMALL	SA;	L;	No_Joining_Group
1CB65;	NDIKO	JONAM	SMALL	TA;	L;	No_Joining_Group
1CB66;	NDIKO	JONAM	SMALL	UU;	L;	No_Joining_Group
1CB67;	NDIKO	JONAM	SMALL	VA;	D;	No_Joining_Group
1CB68;	NDIKO	JONAM	SMALL	WA;	L;	No_Joining_Group
1CB69;	NDIKO	JONAM	SMALL	YA;	L;	No_Joining_Group
1CB6A;	NDIKO	JONAM	SMALL	ZA;	D;	No_Joining_Group
1CB6B;	NDIKO	JONAM	SMALL	MBA;	D;	No_Joining_Group
1CB6C;	NDIKO	JONAM	SMALL	NDA;	L;	No_Joining_Group
1CB6D;	NDIKO	JONAM	SMALL	NJA;	L;	No_Joining_Group
1CB6E;	NDIKO	JONAM	SMALL	NGGA;	L;	No_Joining_Group
1CB6F;	NDIKO	JONAM	SMALL	NYA;	L;	No_Joining_Group
1CB70;	NDIKO	JONAM	SMALL	THA;	L;	No_Joining_Group
1CB71;	NDIKO	JONAM	SMALL	DHA;	L;	No_Joining_Group

Table 5. Shaping Properties of the Ndiko Jonam script.

Punctuation

There are no script-specific Ndiko Jonam punctuation marks.

Numbers

There are script-specific Ndiko Jonam digits/numerals. See Table 3 in Section III above.

V Properties

General Category and other properties

1CB30;NDIKO	JONAM	CAPITAL	LETTER	AA;Lu;0;L;,,,;N;,,,;1CB51;
1CB31;NDIKO	JONAM	CAPITAL	LETTER	BA;Lu;0;L;,,,;N;,,,;1CB52;
1CB32;NDIKO	JONAM	CAPITAL	LETTER	CHA;Lu;0;L;,,,;N;,,,;1CB53;
1CB33;NDIKO	JONAM	CAPITAL	LETTER	DA;Lu;0;L;,,,;N;,,,;1CB54;
1CB34;NDIKO	JONAM	CAPITAL	LETTER	EE;Lu;0;L;,,,;N;,,,;1CB55;
1CB35;NDIKO	JONAM	CAPITAL	LETTER	FA;Lu;0;L;,,,;N;,,,;1CB56;
1CB36;NDIKO	JONAM	CAPITAL	LETTER	GA;Lu;0;L;,,,;N;,,,;1CB57;
1CB37;NDIKO	JONAM	CAPITAL	LETTER	NGA;Lu;0;L;,,,;N;,,,;1CB58;
1CB38;NDIKO	JONAM	CAPITAL	LETTER	HA;Lu;0;L;,,,;N;,,,;1CB59;
1CB39;NDIKO	JONAM	CAPITAL	LETTER	II;Lu;0;L;,,,;N;,,,;1CB5A;
1CB3A;NDIKO	JONAM	CAPITAL	LETTER	JA;Lu;0;L;,,,;N;,,,;1CB5B;
1CB3B;NDIKO	JONAM	CAPITAL	LETTER	KA;Lu;0;L;,,,;N;,,,;1CB5C;
1CB3C;NDIKO	JONAM	CAPITAL	LETTER	LA;Lu;0;L;,,,;N;,,,;1CB5D;
1CB3D;NDIKO	JONAM	CAPITAL	LETTER	MA;Lu;0;L;,,,;N;,,,;1CB5E;
1CB3E;NDIKO	JONAM	CAPITAL	LETTER	NA;Lu;0;L;,,,;N;,,,;1CB5F;
1CB3F;NDIKO	JONAM	CAPITAL	LETTER	OO;Lu;0;L;,,,;N;,,,;1CB60;
1CB40;NDIKO	JONAM	CAPITAL	LETTER	PA;Lu;0;L;,,,;N;,,,;1CB61;
1CB41;NDIKO	JONAM	CAPITAL	LETTER	SHA;Lu;0;L;,,,;N;,,,;1CB62;
1CB42;NDIKO	JONAM	CAPITAL	LETTER	RA;Lu;0;L;,,,;N;,,,;1CB63;
1CB43;NDIKO	JONAM	CAPITAL	LETTER	SA;Lu;0;L;,,,;N;,,,;1CB64;
1CB44;NDIKO	JONAM	CAPITAL	LETTER	TA;Lu;0;L;,,,;N;,,,;1CB65;
1CB45;NDIKO	JONAM	CAPITAL	LETTER	UU;Lu;0;L;,,,;N;,,,;1CB66;
1CB46;NDIKO	JONAM	CAPITAL	LETTER	VA;Lu;0;L;,,,;N;,,,;1CB67;
1CB47;NDIKO	JONAM	CAPITAL	LETTER	WA;Lu;0;L;,,,;N;,,,;1CB68;
1CB48;NDIKO	JONAM	CAPITAL	LETTER	YA;Lu;0;L;,,,;N;,,,;1CB69;
1CB49;NDIKO	JONAM	CAPITAL	LETTER	ZA;Lo;0;L;,,,;N;,,,;1CB6A;
1CB51;NDIKO	JONAM	SMALL	LETTER	AA;Ll;0;L;,,,;N;,,,;1CB30;,,;1CB30
1CB52;NDIKO	JONAM	SMALL	LETTER	BA;Ll;0;L;,,,;N;,,,;1CB31;,,;1CB31
1CB53;NDIKO	JONAM	SMALL	LETTER	CHA;Ll;0;L;,,,;N;,,,;1CB32;,,;1CB32
1CB54;NDIKO	JONAM	SMALL	LETTER	DA;Ll;0;L;,,,;N;,,,;1CB33;,,;1CB33
1CB55;NDIKO	JONAM	SMALL	LETTER	EE;Ll;0;L;,,,;N;,,,;1CB34;,,;1CB34
1CB56;NDIKO	JONAM	SMALL	LETTER	FA;Ll;0;L;,,,;N;,,,;1CB35;,,;1CB35
1CB57;NDIKO	JONAM	SMALL	LETTER	GA;Ll;0;L;,,,;N;,,,;1CB36;,,;1CB36
1CB58;NDIKO	JONAM	SMALL	LETTER	NGA;Ll;0;L;,,,;N;,,,;1CB37;,,;1CB37
1CB59;NDIKO	JONAM	SMALL	LETTER	HA;Ll;0;L;,,,;N;,,,;1CB38;,,;1CB38
1CB5A;NDIKO	JONAM	SMALL	LETTER	II;Ll;0;L;,,,;N;,,,;1CB39;,,;1CB39
1CB5B;NDIKO	JONAM	SMALL	LETTER	JA;Ll;0;L;,,,;N;,,,;1CB3A;,,;1CB3A
1CB5C;NDIKO	JONAM	SMALL	LETTER	KA;Ll;0;L;,,,;N;,,,;1CB3B;,,;1CB3B
1CB5D;NDIKO	JONAM	SMALL	LETTER	LA;Ll;0;L;,,,;N;,,,;1CB3C;,,;1CB3C
1CB5E;NDIKO	JONAM	SMALL	LETTER	MA;Ll;0;L;,,,;N;,,,;1CB3D;,,;1CB3D
1CB5F;NDIKO	JONAM	SMALL	LETTER	NA;Ll;0;L;,,,;N;,,,;1CB3E;,,;1CB3E
1CB60;NDIKO	JONAM	SMALL	LETTER	OO;Ll;0;L;,,,;N;,,,;1CB3F;,,;1CB3F
1CB61;NDIKO	JONAM	SMALL	LETTER	PA;Ll;0;L;,,,;N;,,,;1CB40;,,;1CB40
1CB62;NDIKO	JONAM	SMALL	LETTER	SHA;Ll;0;L;,,,;N;,,,;1CB41;,,;1CB41
1CB63;NDIKO	JONAM	SMALL	LETTER	RA;Ll;0;L;,,,;N;,,,;1CB42;,,;1CB42
1CB64;NDIKO	JONAM	SMALL	LETTER	SA;Ll;0;L;,,,;N;,,,;1CB43;,,;1CB43
1CB65;NDIKO	JONAM	SMALL	LETTER	TA;Ll;0;L;,,,;N;,,,;1CB44;,,;1CB44
1CB66;NDIKO	JONAM	SMALL	LETTER	UU;Ll;0;L;,,,;N;,,,;1CB45;,,;1CB45
1CB67;NDIKO	JONAM	SMALL	LETTER	VA;Ll;0;L;,,,;N;,,,;1CB46;,,;1CB46

1CB68;NDIKO	JONAM	SMALL	LETTER	WA;	Ll;	0;	L;	;	;	;	;	N;	;	1CB47;	;	1CB47
1CB69;NDIKO	JONAM	SMALL	LETTER	YA;	Ll;	0;	L;	;	;	;	;	N;	;	1CB48;	;	1CB48
1CB6A;NDIKO	JONAM	SMALL	LETTER	ZA;	Ll;	0;	L;	;	;	;	;	N;	;	1CB49;	;	1CB49
1CB6B;NDIKO	JONAM	SMALL	LETTER	MBA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB6C;NDIKO	JONAM	SMALL	LETTER	NDA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB6D;NDIKO	JONAM	SMALL	LETTER	NJA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB6E;NDIKO	JONAM	SMALL	LETTER	NGGA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB6F;NDIKO	JONAM	SMALL	LETTER	NYA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB70;NDIKO	JONAM	SMALL	LETTER	THA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB71;NDIKO	JONAM	SMALL	LETTER	DHA;	Ll;	0;	L;	;	;	;	;	N;	;	;	;	;
1CB76;NDIKO	JONAM	DIGIT	ZERO;	Nd;	0;	L;	;	0;	0;	0;	N;	;	;	;	;	;
1CB77;NDIKO	JONAM	DIGIT	ONE;	Nd;	0;	L;	;	1;	1;	1;	N;	;	;	;	;	;
1CB78;NDIKO	JONAM	DIGIT	TWO;	Nd;	0;	L;	;	2;	2;	2;	N;	;	;	;	;	;
1CB79;NDIKO	JONAM	DIGIT	THREE;	Nd;	0;	L;	;	3;	3;	3;	N;	;	;	;	;	;
1CB7A;NDIKO	JONAM	DIGIT	FOUR;	Nd;	0;	L;	;	4;	4;	4;	N;	;	;	;	;	;
1CB7B;NDIKO	JONAM	DIGIT	FIVE;	Nd;	0;	L;	;	5;	5;	5;	N;	;	;	;	;	;
1CB7C;NDIKO	JONAM	DIGIT	SIX;	Nd;	0;	L;	;	6;	6;	6;	N;	;	;	;	;	;
1CB7D;NDIKO	JONAM	DIGIT	SEVEN;	Nd;	0;	L;	;	7;	7;	7;	N;	;	;	;	;	;
1CB7E;NDIKO	JONAM	DIGIT	EIGHT;	Nd;	0;	L;	;	8;	8;	8;	N;	;	;	;	;	;
1CB7F;NDIKO	JONAM	DIGIT	NINE;	Nd;	0;	L;	;	9;	9;	9;	N;	;	;	;	;	;

Table 6. Character Properties of the Ndiko Jonam script.

Line breaking information

Answering the following questions will help the Unicode experts determine the appropriate line break properties:

- Words are separated by using U+0020 SPACE.
- Line breaks only occur at word boundaries.
- Special modes like hyphenation are not used to allow line breaks within words.
- Line breaks cannot occur within numbers.
- Line breaks should not occur before full stops.

VI Collation

The collation (alphabetic order) of the Ndiko Jonam script letters is the same as presented in Table 1, with uppercase letters being ordered first and then lowercase letters.

Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
< Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
< Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
< Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ

Numbers are ordered before letters; therefore, the full collation of the script is as follows:

0 < 1 < 2 < 3 < 4 < 5 < 6 < 7 < 8 < 9 < Ɓ < Ɓ
< Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
< Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ
Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ < Ɓ

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VIII Acknowledgements

The proposal author wishes to thank various members of the Ndiko Jonam script community for their assistance in clarifying aspects of the script.

This project was made possible in part by a grant from the Mellon Foundation to the Script Encoding Initiative at the University of California, Berkeley.

IX Examples

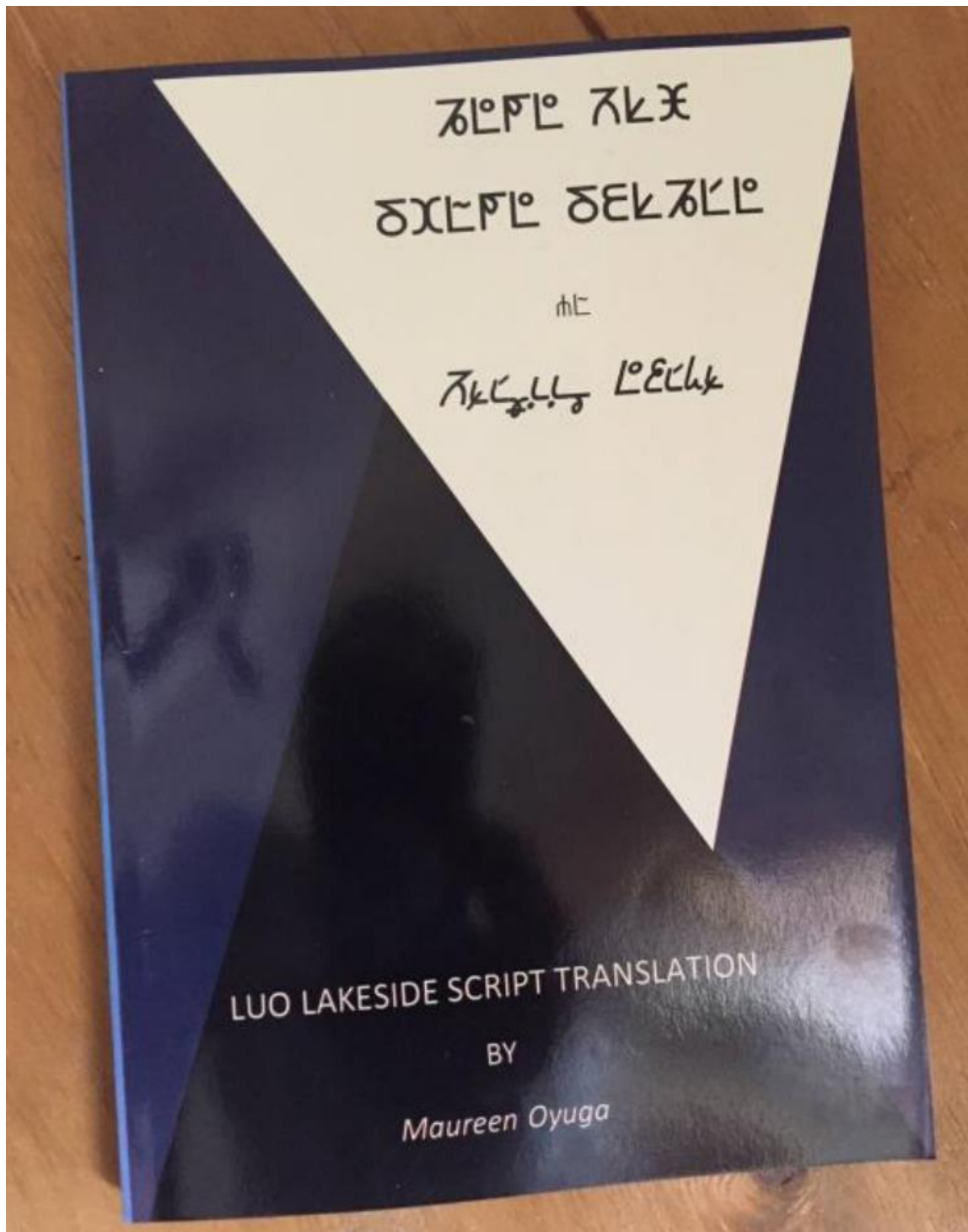


Figure 1.1. A published Luo-English book written in the Ndiko Jonam (Luo Lakeside) script. See Reference 1 in Section VII.

በር, ሲታይ ሲታይ ሲታይ ሲታይ ሲታይ!!

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Ge_d

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ငါ့အဖေကလည်း ခုနစ်နှစ်ခွဲ အသက်မှာ ကျန်းမာရေး ပြောင်းလဲခဲ့ရတယ်။

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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۶۹۶۸۶۱

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፩ኛኛኛኛኛኛኛ ኢሉኒ ነኑኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ
ኒኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ ኒኒኒኒኒኒኒኒ

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အဲဒါနဲ့ပဲ သူက ပုံမှန်ပုံစံနဲ့ နေထိုင်နေရဖို့ အတွက် ဝန်ဆောင်မှု ပေးနေတာကို ချီးကျူးပေးခဲ့တာပါ။

👍 0 👎 0 ⚠️ Flag 💬 Reply

Figure 2. Online forum

428 Luo [Dholuo]

LUO

Southern Luo dialect with 4.2 million speakers in Kenya and Tanzania. Sinistrodextral (left-to-right-reading) Luo Lakeside script shown, developed by Kefa Ombewa. *Kik iyany nyang' ka pod in ei pi.* ("Do not insult the crocodile when you are still in the water.")

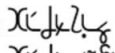
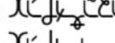
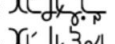
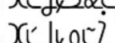
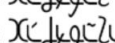
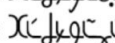
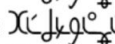
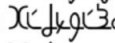
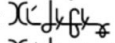
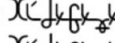
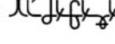
- 01:  / Dumacel
 02:  / Dumariyo
 03:  / Dumadek
 04:  / Dumangwen
 05:  / Dumabic
 06:  / Dumabichel
 07:  / Dumabiro
 08:  / Dumaboro
 09:  / Dumabungwen
 10:  / Dumaapar
 11:  / Dumaaparacel
 12:  / Dumaaparariyo
-

Figure 3. The Ndiko Jonam (Luo Lakeside) script used in a published book, "The Twelve Months of the Year in 850 Languages and Dialects". See Reference 2 in Section VII.

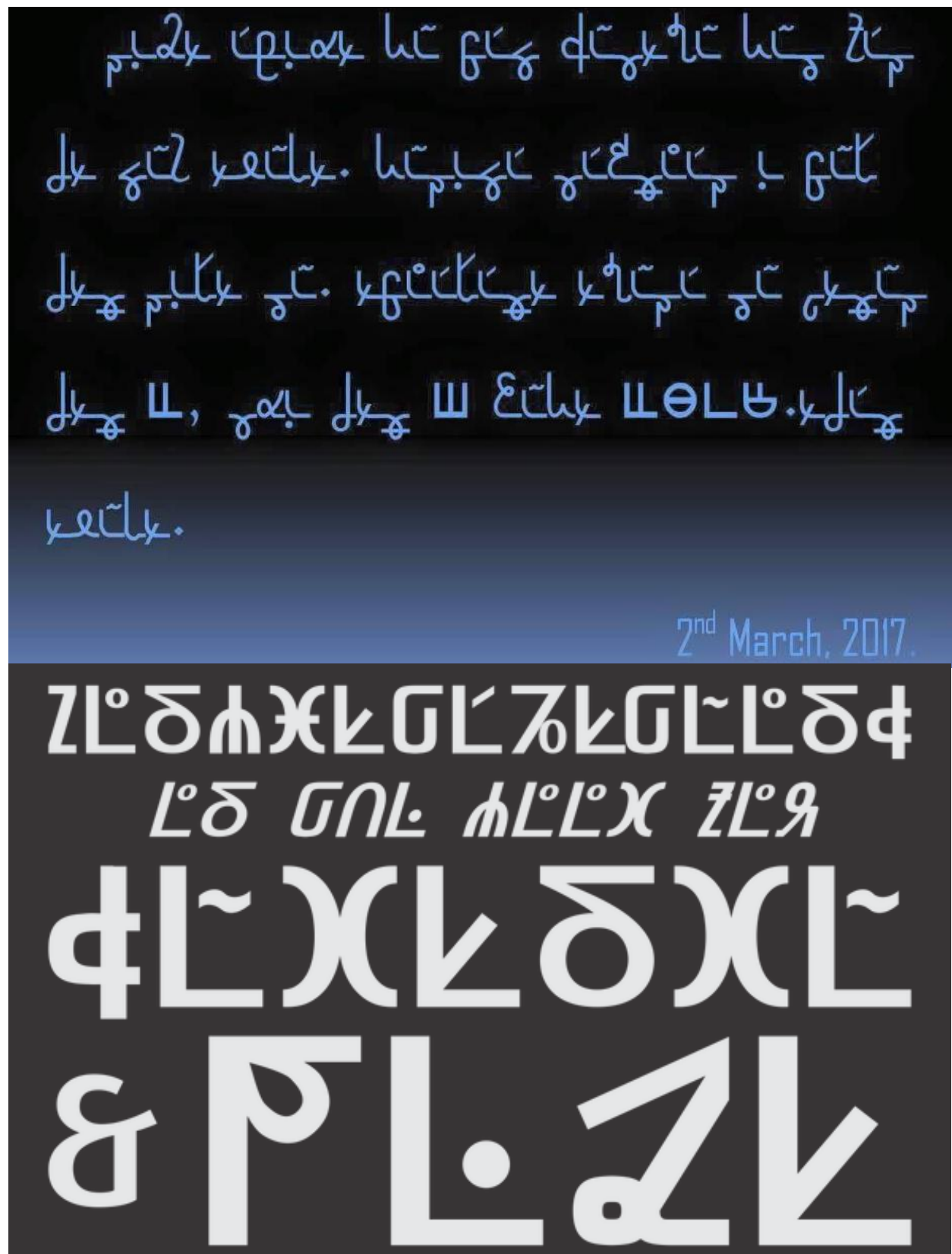


Figure 4. Digital images of text shared online.

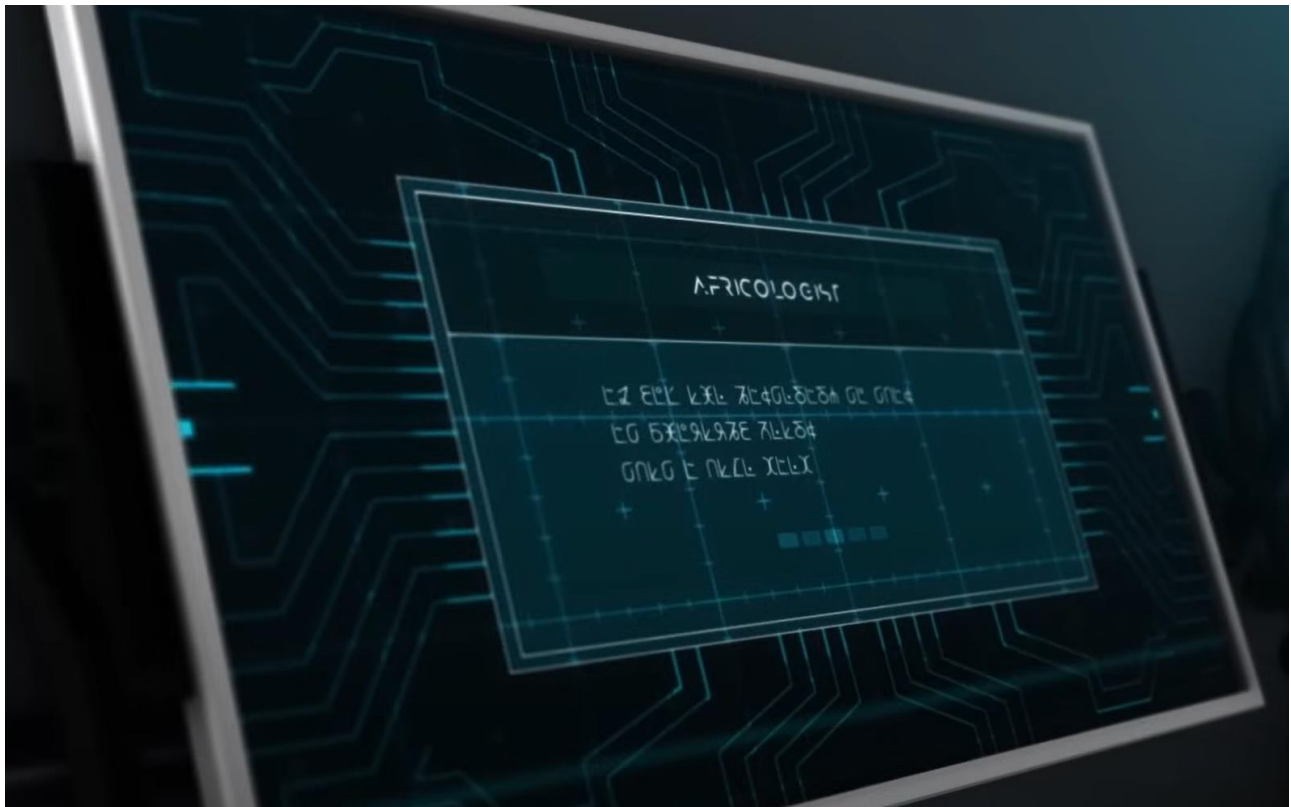


Figure 5. The Ndiko Jonam script used in “*The Africologist*”, a documentary on African history, science, and technology. See Reference 3 in Section VII.

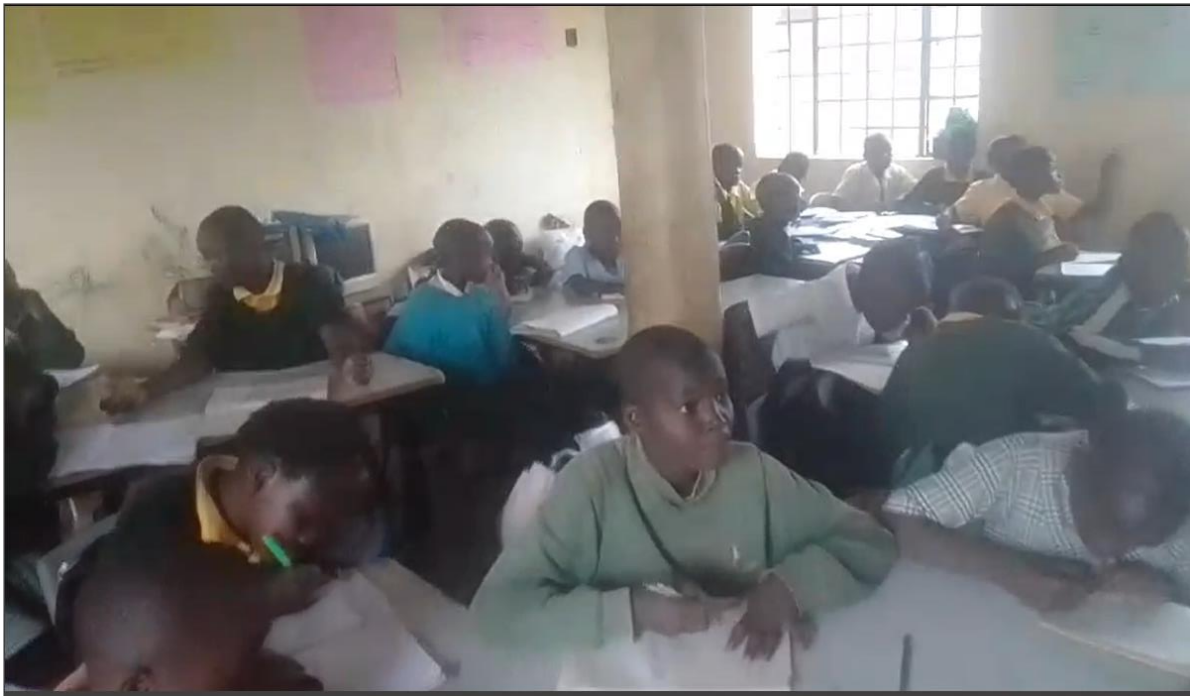


Figure 6.1. Classroom educated in the Ndiko Jonam script at Captain's Choice Academy in Kanyimach Village, Kogenya Shopping Centre, Migori County, Kenya.



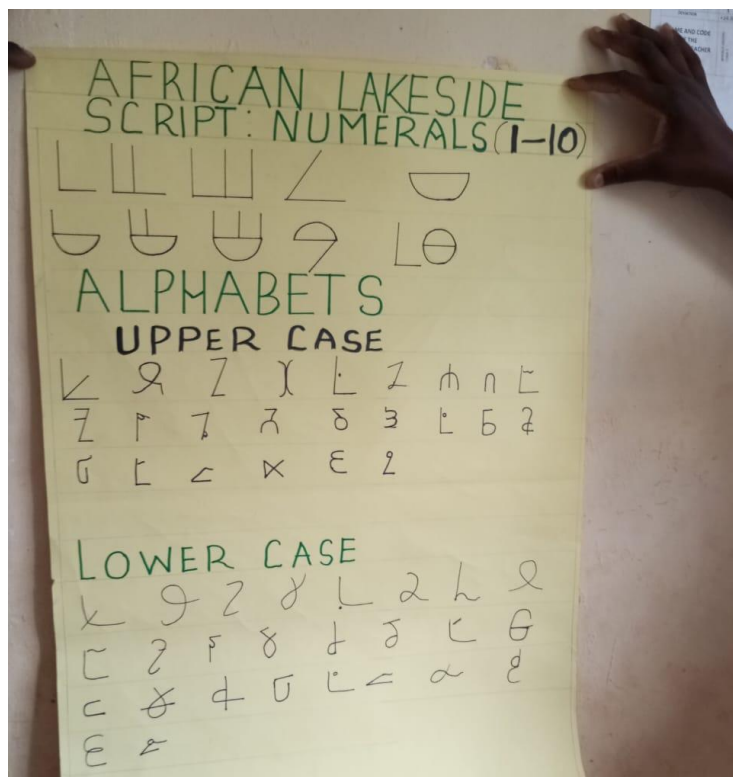
Figure 6.2. Captain's Choice Academy Kenya (CCAK).



Figure 7. (Left) Botswana Secondary School Principal Ndinaane displays a dual Hindu-Arabic numeral and Ndiko Jonam numeral clock. (Right) Mrs. Johnson of Nxakato Junior Secondary School Sowa Town Botswana with a t-shirt using the Ndiko Jonam script.



Figure 8. Stand of Ndiko Jonam (Luo Lakeside) script users promoting the script.



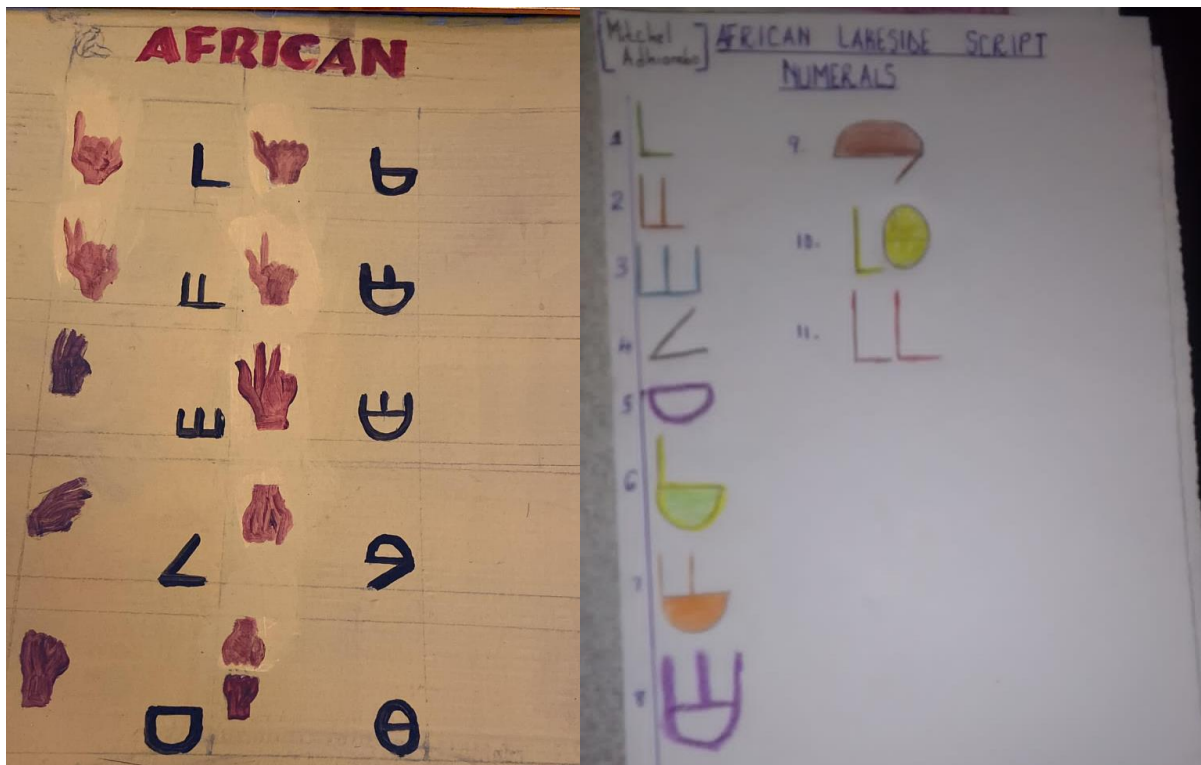


Figure 9. Various charts teachers use in classes.

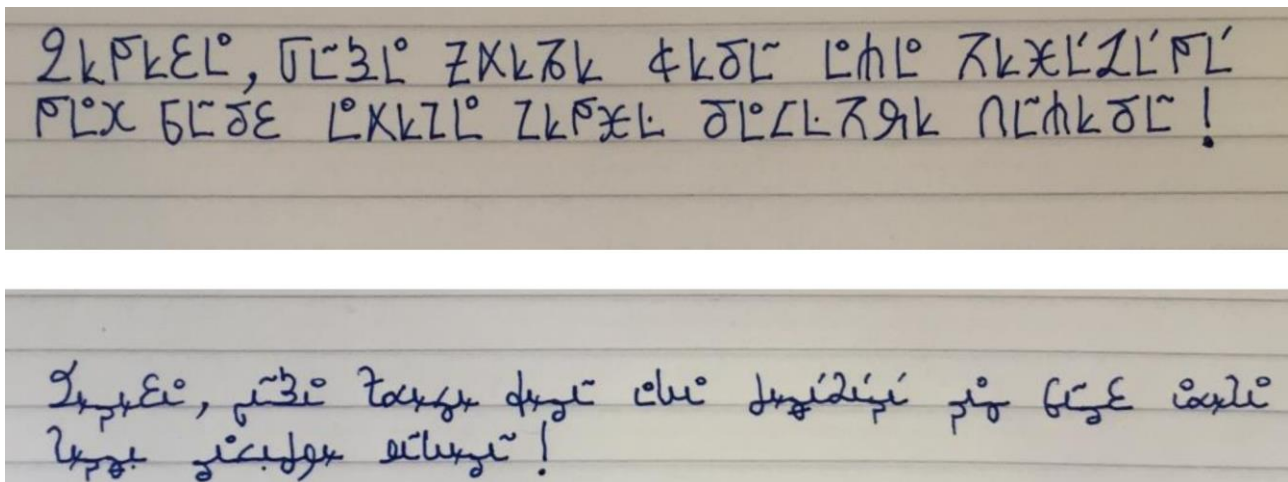


Figure 10. Excerpt: A handwritten sentence in the Ndiko Jonam script in uppercase (top) and lowercase (bottom).

Latin transliteration: zakayo, ting'o jwala sani ogo marufuku kod piny owacho chakre novemba higani!

English translation: "Zakayo, polythene carrier bags are banned by the government from November this year!"

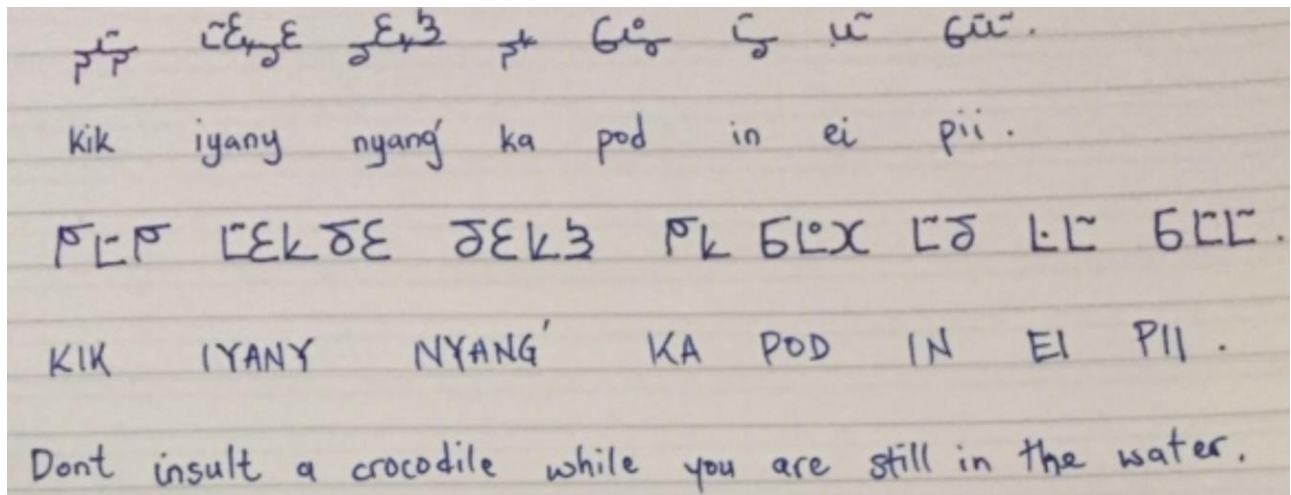


Figure 11. Excerpt: A Luo proverb written in the Ndiko Jonam script in uppercase (top) and lowercase (bottom).



Figure 12. Digital media of 2023 New Year's celebration in the Ndiko Jonam script.

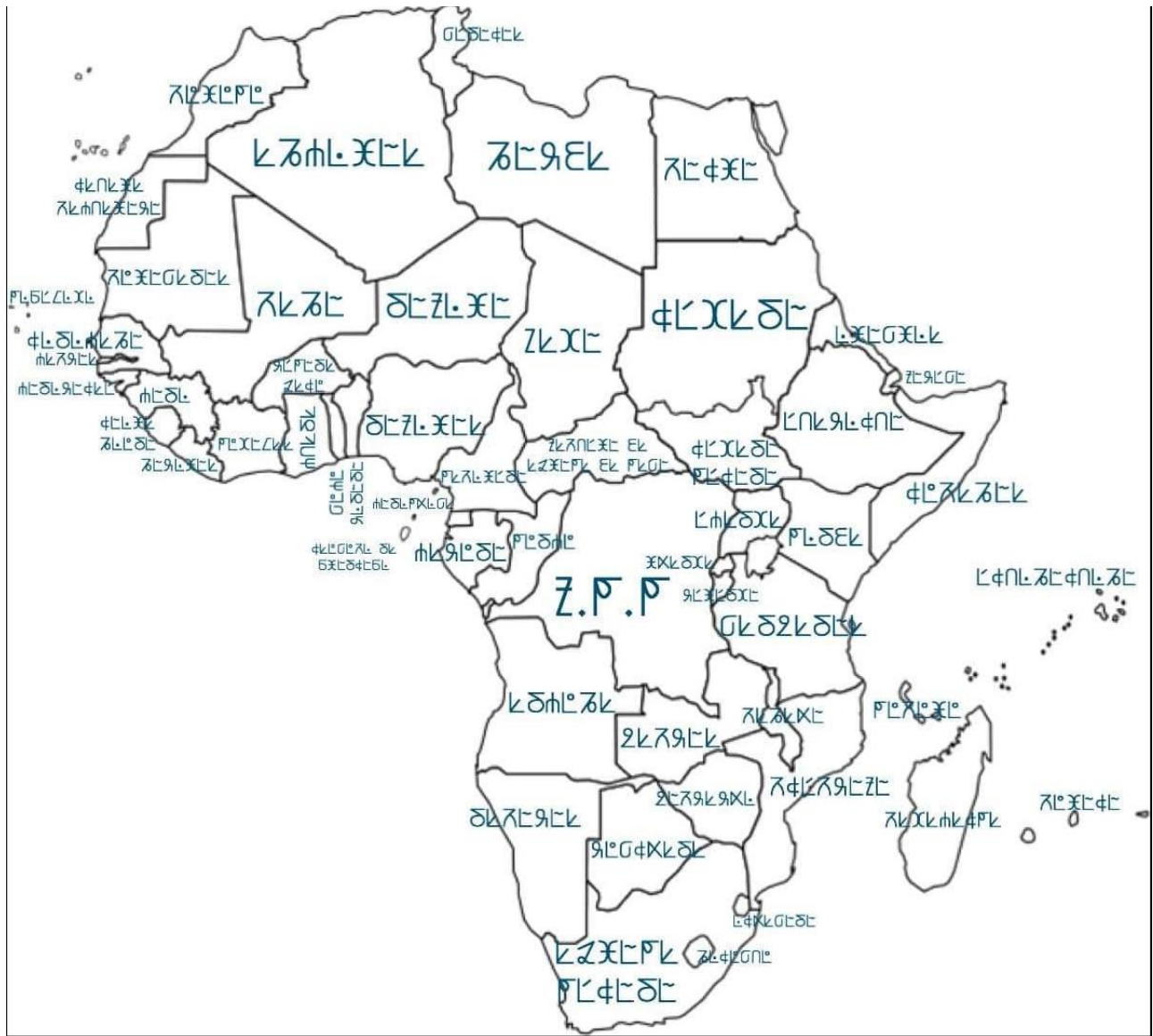


Figure 13. Map of Africa in the Ndiko Jonam script.

- [illegible]

Figure 14. Video teaching the Ndiko Jonam script. See Reference 23 in Section VII.

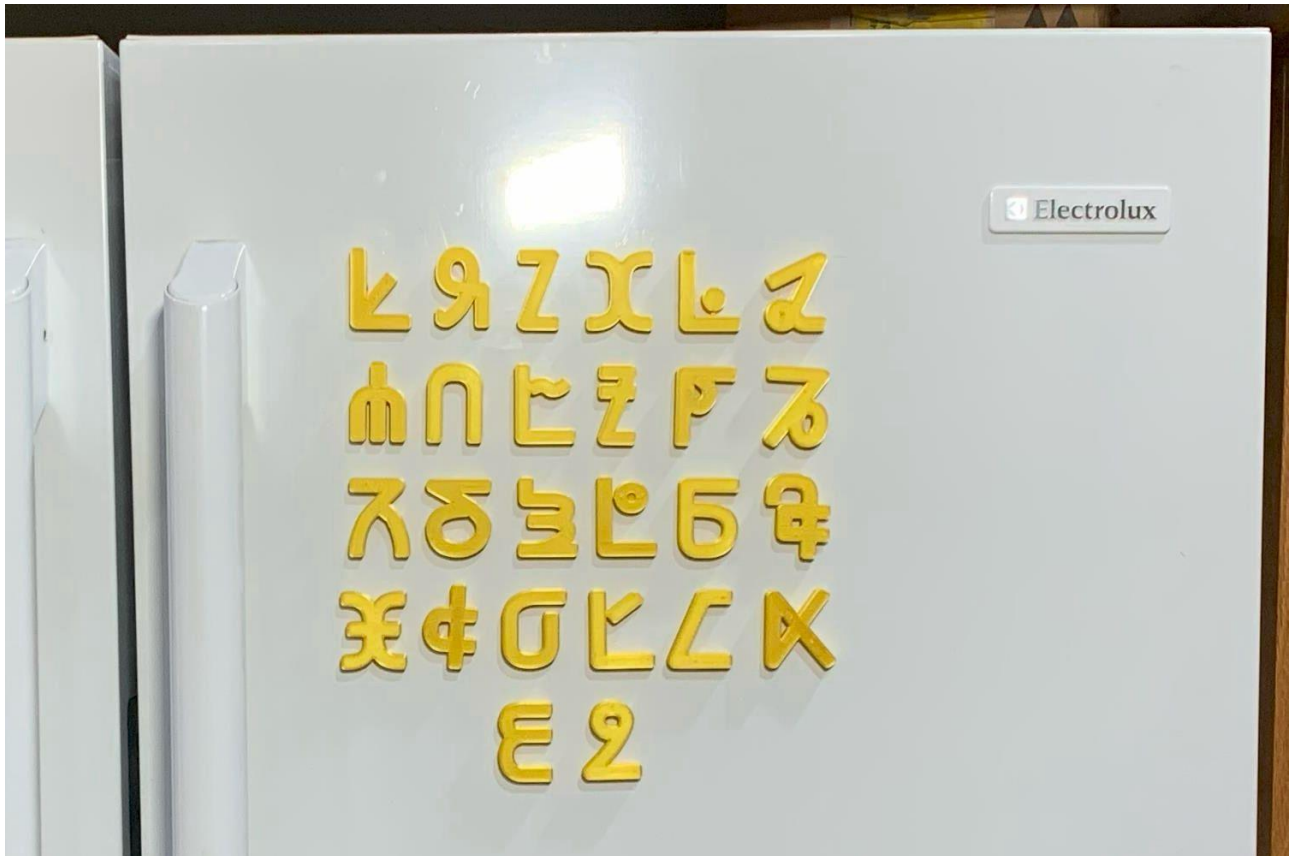


Figure 15. Magnets of Ndiko Jonam letters.



Figure 16. Works from artists using Ndiko Jonam calligraphy (top-left of both images).

Wuodwa, kik ibed gi samuoyo. Itimo tich maber kabisa. Kaponi abedo jatelo mar
Luo, abiro hakikisha ni ndiko miloso ni ema ibiro tiyogo e puiny Luo.

Figure 18. Text shared online.

Latin transliteration: “Wuodwa, kik ibed gi samuoyo. Itimo tich maber kabisa. Kaponi abedo jatelo mar Luo, abiro hakikisha ni ndiko miloso ni ema ibiro tiyogo e puiny Luo.”

English translation: “Our son, do not falter. You have done a good job. If I become a leader of the Luo, I will ensure the writing is the one to be used in Luoland.”

Amala isa keessa inni guddaan nama gargaruudha = (His greatest attribute is helping others)
 ኣለኦ ንቀ ምረቀቀ ንሓር ኣረጋገጹ ፅን ሓጺሒኡ

Amantaa cimaan qaba = I have a firm belief
 ኣለኦህቲ ቀርኢኡ ጭዳ

Amma dammaqun narra jiraataa? = Do I have to get up now?
 ኣለኦ ጸባንቁሒኡ ፅጽ ጸጽኡህ?

Amma yeroon meeqa? = What time is it?
 ኣለኦ ደረጃ ሓላ?

Amma iyyuu muggaan jira = I am still sleepy
 ኣለኦ ርዩሮ ሓረኢኡ ጸጽ

Please = Tafadhali
 ሀጺንብኒ

Please write it down. = Waweza kuiandika.
 ጸሓፊ ምረቅኡህኒ.

Do you speak English? = Unazungumza Kingereza?
 ርፅኢኡህኒ ምረቅኡህኒ?

Do you speak Swahili? = Unazungumza Kiswahili?
 ርፅኢኡህኒ ምረቅኡህኒ?

Sorry = Samahani
 ቀንብኒ



Figure 17. Video screenshot of Oromo (top) and Swahili (bottom) being written in the Ndiko Jonam script. See Reference 6-7 in Section VII.

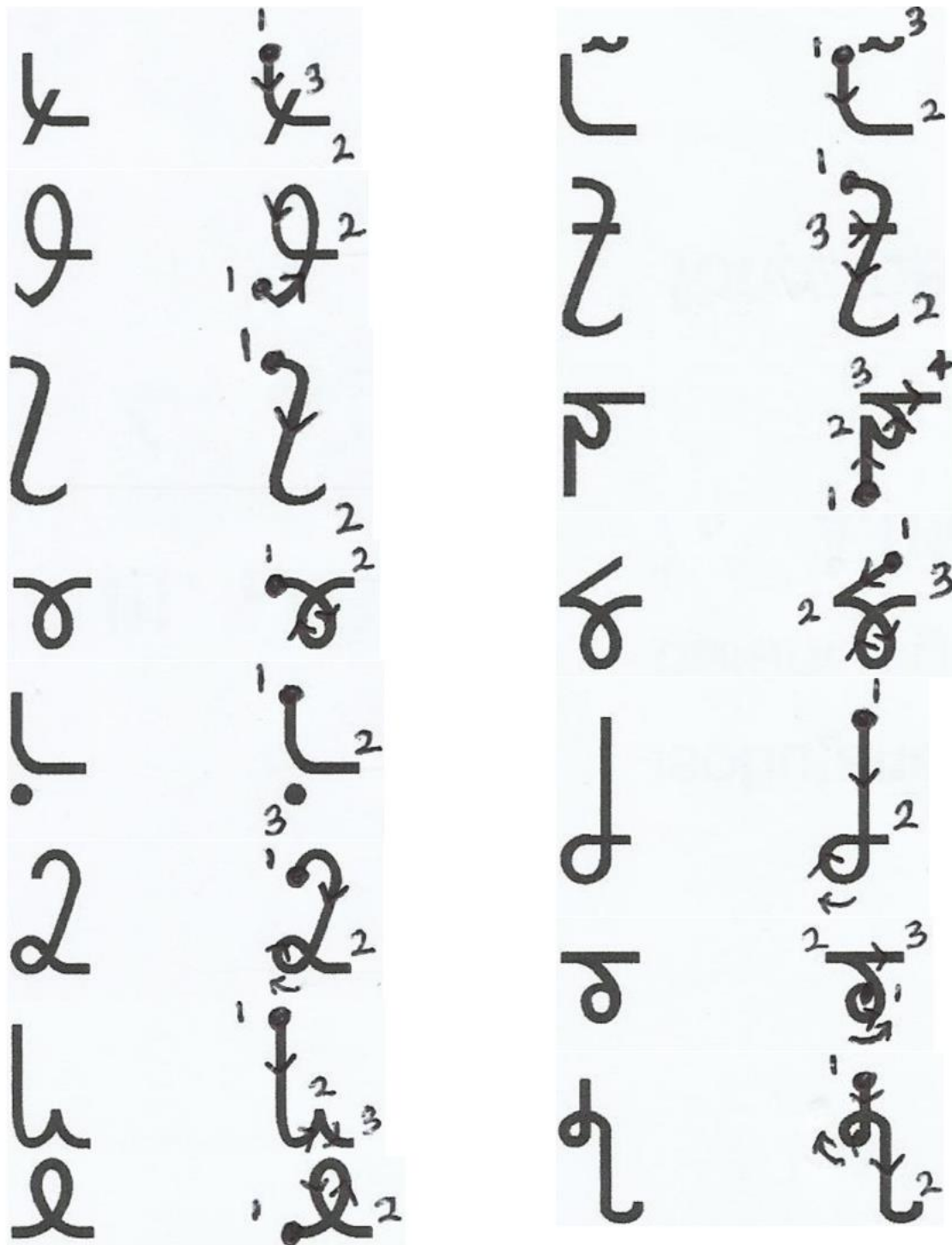


Figure 18.1 Stroke order for lowercase Ndiko Jonam letters.

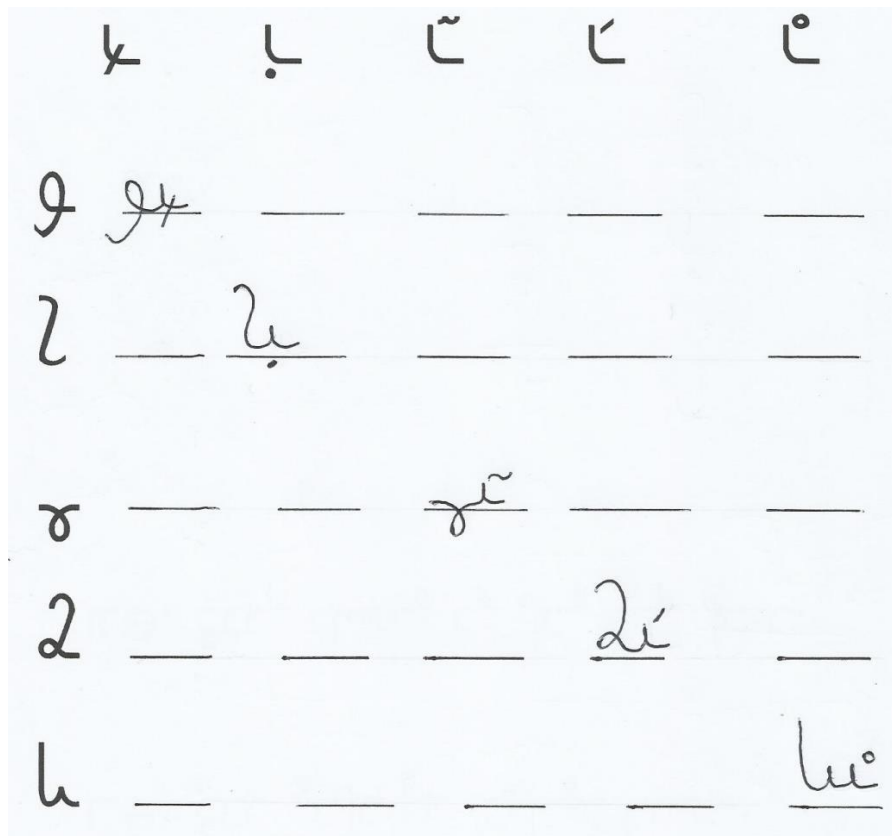


Figure 19. Examples showing how vowels can also join on the left (in addition to joining on the right) in handwritten style.

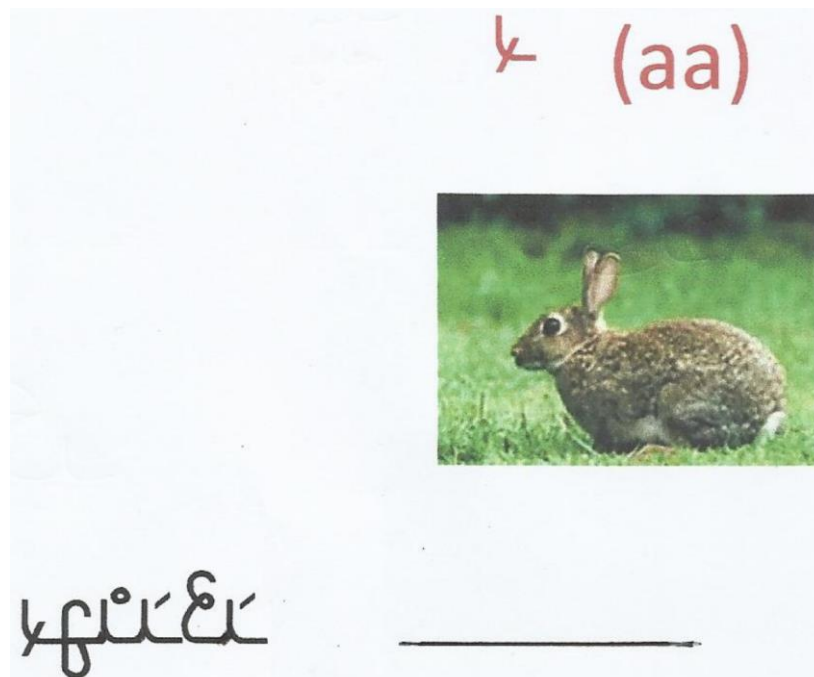


Figure 20. Example showing how vowels are Dual-Joining in handwritten form. In this example, 'k' (AA), 'l' (OO), and 'c' (UU) are used in the word. 'l' (OO), and 'c' (UU) can be seen as Dual-Joining.

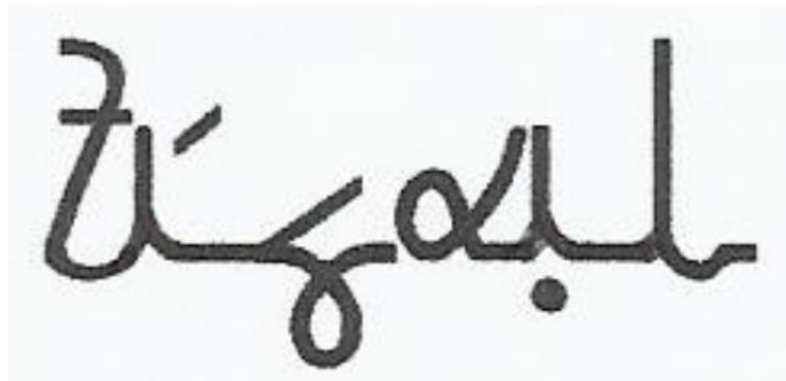


Figure 21. Example showing the letter ^L (NYA) is can join on the left in handwritten form (in addition to normally joining on the right as well).

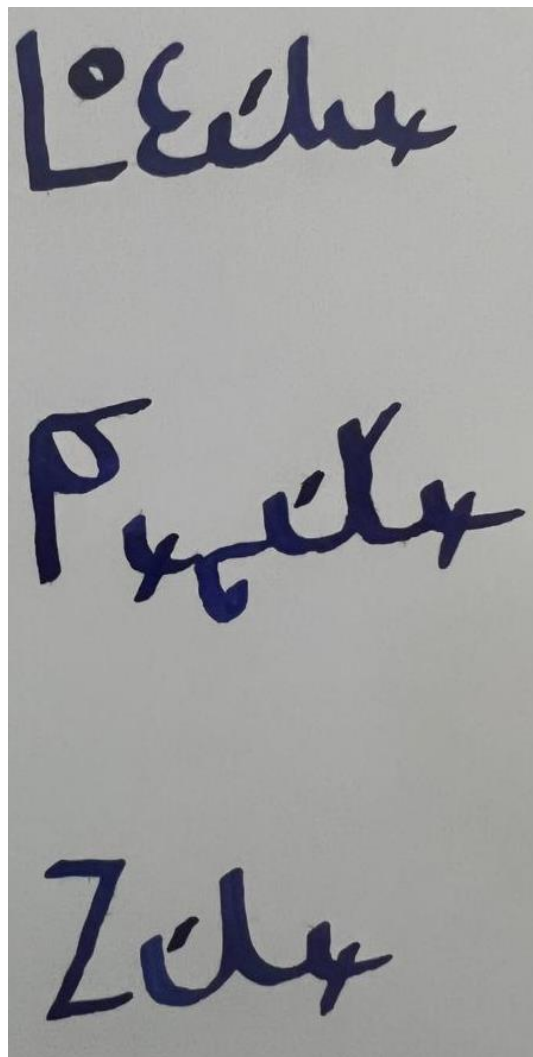


Figure 22. Words from top-to-bottom: ^{L°Echx} (Oyuga), ^{Pchx} (Katunja), and ^{Zchx} (Chunya). In this handwritten style, the letters GA, NJA, and NYA are Dual-Joining (they join on both sides).

X ISO Proposal Summary Forms

ISO/IEC JTC 1/SC 2/WG 2 PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	Revised Proposal to Encode the Ndiko Jonam Script in the UCS	
2. Requester's name:	Oreen Yousuf	
3. Requester type (Member body/Liaison/Individual contribution):	Individual contribution	
4. Submission date:	2026 March 19	
5. Requester's reference (if applicable):	oreen.yousuf@gmail.com	
6. Choose one of the following:		
This is a complete proposal:	Yes	
(or) More information will be provided later:		

B. Technical – General

1. Choose one of the following:		
a. This proposal is for a new script (set of characters):	Yes	
Proposed name of script:		
b. The proposal is for addition of character(s) to an existing block:	No	
Name of the existing block:		
2. Number of characters in proposal:	69	
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	
4. Is a repertoire including character names provided?	Yes	
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	Yes	
b. Are the character shapes attached in a legible form suitable for review?	Yes	
5. Fonts related:		
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	Kefa Ombewa	
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	Kefa Ombewa, kefa.ombewa@gmail.com	
6. References:		
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	Yes	
b. 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)?	No	

8. Additional Information:

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

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

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.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	Yes
If YES explain	<i>Short proposal submitted - L2/19-268</i>
2. 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
If YES, with whom?	<i>User community; script creator(s)</i>
If YES, available relevant documents:	<i>Enclosed in this proposal</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	Yes
Reference:	<i>Enclosed in this proposal</i>
4. The context of use for the proposed characters (type of use; common or rare)	Rare
Reference:	<i>Enclosed in this proposal</i>
5. Are the proposed characters in current use by the user community?	Yes
If YES, where? Reference:	<i>Kenya (various parts) and Botswana (mainly Lobatse).</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	No
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	Yes
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
11. Does the proposal include use of combining characters and/or use of composite sequences?	No
If YES, is a rationale for such use provided?	
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	
If YES, reference:	
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	No
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideographic compatibility characters?	No
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	