Universal Multiple-Octet Coded Character Set International Organization for Standardization Organisation internationale de normalisation

Международная организация по стандартизации

Doc Type: Working Group Document

Title: Proposal to encode the Hniakeng Puachue Hmong script in 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

Replaces: N4710 (L2/16-070)

Date: 2017-01-03

1.0 Introduction. The Hniakeng Puachue Hmong script (in RPA transcription (*Ntawv Nyiaj Keeb Puaj Txwm Hmoob*; *ntawv* means 'letter'; *nyiaj keeb* means 'genesis' and *puaj txwm* means 'complete') is used for writing the White Hmong and Green Hmong languages. It has also been called the *Ntawv Txawj Vaag*, named after its inventor, the Reverend Chervang Kong (Txawj Vaag Koo), who devised it in the 1980s for use within his church. This script has been used by members of the United Christians Liberty Evangelical church in America for more than 25 years, in printed material and videos. The script is also called Hmong Kong Hmong (*Ntawv Hmoob Koob Hmoob*), and Pa Dao Hmong (*Ntawv Paj Ntaub*, translating as "flower-cloth writing system"; *paj* means 'flower' and *ntaub* means 'cloth' and the two together mean 'embroidery'). Another unrelated Flower Hmong script devised in 1959 is also called *Paj Ntaub*. Several of the consonant letters appear to have been derived from the shapes of Hebrew characters.

In this document, the Romanized Popular Alphabet orthography (widely used by the Hmong in North America) is given alongside example text in Hniakeng Puachue Hmong. Two features of the RPA are of note. Double vowels *ee* and *oo* indicate [ɛŋ] and [oŋ] respectively; final letters indicate tones thus:

RPA	Diacritic tones	Nhiakeng Puachue tones
<i>-b</i>	ν high-level	Ö
- <i>m</i> L	y low-glottalized	<u>.</u>
<i>-j</i>	v high-falling	ॅ
-v Y	<i>v</i> mid-rising	ំ
-Ø †	v mid-level	_
-s -	<i>v</i> low-level	ō
- <i>g</i> \	y falling-breathy	៌
- <i>d</i>	y low-rising	ំ

2.0 Processing. Hniakeng Puachue Hmong is an alphabetic script comprised of 36 consonant characters, 9 vowel characters, and 7 combining tone characters. Diphthongs are written as sequences $16 \, ai$, $18 \, aw$, $13 \, au$, $10 \, ai$, $10 \,$

Two of the consonants can be read as vowels; hara ra [ra]~[sa] can also be read as ai [ai] and g hah? can also be read as o. Thus ซึ่งซึ่งปี่ 'very very short' which could be transliterated as př př táo is read păi păi táo (RPA paiv paiv taob) which can also be written ซึ่งเชิงใหม่ păi păi táo with the full vowels); in transcriptions of English "what" can be written ซูรักษ which could be transliterated huât (perhaps RPA *huaj t), and "Fresno" ซุรุโฟฟซี่ which could be transliterated as frěxnh is read frěxno (perhaps RPA *frev xnom). Note that y RA RPA ra is [ta], n ha RPA ha is [ha].

- **3.0 Non-alphabetic characters** are used in Hniakeng Puachue Hmong. Ordinary generic punctuation marks like COMMA and FULL STOP are used in Hniakeng Puachue Hmong and can be represented by existing UCS characters.
- **3.1 Classifiers.** The characters from U+1E137-U+1E13B indicate various classes of noun; these do not have pronunciation, but are used in a fashion similar to determinatives in Ancient Egyptian, to help distinguish homophones.
- 3.2.1 Replication mark. The character U+1E13C η HNIAKENG PUACHUE HMONG SIGN XW XW indicates that what precedes is to be repeated, like "ditto" is in English. It can be used more than once sequentially (to indicate the number of repeats) and is not separated by a space from what is to be repeated. (A reduplication mark repeats only a syllable; it remains to be determined which function this mark has.) There maybe a reading rule that specifies that a line of text should be repeated in its entirely if there is a space between it and what precedes. This is an orthographic matter, but the usage remains to be determined.
- **3.2.2** Creaky voice mark. The character U+1E13D _{In} HNIAKENG PUACHUE HMONG SIGN KHU SAIM indicates creaky voice (described as "vibrato" by James and Persson). It remains to be determined whether this is similar to U+16B40 PAHAWH HMONG SIGN VOS SEEV in function or not. The name KHU SAIM needs to be verified.
- **3.2.3 Money sign.** The character U+1E14E $_{\text{N}}$ HNIAKENG PUACHUE HMONG MONEY SIGN is used to represent the word for 'money'. This remains to be determined what the actual reading is. The glyph is similar to a turned $_{\text{N}}$ NTA.
- **3.2.4 Circled ca.** The character U+1E14F ® HNIAKENG PUACHUE HMONG SIGN CIRCLED CA is used to indicate copyright or trademark. It remains to be determined whether this character is genuinely required; in particular, if § CA is representing Latin C, it would seem unlikely.
- **4.0 Digits.** U+1E140-U+1E149 are the decimal digits 0–9.
- **4.0 Ordering.** The ordering of the consonant onsets and tone marks follows that of the code chart.
- **5.0 Unicode Linebreaking Properties.** The consonant onsets and vowel rimes behave like letters. The digits behave like digits. The punctuation marks 1E137..1E13D behave like $00B6\,$ §.

6.0. Unicode Character Properties.

```
1E100; HNIAKENG PUACHUE HMONG LETTER MA;Lo;0;L;;;;N;;;;
1E101; HNIAKENG PUACHUE HMONG LETTER TSA;Lo;0;L;;;;N;;;;
1E102; HNIAKENG PUACHUE HMONG LETTER NTA;Lo;0;L;;;;N;;;;
1E103; HNIAKENG PUACHUE HMONG LETTER TA;Lo;0;L;;;;N;;;;
1E104; HNIAKENG PUACHUE HMONG LETTER HA;Lo;0;L;;;;N;;;;
1E105; HNIAKENG PUACHUE HMONG LETTER NA;Lo;0;L;;;;N;;;;
1E106; HNIAKENG PUACHUE HMONG LETTER XA;Lo;0;L;;;;N;;;;
1E108; HNIAKENG PUACHUE HMONG LETTER NKA;Lo;0;L;;;;N;;;;
```

```
1E109; HNIAKENG PUACHUE HMONG LETTER LA; Lo; 0; L;;;;; N;;;;
1E10A; HNIAKENG PUACHUE HMONG LETTER SA; Lo; 0; L;;;;; N;;;;
1E10B; HNIAKENG PUACHUE HMONG LETTER ZA; Lo; 0; L;;;;; N;;;;
                                      NCA;Lo;0;L;;;;;N;;;;
1E10C; HNIAKENG PUACHUE HMONG LETTER
1E10D; HNIAKENG PUACHUE
                        HMONG LETTER NTSA; Lo; 0; L;;;;; N;;;;;
1E10E:HNIAKENG PUACHUE
                        HMONG LETTER
                                      KA;Lo;0;L;;;;N;;;;
1E10F:HNIAKENG PUACHUE
                        HMONG LETTER DA; Lo; 0; L;;;;; N;;;;
1E110:HNIAKENG PUACHUE
                        HMONG LETTER NYA; Lo; 0; L;;;;; N;;;;
1E111; HNIAKENG PUACHUE HMONG LETTER NRA; Lo; 0; L;;;;; N;;;;
1E112; HNIAKENG PUACHUE
                        HMONG LETTER
                                       VA;Lo;0;L;;;;;N;;;;
1E113; HNIAKENG PUACHUE
                        HMONG LETTER NTXA; Lo; 0; L;;;;; N;;;;;
                                      TXA;Lo;0;L;;;;;N;;;;
1E114; HNIAKENG PUACHUE
                        HMONG LETTER
1E115; HNIAKENG PUACHUE
                        HMONG LETTER FA; Lo; 0; L;;;;; N;;;;;
                        HMONG LETTER RA; Lo; 0; L;;;;; N;;;;;
1E116; HNIAKENG PUACHUE
                                      QA;Lo;0;L;;;;;N;;;;
1E117:HNIAKENG PUACHUE
                        HMONG LETTER
                                       YA; Lo; 0; L;;;;; N;;;;;
1E118:HNIAKENG PUACHUE
                        HMONG LETTER
                        HMONG LETTER NQA;Lo;0;L;;;;;N;;;;
1E119:HNIAKENG PUACHUE
1E11A: HNIAKENG PUACHUE
                        HMONG LETTER PA;Lo;0;L;;;;;N;;;;;
                        HMONG LETTER XYA;Lo;0;L;;;;;N;;;;
1E11B:HNIAKENG PUACHUE
                        HMONG LETTER NPA;Lo;0;L;;;;;N;;;;
1E11C:HNIAKENG PUACHUE
1E11D:HNTAKENG PUACHUE
                        HMONG LETTER DLA; Lo; 0; L;;;;; N;;;;;
                        HMONG LETTER NPLA; Lo; 0; L;;;;; N;;;;
1E11E; HNIAKENG PUACHUE
1E11F; HNIAKENG PUACHUE
                        HMONG LETTER HAH; Lo; 0; L;;;;; N;;;;;
1E120:HNIAKENG PUACHUE
                        HMONG LETTER MLA; Lo; 0; L;;;;; N;;;;
1E121:HNIAKENG PUACHUE
                        HMONG LETTER PLA; Lo; 0; L;;;;; N;;;;;
1E122; HNIAKENG PUACHUE
                        HMONG LETTER GA; Lo; 0; L;;;;; N;;;;
1E123; HNIAKENG PUACHUE HMONG LETTER RRA; Lo; 0; L;;;;; N;;;;
1E124; HNIAKENG PUACHUE
                        HMONG LETTER A; Lo; 0; L;;;;; N;;;;
1E125; HNIAKENG PUACHUE
                        HMONG LETTER AA; Lo; 0; L;;;;; N;;;;
1E126; HNIAKENG PUACHUE
                        HMONG LETTER I; Lo; 0; L;;;;; N;;;;;
1E127; HNIAKENG PUACHUE
                        HMONG LETTER U; Lo; 0; L;;;;; N;;;;
1E128; HNIAKENG PUACHUE
                        HMONG LETTER O; Lo; 0; L;;;;; N;;;;;
1E129; HNIAKENG PUACHUE
                        HMONG
                               LETTER
                                      OO;Lo;0;L;;;;N;;;;
                        HMONG LETTER E; Lo; 0; L;;;;; N;;;;;
1E12A; HNIAKENG PUACHUE
                                      EE;Lo;0;L;;;;;N;;;;
1E12B; HNIAKENG PUACHUE
                        HMONG LETTER
                        HMONG LETTER W;Lo;0;L;;;;;N;;;;;
1E12C; HNIAKENG PUACHUE
1E130; HNIAKENG
                PUACHUE
                        HMONG
                               SOM THWB; Mn; 230; NSM;;;;; N;;;;;
                        HMONG SOM THWM; Mn; 230; NSM;;;;; N;;;;
1E131; HNIAKENG PUACHUE
1E132:HNIAKENG
                PUACHUE
                        HMONG
                               SOM
                                   THWJ; Mn; 230; NSM;;;;; N;;;;
1E133; HNIAKENG PUACHUE
                        HMONG SOM
                                   THWV; Mn; 230; NSM;;;;; N;;;;;
1E134; HNIAKENG
                PUACHUE
                        HMONG
                               SOM
                                   THWS; Mn; 230; NSM;;;;; N;;;;
1E135:HNIAKENG PUACHUE
                        HMONG SOM THWG; Mn; 230; NSM;;;;; N;;;;;
1E136; HNIAKENG
                PUACHUE
                        HMONG
                               SOM THWD; Mn; 230; NSM;;;;; N;;;;
1E137; HNIAKENG PUACHUE
                        HMONG SIGN OOV; So; 0; L;;;;; N;;;;
1E138; HNIAKENG PUACHUE
                        HMONG SIGN PES; So; 0; L;;;;; N;;;;
                        HMONG SIGN KHAB THEEB; So; 0; L;;;;; N;;;;
1E139; HNIAKENG PUACHUE
1E13A; HNIAKENG PUACHUE
                        HMONG
                               SIGN KHUAM LUAS; So; 0; L;;;;; N;;;;
                        HMONG SIGN POOS; So; 0; L;;;;; N;;;;
1E13B; HNIAKENG PUACHUE
                        HMONG SIGN XW XW;So;0;L;;;;;N;;;;
1E13C; HNIAKENG PUACHUE
                        HMONG SIGN KHU SAIM; So; 0; L;;;;; N;;;;;
1E13D; HNIAKENG PUACHUE
                                     ZERO; Nd; 0; L;; 0; 0; 0; N;;;;;
1E240:HNIAKENG PUACHUE
                        HMONG DIGIT
                                     ONE; Nd; 0; L;; 1; 1; 1; N;;;;;
1E241:HNIAKENG PUACHUE
                        HMONG DIGIT
1E242; HNIAKENG PUACHUE
                        HMONG DIGIT
                                     TWO; Nd; 0; L;; 2; 2; 2; N;;;;;
1E243:HNIAKENG PUACHUE
                        HMONG DIGIT
                                     THREE; Nd; 0; L;; 3; 3; 3; N;;;;;
1E244; HNIAKENG PUACHUE
                        HMONG DIGIT
                                     FOUR; Nd; 0; L;; 4; 4; 4; N;;;;;
                                     FIVE; Nd; 0; L;; 5; 5; 5; N;;;;;
1E245:HNIAKENG PUACHUE
                        HMONG DIGIT
1E246; HNIAKENG PUACHUE
                        HMONG DIGIT
                                     SIX;Nd;0;L;;6;6;6;N;;;;;
1E247; HNIAKENG PUACHUE
                        HMONG DIGIT
                                     SEVEN; Nd; 0; L;; 7; 7; 7; N;;;;;
1E248; HNIAKENG PUACHUE
                        HMONG DIGIT EIGHT; Nd; 0; L; ; 8; 8; 8; N; ; ; ; ;
1E249; HNIAKENG PUACHUE HMONG DIGIT NINE; Nd; 0; L;; 9; 9; 9; N;;;;;
1E14E; HNIAKENG PUACHUE HMONG MONEY SIGN; So; 0; L;;;;; N;;;;;
1E14F; HNIAKENG PUACHUE HMONG CIRCLED CA; So; 0; L;;;;; N;;;;
```

7.0 References

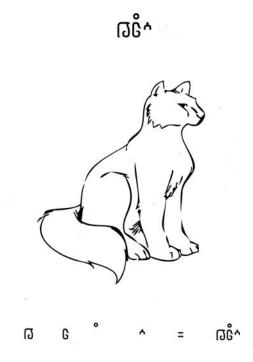
James, Ian, & Mattias Persson. 2014. "New Flower Script for Mong by Cher Vang Kong". http://www.skyknowledge.com/mong-ntaub3.htm
Kong, Chervang. s.d. ງົ່າ ທຳສຸດທ່ຽງ (Kawm ntawv mhoob): Learning Hmong. [Fresno]: s.l.

8.0. 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 Hniakeng Puachue Hmong encoding. Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the National Endowment for the Humanities.

Figures.

1 5	Ŧ	 	ν	จ	В	8	ચ	0			
Oov	pes	k	habthe	eb	khuam	nluas	po	oos	xwxw	, ki	houshaim
G	4		ķ.		٨		5		"		h
somthwb	somthw	m	somthwj		somthw	v	somthw		somthws	somthwg	somthwd
•	•		_		•				-	_	٥
a aa	I.	u	0	00	е	ee	w	hoh	ai		
า	G	3	О	8	F	٥	3	ව	ל	9	
mla	pla		nka		ra						
G	2		ź		ל						
ya	nqa		pa		xya		npa		dia	npla	hah
8	ଥ		3		តា		ជ		16	Ø	ව
Nya	nra		va		ntxa		txa		fa	ra	qa
B.	8		91		8		и		2	ម	ת
5 1 ca	S la		บั sa		2 za		nca		R ntsa) ka	da
ma	tsa		nta		ta						
a	9		19		U		1 ha		81 na	⊮3 xa	Je nka

Figure 1a. Chart of Hniakeng Puachue Hmong characters. At the end of the consonants ε nka is named GA in this proposal, and γ ra is named RRA in this proposal. Both \Im hoh and γ ai are listed, but these are not proposed for encoding as they are identical to \Im HAH and γ RRA.



อ6^ อว่ อว้ อรี อร่า อต์⁴. อริา อตั อริา อเํ. อว่๚ อวั อภั อติ. อธ๋⁴ อรัา อวํ6 อวํ6. อติ⁴ อว่ อว่. อร่ อว่ อว๋ อรัว อซั.

Figure 2. From the primer *Learning Hmong*. The reading is *miv* 'cat' with the animal determinative.

Ŧ

- ເ ໝຣໍເຣະົກສົສຈົ ເອດິບອີພາ່ເຄລົ້າວຣໍ ທຣິໝຣໍ້ເວທິທທີ ອຣ່ຽຍສຸທທີ່ຄົກຮໍຂຣ່ຽນຂ່ານຮັ ໝຣໍ້ເວັນທີ ຂຣີ ຮາເວທິພຳ ຕຸກສອຣຂອທີ ຮໍ ທຣ່ວຣໍທຸສັອະໄຂຮີາ ເອຣີຂຣ່ສາະ ແກາຂະເວຣັາຍຣີ
- ຈ ບສິຫສໍຮະເຄສັ ທາັທສ່ຫຕໍ່ວຣ້ວສໍ ທຣິຮສິຮາ້ເວສໍ ເ່ ພຣໍທັ ຫຣັສສເວສໍສະເ ບສິວສິດຈີ ຮະເຄສົຮຈັຮສຳອລ໋ສເັສສໍ ທຣິສອ໋ວຣ່ດຫໍຣຽສສ ຫຕໍ່ວສົດສຳພາ່ ຽາສດຈີຮະເຄສັ
- บริชาาพา่ารรั ษริเงริษร้าชติสริ ทตับรัดริธดี ทริงสัขธิ ษริเงริสร่ชรั ทธิบริทาร บริเงริ หติบริ หรือริเงริ บทวัศดริธดีขริวพวัศทงรั บริชธิทธิ บริบริหติธรั



วร้สริทธิา ขร้ดริเพริ அรัขร้ขรทริพาร ขร้างที่คงราชคำร่สริ ผขรางริตรำผขีรทาิต งารทริสร์ พร่หาิ ขา่วรงริขรัตริพริ

Figure 3. Text from a Hmong hymnal.

	1E10	1E11	1E12	1E13	1E14
0	[] 1E100	6	G	1E130	O 1E140
1	1 E101	E 1E111	2 1E121	1E131	J 1E141
2	N 1E102	H 1E112	ځ 1E122	် 1E132	5 1E142
3	1 9	2 1E113	ት 1E123	o 1E133	ኍ 1E143
4	J	₹	ງ 1E124		1E144
5	S 1E105	2 1E115	3	1E135	V 1E145
6	り	5 1E116	G 1E126	6 1E136	ද 1E146
7	H 1E107	T 1E117	3	G 1E137	3
8	5 1	8	H	4 1E138	S
9	3	2) 1E119	S	r 1E139	2) 1E149
Α	1E10A	3	L	₼	
В	1E10B	7) 1E11B	T	Z	
С	1E10C	1E11C	3 1E12C	M 1E13C	
D	Ç	N	IEIZC	Ju	
E	1E10D	1E11D		1E13D	O)
F	1E10E G 1E10F	1E11E			1E14E ⑤

Date: 2017-01-08

The Hniakeng Puachue Hmong script (Nyiaj Keeb Puaj Txwm in RPA orthography) is also known as Pa Dao (Paj Ntaub in RPA orthography) and Cher Vang script (Txawj Vaag in RPA orthography).

Consonant onsets

1E100	U	HNIAKENG PUACHUE HMONG LETTER MA
		→ 05DE 🖒 hebrew letter mem
1E101	I	HNIAKENG PUACHUE HMONG LETTER TSA
1E102	N	HNIAKENG PUACHUE HMONG LETTER NTA
1E103	ŋ	HNIAKENG PUACHUE HMONG LETTER TA
		→ 05D8 12 hebrew letter tet
1E104	Ŋ	HNIAKENG PUACHUE HMONG LETTER HA
1E105	Ø	HNIAKENG PUACHUE HMONG LETTER NA
1E106	Ю	HNIAKENG PUACHUE HMONG LETTER XA
1E107	H	HNIAKENG PUACHUE HMONG LETTER NKA
1E108	វា	HNIAKENG PUACHUE HMONG LETTER CA
		→ 1E14F ® hniakeng puachue hmong circled c
1E109	5	HNIAKENG PUACHUE HMONG LETTER LA
1E10A	U	HNIAKENG PUACHUE HMONG LETTER SA
		→ 05E9 W hebrew letter shin
1E10B	9	HNIAKENG PUACHUE HMONG LETTER ZA
1E10C	Ŋ	HNIAKENG PUACHUE HMONG LETTER NCA
1E10D	Ľ	HNIAKENG PUACHUE HMONG LETTER NTSA
1E10E	่ว	HNIAKENG PUACHUE HMONG LETTER KA
		→ 05DB > hebrew letter kaf
1E10F	G	HNIAKENG PUACHUE HMONG LETTER DA
1E110	G	HNIAKENG PUACHUE HMONG LETTER NYA
1E111	3	HNIAKENG PUACHUE HMONG LETTER NRA
1E112	Э	HNIAKENG PUACHUE HMONG LETTER VA
1E113	S	HNIAKENG PUACHUE HMONG LETTER NTXA
1E114	И	HNIAKENG PUACHUE HMONG LETTER TXA
1E115	S	HNIAKENG PUACHUE HMONG LETTER FA
1E116	ប្រ	HNIAKENG PUACHUE HMONG LETTER RA
1E117	Ŋ	HNIAKENG PUACHUE HMONG LETTER QA
		→ 05E7 7 hebrew letter qof
1E118	8	HNIAKENG PUACHUE HMONG LETTER YA
1E119	ଥ	HNIAKENG PUACHUE HMONG LETTER NQA
1E11A	3	HNIAKENG PUACHUE HMONG LETTER PA
		→ 05E4 5 hebrew letter pe
1E11B	ด	HNIAKENG PUACHUE HMONG LETTER XYA
1E11C	П	HNIAKENG PUACHUE HMONG LETTER NPA
1E11D	Ŋ	HNIAKENG PUACHUE HMONG LETTER DLA
1E11E	Ø	HNIAKENG PUACHUE HMONG LETTER NPLA
1E11F	ໆ	HNIAKENG PUACHUE HMONG LETTER HAH
		 also used for a vowel o
1E120	<u> </u>	HNIAKENG PUACHUE HMONG LETTER MLA
1E121	2	HNIAKENG PUACHUE HMONG LETTER PLA
1E122	٤	HNIAKENG PUACHUE HMONG LETTER GA
1E123	ነ	HNIAKENG PUACHUE HMONG LETTER RRA
		• also used for a diphthong ai
Vow	ام	rimas

Vowel rimes

	•	
1E124	J	HNIAKENG PUACHUE HMONG LETTER A
1E125	S	HNIAKENG PUACHUE HMONG LETTER AA
1E126	G	HNIAKENG PUACHUE HMONG LETTER I
1E127	3	HNIAKENG PUACHUE HMONG LETTER U
1E128	Gl	HNIAKENG PUACHUE HMONG LETTER O
1E129	S	HNIAKENG PUACHUE HMONG LETTER OO
1E12A	ŀ	HNIAKENG PUACHUE HMONG LETTER E
1E12B	ð	HNIAKENG PUACHUE HMONG LETTER EE
1E12C	3	HNIAKENG PUACHUE HMONG LETTER W

Tone marks

- 1E132 O HNIAKENG PUACHUE HMONG SOM THWJ = RPA -j high-falling tone
- 1E134 5 HNIAKENG PUACHUE HMONG SOM THWS = RPA -s low-level tone

Determinatives

- 1E137 HNIAKENG PUACHUE HMONG SIGN OOV = person, name
- 1E139 ' HNIAKENG PUACHUE HMONG SIGN KHAB THEEB
- 1E13B * HNIAKENG PUACHUE HMONG SIGN POOS = invertebrate

Punctuation

- 1E13C η HNIAKENG PUACHUE HMONG SIGN XW XW = reduplication
- 1E13D h HNIAKENG PUACHUE HMONG SIGN KHUS HAIM = creaky voice

Digits

_		
1E140	0	HNIAKENG PUACHUE HMONG DIGIT ZERO
1E141	- [HNIAKENG PUACHUE HMONG DIGIT ONE
1E142	4	HNIAKENG PUACHUE HMONG DIGIT TWO
1E143	Ŧ	HNIAKENG PUACHUE HMONG DIGIT THREE
1E144	3	HNIAKENG PUACHUE HMONG DIGIT FOUR
1E145	٧	HNIAKENG PUACHUE HMONG DIGIT FIVE
1E146	จ	HNIAKENG PUACHUE HMONG DIGIT SIX
1E147	В	HNIAKENG PUACHUE HMONG DIGIT SEVEN
1E148	8	HNIAKENG PUACHUE HMONG DIGIT EIGHT
1E149	રા	HNIAKENG PUACHUE HMONG DIGIT NINE

Symbols

Date: 2017-01-08

- 1E14E ∅ HNIAKENG PUACHUE HMONG MONEY SIGN

 → 1E102 № hniakeng puachue hmong letter nta

 looks like a turned nta "da"
- - → 1E108 5 hniakeng puachue hmong letter ca
 - used as a trademark or copyright sign

A. Administrative

1. Title

Preliminary proposal for encoding the Hniakeng Puachue Hmong script in 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

2016-01-03

- 5. Requester's reference (if applicable)
- 6. Choose one of the following:

6a. This is a complete proposal

Nο

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)

Ves

1b. Proposed name of script

Hniakeng Puachue Hmong.

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

71.

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 via the Rev. Chervang Kong

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

Michael Everson, Fontographer.

6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

Yes.

 $6b.\ Are\ published\ examples\ of\ use\ (such\ as\ samples\ from\ newspapers, magazines, or\ other\ sources)\ of\ proposed\ characters\ attached?$

No.

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.

See above.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

Nο.

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?

To be provided

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?

Contemporary cultural use by Hmongs and historians of Hmong culture.

4a. The context of use for the proposed characters (type of use; common or rare)

Somewhat rare.

4b. Reference

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

Yes.

5b. If YES, where?

In the US.

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?