

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

**Doc Type:** Working Group Document

**Title:** Final proposal for encoding the Miao script in the SMP of the UCS

**Source:** China, Ireland, and UK

**Status:** National Body Contribution

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

**Replaces:** N3669, N3730, N3761

**Date:** 2010-03-26

**1. Introduction.** Miao is the short name of the Lao Miaowen script. There are many Miao orthographies, but most use Latin letters and do not pose any character encoding concerns. The Miao script was created by the Englishman Samuel Pollard, Miao people Wang Mingji, John Zhang, and James Yang, as well as Han intellectual Stephen Lee during 1904 at Stone Gateway, Weining County, western Guizhou Province, China. It adopted some Cree graphemes, some Latin letter variants, some English shorthand characters, as well as some Miao pictographs. The main principle is to represent initials (usually consonants) with larger letters, finals (mostly vowels) with smaller letters, and with tones represented by various placement of the small letters relative to the big letter. This system is simple to use, but many Chinese scholars thought that the few phonological tone positions cannot completely express the many phonetic tones of the Miao language. Also, it was a challenge to set lead type with these letters. Therefore, in the early 1950s Yang Rongxin and other Miao people from Weining in Guizhou attempted a reform by designing tone marks and designating the bottom-right position of the big letter as the only tone mark position. This reform did not see much support from the Miao people. Later Miao people from Kunming City and Chuxiong Prefecture adopted Yang Rongxin's approach and devised what they called the Normalised writing system. Therefore, the Miao script is comprised of two orthographic styles. Since both systems are in current use, this encoding proposal covers both tone marking systems of the Miao script.

Originally, this script was mainly used by the Northeastern Yunnan Miao. Later, various other Miao dialects began to use it as well. In addition, some people from the Yi, and the Lisu nationalities in Luquan, Yunnan also use this script to write their languages. The estimated user population of the multiple language groups is between 200,000 and 500,000. Extensive literature, bilingual education materials and elementary textbooks have been published in the Miao Script.

**2. Structure.** The Miao script is written from left to right. Used for tonal languages, Miao divides each syllable into an initial and a final. The initial is usually the initial consonant (or consonant cluster) and the final consists of the vowel cluster and the tone. Nasalization and voicing can be considered as qualities of the whole syllable and are marked on the initial rather than the final. Nasalization is marked by a non-combining letter; aspiration is a combining mark. In Chuxiong style Ahmao orthography, a vowel is written on the baseline, followed by a tone mark; in most orthographies, the vowel is written at different heights and positions (above, top-right, right, bottom-right, below) indication the tone.

The syllable structure is: (N)C(M)V<sup>+</sup>(S/T), where N is the nasalizer, C is the obligatory consonant, M is a modifier (there is an aspiration mark in current use and two archaic voicing marks), V is one obligatory

vowel mark which may be followed by others, S is a “shifting” character which controls the height of the vowel (all vowels being moved to the same height and position), and T is a tone mark; S and T do not co-occur on a syllable.

**3. Punctuation and digits.** Users of the Miao script freely employ punctuation marks from both Chinese and Latin scripts. No new encodings for punctuation are required. European digits are used.

**4. Line breaking and word breaking.** Line breaks occur in place of spaces or after punctuation. A line break may not be inserted within a Miao syllable, or before punctuation immediately following a Miao syllable. There is no line breaking hyphenation. Word breaking occurs only before an initial consonant (N)C. Polysyllabic words are common.

**5. Rendering: the “wart”.** A number of characters in the code charts are drawn with a half-ring fused into the glyph. This “wart” represents a pronunciation which may be voicing or half voicing or lenition or some other sort of “reduced tension”. The wart is often drawn on the left side of a character, but if the base grapheme is hollow on the right side, the “wart” sometimes is applied to the right to reduce space used in printing. In the Chuxiong style of writing, the wart is not written, but instead a dot is drawn immediately after the character. Some Yi users do the same thing with a vertical stroke mark resembling a serif on the letters. A given word in a particular dialect can be written with a wart, a dot, or (rather more rarely and with little standardization) the serif-like mark, or without being considered a spelling change. Some documents have been published in both “wart” and “dot-like” forms for different user communities. In any case, because the users claim that these are simply different ways to write the same characters, the warted characters have been encoded, with the proviso that their glyph shapes may vary in implementation. Here are the “warted” and “dotted” variants:

ᄀ	ᄀ̣	ᄁ	ᄁ̣	ᄂ	ᄂ̣	ᄃ	ᄃ̣	ᄄ	ᄄ̣	ᄅ	ᄅ̣	ᄆ	ᄆ̣
ᄇ	ᄇ̣	ᄈ	ᄈ̣	ᄉ	ᄉ̣	ᄊ	ᄊ̣	ᄋ	ᄋ̣	ᄌ	ᄌ̣	ᄍ	ᄍ̣
ᄎ	ᄎ̣	ᄏ	ᄏ̣	ᄐ	ᄐ̣	ᄑ	ᄑ̣	ᄒ	ᄒ̣	ᄓ	ᄓ̣	ᄔ	ᄔ̣
ᄕ	ᄕ̣	ᄖ	ᄖ̣	ᄗ	ᄗ̣	ᄘ	ᄘ̣	ᄙ	ᄙ̣	ᄚ	ᄚ̣	ᄛ	ᄛ̣

**6. Rendering: the rimes.** In Chuxiong orthography, the letters representing vowels and final nasals rest on the baseline (indicating Tone 3), and an additional tone mark is used following the vowel sign(s) to indicate other tones. In Ahmao and other orthographies, a special formatting character (“S” for “shifter” as described above) is used, following the last of the vowel letters when it is to be rendered above the base letter, or to the top left of the base letter, or to the right of the base letter, or below the base letter. When more than one rime character precedes the shifter, all of the glyphs are shifted together to the appropriate position.

ᄀ	+	ᄀ̣	=	ᄀ̣		
ᄀ	+	ᄀ̣	+	ᄀ̣	=	ᄀ̣
ᄀ	+	ᄀ̣	+	ᄀ̣	=	ᄀ̣
ᄀ	+	ᄀ̣	+	ᄀ̣	=	ᄀ̣
ᄀ	+	ᄀ̣	+	ᄀ̣	=	ᄀ̣



o	O	
σ	ONG	(as o O + _ A)
ɓ	W	
c	E	
ε	EN	(as ε E + c N)
ε̄	ENG	(as ε E + ɛ NG)
ɣ	OEY	
n	I	
ɲ	IA	(as n I + _ A)
ɲ̣	IAN	(as n I + _ A + c N)
ɲ̣̄	IAN̄G	(as n I + _ A + ɛ NG)
ɹ	IO	(as n I + o O)
=	IE	
m	II	(as n I + n I)
ɲ	IU	(as n I + u U)
ɲ̣	ING	(as n I + ɛ NG)
u	U	
ɹ	UA	(as u U + _ A)
ɹ̣	UAN	(as u U + _ A + c N)
ɹ̣̄	UAN̄G	(as u U + _ A + ɛ NG)
w	UU	(as u U + u U)
ɹ	UEI	(as u U + c EI)
ɹ̣	UNG	(as u U + ɛ NG)
ɔ	Y	
ɹ	AE	
ɓ	AEE	
ɹ	ER	
ɹ	R-ER	
ɹ	ERR	
ɹ̣	R-ERR	
i	AI	
ɹ	EI	
ɹ̄	AU	
ɹ	OU	
c	N	
ɛ	NG	
ɹ	TONE RIGHT	
ɹ	TONE TOP RIGHT	
ɔ	TONE ABOVE	
ɔ̄	TONE BELOW	
ɹ	TONE-2	
ɹ̄	TONE-3	
ɹ̄̄	TONE-4	
ɹ̄̄̄	TONE-5	
ɹ̄̄̄̄	TONE-6	
ɹ̄̄̄̄̄	TONE-7	
ɹ̄̄̄̄̄̄	TONE-8	
ɹ̄̄̄̄̄̄̄	R-TONE-1	
ɹ̄̄̄̄̄̄̄̄	R-TONE-2	
ɹ̄̄̄̄̄̄̄̄̄̄	R-TONE-4	

⓪	R-TONE-5
⓫	R-TONE-6
⓬	R-TONE-8

**9. Character names.** The transcription of character names follows the usual UCS conventions for rendering IPA characters in ASCII.

## 10. Unicode Character Properties.

```

16F00;MIAO LETTER PA;Lo;0;L;;;;;N;;;;;
..
16F41;MIAO LETTER HHA;Lo;0;L;;;;;N;;;;;
16F50;MIAO LETTER NASALIZATION;Lo;0;L;;;;;N;;;;;
16F51;MIAO LETTER ASPIRATION;Mc;0;L;;;;;N;;;;;
16F52;MIAO LETTER REFORMED VOICING;Mc;0;L;;;;;N;;;;;
16F53;MIAO LETTER REFORMED ASPIRATION;Mc;0;L;;;;;N;;;;;
16F54;MIAO LETTER A;Mc;0;L;;;;;N;;;;;
..
16F7C;MIAO LETTER NG;Mc;0;L;;;;;N;;;;;
16F7D;MIAO MODIFIER TONE RIGHT;Mn;0;L;;;;;N;;;;;
16F7E;MIAO MODIFIER TONE TOP RIGHT;Mn;0;L;;;;;N;;;;;
16F7F;MIAO MODIFIER TONE ABOVE;Mn;0;L;;;;;N;;;;;
16F80;MIAO MODIFIER TONE BELOW;Mn;0;L;;;;;N;;;;;
16F81;MIAO LETTER TONE-2;Lm;0;L;;;;;N;;;;;
..
16F8D;MIAO LETTER REFORMED TONE-8;Lm;0;L;;;;;N;;;;;

```

## 11. Bibliography.

- Anonymous. 1948. *Miao hymnal*, China Inland Mission republished by Zhongguo Jidujiao Xiehui 中国基督教协会 “Chinese Christian Association” in 1988.
- Anonymous. 1984. *Black Yi songbook*. Yunnan Sheng Jidujiao Xiehui 云南省基督教协会 “Yunnan Province Christian Association”.
- Anonymous. s.d. “White [sic] Yi songbook”, Yunnan Sheng Jidujiao Xiehui 云南省基督教协会 “Yunnan Province Christian Association”.
- Constable, Peter (ed.), Deborah Anderson, Chen Zhuang, Michael Everson, Erich Fickle, Martin Hosken, Toshiya Suzuki, Ken Whistler. 2009. *Miao Ad-Hoc Meeting Report*. ISO/IEC JTC1/SC2/WG2 N3730, 2009-10-28.
- Enwall, Joakim (1994). “In search of the Entering Tone: The importance of the Sichuanese tones for understanding the tone marking system of the Sichuan Hmong Pollard Script”, in Joakim Enwall (ed.), *Outstretched leaves on his bamboo staff: Studies in honour of Göran Malmqvist on his 70th birthday*. Stockholm: The Association of Oriental Studies. pp 70-74.
- Enwall, Joakim (1994, 1995), *A myth become reality: History and development of the Miao written language*. Volumes 1 and 2. Stockholm East Asian monographs no. 5-6., Stockholm: Institute of Oriental Languages, Stockholm University.
- Johnson, Michael (1998). *Farwestern Hmongic*. Unknown publisher.
- Wang Chunde 王春德, et al., eds. 1991. 中国少数民族文字 “Chinese Minority writing”. Zhongguo Zang Xue chubanshe 中国藏学出版社 “Chinese Tibetology Publishing House”.
- Wang Fushi (王辅世). 1985. “Miao Language Simple Book” 《苗语简志》 北京: 民族出版社. Beijing: People's Press.”
- Wang Shengying 王盛英, et al., Eds. (1996). 苗汉简明词典 “Miao-Han concise dictionary”, 云南民族出版社 Kunming: “Yunnan Nationalities Press”.
- Wang Shiwei 王时炜 (2005). *Ad hmaob lul ad got ndeued: diand dongd beis shangb lul*. 苗语理论基础 Series “Miao language theory foundation”. 云南民族出版社 “Yunnan Nationalities Press”.
- Wang Yangcai 王阳才, et al. (2005). 楚雄苗族使略 *Chuxiong Miao zu Shilue* “Chuxiong Miao People History”, 云南民族出版社 Kunming: “Yunnan Nationalities Press”.
- Xiong Yuyou 熊玉有 (2003). 苗族文化史 “A cultural history of the Miao nationality”, 云南民族出版社 Kunming: “Yunnan Nationalities Press”, Yunnan Institute for Nationality Research.

	16F0	16F1	16F2	16F3	16F4	16F5	16F6	16F7	16F8
0	𐌀 16F00	𐌁 16F10	𐌂 16F20	𐌃 16F30	𐌄 16F40	𐌅 16F50	𐌆 16F60	𐌇 16F70	𐌈 16F80
1	𐌉 16F01	𐌊 16F11	𐌋 16F21	𐌌 16F31	𐌍 16F41	𐌎 16F51	𐌏 16F61	𐌐 16F71	𐌑 16F81
2	𐌒 16F02	𐌓 16F12	𐌔 16F22	𐌕 16F32		𐌖 16F52	𐌗 16F62	𐌘 16F72	𐌙 16F82
3	𐌚 16F03	𐌛 16F13	𐌜 16F23	𐌝 16F33		𐌞 16F53	𐌟 16F63	𐌠 16F73	𐌡 16F83
4	𐌣 16F04	𐌤 16F14	𐌥 16F24	𐌦 16F34		𐌧 16F54	𐌨 16F64	𐌩 16F74	𐌪 16F84
5	𐌫 16F05	𐌬 16F15	𐌭 16F25	𐌮 16F35		𐌯 16F55	𐌰 16F65	𐌱 16F75	𐌲 16F85
6	𐌳 16F06	𐌴 16F16	𐌵 16F26	𐌶 16F36		𐌷 16F56	𐌸 16F66	𐌹 16F76	𐌺 16F86
7	𐌻 16F07	𐌼 16F17	𐌽 16F27	𐌾 16F37		𐌿 16F57	𐍀 16F67	𐍁 16F77	𐍂 16F87
8	𐍃 16F08	𐍄 16F18	𐍅 16F28	𐍆 16F38		𐍇 16F58	𐍈 16F68	𐍉 16F78	𐍊 16F88
9	𐍋 16F09	𐍌 16F19	𐍍 16F29	𐍎 16F39		𐍏 16F59	𐍐 16F69	𐍑 16F79	𐍒 16F89
A	𐍓 16F0A	𐍔 16F1A	𐍕 16F2A	𐍖 16F3A		𐍗 16F5A	𐍘 16F6A	𐍙 16F7A	𐍚 16F8A
B	𐍛 16F0B	𐍜 16F1B	𐍝 16F2B	𐍞 16F3B		𐍟 16F5B	𐍠 16F6B	𐍡 16F7B	𐍢 16F8B
C	𐍣 16F0C	𐍤 16F1C	𐍥 16F2C	𐍦 16F3C		𐍧 16F5C	𐍨 16F6C	𐍩 16F7C	𐍪 16F8C
D	𐍬 16F0D	𐍭 16F1D	𐍮 16F2D	𐍯 16F3D		𐍰 16F5D	𐍱 16F6D	𐍲 16F7D	𐍳 16F8D
E	𐍴 16F0E	𐍵 16F1E	𐍶 16F2E	𐍷 16F3E		𐍸 16F5E	𐍹 16F6E	𐍺 16F7E	
F	𐍻 16F0F	𐍼 16F1F	𐍽 16F2F	𐍾 16F3F		𐍿 16F5F	𐎀 16F6F	𐎁 16F7F	

**Consonant onsets**

16F00	ɹ	MIAO LETTER PA	• used for ba in Dry Yi
16F01	ɹ̥	MIAO LETTER BA	
16F02	ɹ̥	MIAO LETTER YI PA	• used for pa in Dry Yi
16F03	ɹ̥	MIAO LETTER PLA	• used in Sichuan Hmong
16F04	ɹ̥	MIAO LETTER MA	
16F05	ɹ̥	MIAO LETTER MHA	
16F06	ɹ̥	MIAO LETTER ARCHAIC MA	• used in Pollard's early orthography
16F07	ɹ̥	MIAO LETTER FA	
16F08	ɹ̥	MIAO LETTER VA	
16F09	ɹ̥	MIAO LETTER VFA	• used in Black Yi
16F0A	ɹ̥	MIAO LETTER TA	• used for da in Dry Yi
16F0B	ɹ̥	MIAO LETTER DA	
16F0C	ɹ̥	MIAO LETTER YI TA	• used for ta in Dry Yi
16F0D	ɹ̥	MIAO LETTER TTA	
16F0E	ɹ̥	MIAO LETTER DDA	
16F0F	ɹ̥	MIAO LETTER NA	
16F10	ɹ̥	MIAO LETTER NHA	
16F11	ɹ̥	MIAO LETTER ARCHAIC NA	• used in Pollard's early orthography
16F12	ɹ̥	MIAO LETTER NNA	
16F13	ɹ̥	MIAO LETTER NNHA	
16F14	ɹ̥	MIAO LETTER LA	
16F15	ɹ̥	MIAO LETTER LYA	• used in Black Yi
16F16	ɹ̥	MIAO LETTER LHA	
16F17	ɹ̥	MIAO LETTER LHYA	• used in Black Yi
16F18	ɹ̥	MIAO LETTER TLHA	
16F19	ɹ̥	MIAO LETTER DLHA	
16F1A	ɹ̥	MIAO LETTER TLHYA	
16F1B	ɹ̥	MIAO LETTER DLHYA	
16F1C	ɹ̥	MIAO LETTER KA	• used for ga in Dry Yi
16F1D	ɹ̥	MIAO LETTER GA	
16F1E	ɹ̥	MIAO LETTER YI KA	• used for ka in Dry Yi
16F1F	ɹ̥	MIAO LETTER QA	
16F20	ɹ̥	MIAO LETTER QGA	
16F21	ɹ̥	MIAO LETTER NGA	
16F22	ɹ̥	MIAO LETTER NGHA	
16F23	ɹ̥	MIAO LETTER ARCHAIC NGA	• used in Pollard's early orthography
16F24	ɹ̥	MIAO LETTER HA	
16F25	ɹ̥	MIAO LETTER XA	• archaic character used in a 1949 S reformed orthography
16F26	ɹ̥	MIAO LETTER GHHA	
16F27	ɹ̥	MIAO LETTER GHHA	
16F28	ɹ̥	MIAO LETTER TSSA	
16F29	ɹ̥	MIAO LETTER DZZA	
16F2A	ɹ̥	MIAO LETTER NYA	
16F2B	ɹ̥	MIAO LETTER NYHA	
16F2C	ɹ̥	MIAO LETTER TSHA	• used for dzha in Dry Yi
16F2D	ɹ̥	MIAO LETTER DZHA	
16F2E	ɹ̥	MIAO LETTER YI TSHA	• used for tsha in Dry Yi

16F2F	ɹ̥	MIAO LETTER REFORMED TSHA	• archaic character used in a 1949 S reformed orthography
16F30	ɹ̥	MIAO LETTER SHA	
16F31	ɹ̥	MIAO LETTER SSA	
16F32	ɹ̥	MIAO LETTER ZHA	• used in Black Yi
16F33	ɹ̥	MIAO LETTER ZSHA	• used in Black Yi
16F34	ɹ̥	MIAO LETTER TSA	• used for dza in Dry Yi
16F35	ɹ̥	MIAO LETTER DZA	
16F36	ɹ̥	MIAO LETTER YI TSA	• used for tsa in Dry Yi
16F37	ɹ̥	MIAO LETTER SA	
16F38	ɹ̥	MIAO LETTER ZA	
16F39	ɹ̥	MIAO LETTER ZSA	• used in Black Yi
16F3A	ɹ̥	MIAO LETTER ZZA	
16F3B	ɹ̥	MIAO LETTER ZZSA	• used in Black Yi
16F3C	ɹ̥	MIAO LETTER ARCHAIC ZZA	• used in Pollard's early orthography
16F3D	ɹ̥	MIAO LETTER ZZYA	• used in Black Yi
16F3E	ɹ̥	MIAO LETTER ZZSYA	• used in Black Yi
16F3F	ɹ̥	MIAO LETTER WA	
16F40	ɹ̥	MIAO LETTER AH	• glottal stop
16F41	ɹ̥	MIAO LETTER HHA	• used in Black Yi

**Modifiers**

16F50	ɹ̥	MIAO LETTER NASALIZATION	
16F51	ɹ̥	MIAO LETTER ASPIRATION	
16F52	ɹ̥	MIAO LETTER REFORMED VOICING	• archaic character used in a post-1949 reformed orthography
16F53	ɹ̥	MIAO LETTER REFORMED ASPIRATION	• archaic character used in a post-1949 reformed orthography

**Vowels and finals**

16F54	ɹ̥	MIAO LETTER A	
16F55	ɹ̥	MIAO LETTER AA	• used in Eastern Lisu
16F56	ɹ̥	MIAO LETTER AN	
16F57	ɹ̥	MIAO LETTER ANG	• also used for aw
16F58	ɹ̥	MIAO LETTER O	
16F59	ɹ̥	MIAO LETTER OO	
16F5A	ɹ̥	MIAO LETTER W	
16F5B	ɹ̥	MIAO LETTER E	
16F5C	ɹ̥	MIAO LETTER EN	
16F5D	ɹ̥	MIAO LETTER ENG	
16F5E	ɹ̥	MIAO LETTER OEY	
16F5F	ɹ̥	MIAO LETTER I	
16F60	ɹ̥	MIAO LETTER IA	
16F61	ɹ̥	MIAO LETTER IAN	
16F62	ɹ̥	MIAO LETTER IANG	• also used for iaw
16F63	ɹ̥	MIAO LETTER IO	
16F64	ɹ̥	MIAO LETTER IE	
16F65	ɹ̥	MIAO LETTER II	• used in Eastern Lisu

16F66	◌ <sub>~</sub>	MIAO LETTER IU
16F67	◌ <sub>ṁ</sub>	MIAO LETTER ING • also used for in
16F68	◌ <sub>u</sub>	MIAO LETTER U
16F69	◌ <sub>ʉ</sub>	MIAO LETTER UA
16F6A	◌ <sub>ɹ</sub>	MIAO LETTER UAN
16F6B	◌ <sub>uṁ</sub>	MIAO LETTER UANG • also used for uaw
16F6C	◌ <sub>w</sub>	MIAO LETTER UU • used in Eastern Lisu
16F6D	◌ <sub>u</sub>	MIAO LETTER UEI
16F6E	◌ <sub>ḡ</sub>	MIAO LETTER UNG
16F6F	◌ <sub>ḡ</sub>	MIAO LETTER Y
16F70	◌ <sub>ḡ</sub>	MIAO LETTER YI
16F71	◌ <sub>ḡ</sub>	MIAO LETTER AE
16F72	◌ <sub>ḡ</sub>	MIAO LETTER AEE • used in Eastern Lisu
16F73	◌ <sub>ḡ</sub>	MIAO LETTER ERR
16F74	◌ <sub>ḡ</sub>	MIAO LETTER ROUNDED ERR • used in Eastern Lisu
16F75	◌ <sub>r</sub>	MIAO LETTER ER
16F76	◌ <sub>r</sub>	MIAO LETTER ROUNDED ER • used in Eastern Lisu
16F77	◌ <sub>i</sub>	MIAO LETTER AI
16F78	◌ <sub>l</sub>	MIAO LETTER EI
16F79	◌ <sub>ii</sub>	MIAO LETTER AU
16F7A	◌ <sub>q</sub>	MIAO LETTER OU
16F7B	◌ <sub>l</sub>	MIAO LETTER N
16F7C	◌ <sub>ḡ</sub>	MIAO LETTER NG

### Positioning tone marks

*These are used to position the vowel off of the baseline position to indicate a changed tone.*

16F7D	◌ <sub>ṁ</sub>	MIAO LETTER TONE RIGHT
16F7E	◌ <sub>ṁ</sub>	MIAO LETTER TONE TOP RIGHT
16F7F	◌ <sub>ṁ</sub>	MIAO LETTER TONE ABOVE
16F80	◌ <sub>ṁ</sub>	MIAO LETTER TONE BELOW

### Baseline tone marks

*These are used in Chuxiong Ahmao instead of the four above*

16F81	ṁ	MIAO LETTER TONE-2
16F82	ṁ	MIAO LETTER TONE-3
16F83	ṁ	MIAO LETTER TONE-4
16F84	ṁ	MIAO LETTER TONE-5
16F85	ṁ	MIAO LETTER TONE-6
16F86	ṁ	MIAO LETTER TONE-7
16F87	ṁ	MIAO LETTER TONE-8

### Archaic baseline tone marks

*These are archaic characters used in a post-1949 reformed orthography*

16F88	ṁ	MIAO LETTER REFORMED TONE-1
16F89	ṁ	MIAO LETTER REFORMED TONE-2
16F8A	ṁ	MIAO LETTER REFORMED TONE-4
16F8B	ṁ	MIAO LETTER REFORMED TONE-5
16F8C	ṁ	MIAO LETTER REFORMED TONE-6
16F8D	ṁ	MIAO LETTER REFORMED TONE-8



Figures.

规范苗文声母符号

基础字母:	J	T	ɟ	ɕ	l	ʌ	ʌ	ɬ	ɬ	J	Y	V	ʌ	A	L	ʌ
派生字母:	J'	T'	ɟ'	ɕ'	l'	ʌ'	ʌ'	ɬ'	ɬ'	J'	Y'	V'	ʌ'	A'	L'	ʌ'
	J'	T'	ɟ'	ɕ'	l'	ʌ'	ʌ'	ɬ'	ɬ'	J'	Y'	V'	ʌ'	A'	L'	ʌ'
	ɕɟ	ɕT	ɕɟ	ɕɕ	ɕl	ɕʌ	ɕʌ	ɕɬ	ɕɬ	ɕJ	ɕY					
	ɕJ'	ɕT'	ɕɟ'	ɕɕ'	ɕl'	ɕʌ'	ɕʌ'	ɕɬ'	ɕɬ'	ɕJ'	ɕY'					
	ɕJ'	ɕT'	ɕɟ'	ɕɕ'	ɕl'	ɕʌ'	ɕʌ'	ɕɬ'	ɕɬ'	ɕJ'	ɕY'					

基础字母:	ɟ	ɕ	ʒ	ʒ	e	ɟ	l	J	J	S	ɟ	ɟ	R	U
派生字母:	ɟ'	ɕ'	ʒ'	ʒ'	e'	ɟ'	l'							
	ɟ'	ɕ'	ʒ'	ʒ'	e'	ɟ'	l'							

韵母符号

单韵母:	-	o	ɔ	ɒ	u	ɟ	l	ɟ	ɟ	ɟ	ɟ	ɟ	ɟ	ɟ	ɟ	ɟ
复韵母:	ou	oɟ	no	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ	noɟ

声调标写方法

调序	1	2	3	4	5	6	7	8	
调号		T	ɟ	M	ɟ	S	L	t	(1 调不标)
调值	55	35	53	23	33	31	22	11	
字例	ɟu	ɟ-T	ɟnɟ	liɟM	ɟɟɟ	ɟɟos	ɟnL	eɟt	
清音	1	3	5	7	调				
浊音	2	4	6	8	调				

Figure 1. Chart of complete Chuxiong style Lao Miaowen system. (Wang Yangcai, 2005).

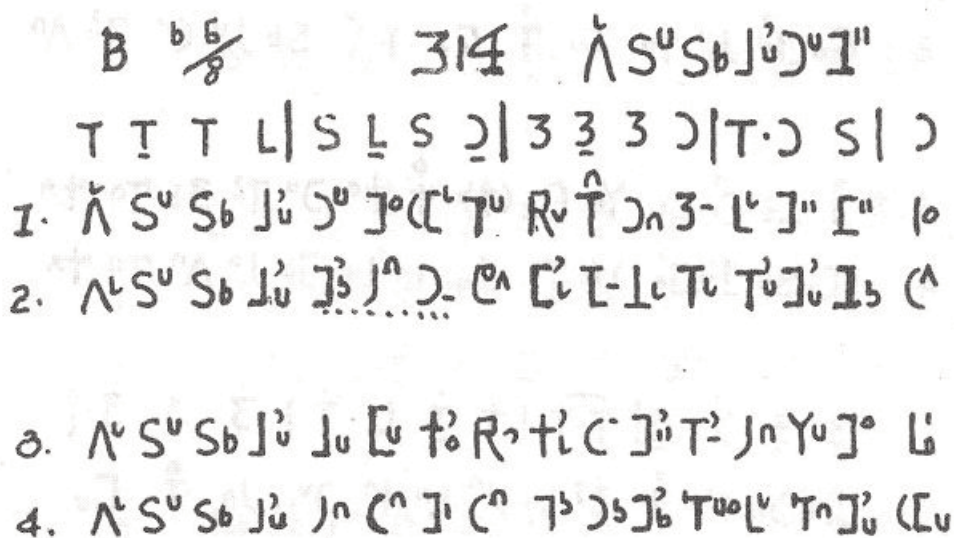


Figure 2. Musical notation with Lao Miaowen replacing the numbers in a Yi hymnal.





## A. Administrative

1. Title

**Final proposal for encoding the Miao script in the SMP of the UCS**

2. Requester's name

**China, Ireland, and UK**

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

**National Body contribution.**

4. Submission date

**2010-03-26**

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

**Yes.**

6b. More information will be provided later

**No.**

## 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

**Miao.**

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

**128.**

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?

**David Morse and 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, 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?

**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.

**Yes, in N3669 and N3761.**

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?

**Yunnan Minority Language Commission, David Morse, Joakim Enwall.**

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?

**Yes.**



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

**Common.**

4b. Reference

**Scriptures, dictionaries, song books, textbooks, signs**

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

**Yes.**

5b. If YES, where?

**In Northeastern Yunnan, China.**

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?

**Yes.**

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

**Yes.**

10c. If YES, reference

**Some letters appear similar to Cree or Latin, but this is a different script with different behaviours. They should be encoded as a block**

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)?

**Yes.**

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

**Yes.**

11c. If YES, reference

**See above.**

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?