Universal Multiple-Octet Coded Character Set
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1.0 Introduction. Pahawh Hmong is a script devised for writing the Hmong language by Shong Lue Yang (*Soob Lwj Yaj* ᗑᑔ̌ ᗑᑎ ᗑᗑ [ʃɔ́ŋ lɨ̂ jâ]). Shong Lue Yang was a charismatic figure among the Hmong in Laos, and was considered by many to be a kind of messiah. It is said that in 1959 the writing system was revealed to him by two supernatural messengers who appeared to him over a period of months. A full account of this is given in Smalley, Vang, and Yang 1990. Devised in Laos, Pahawh Hmong was taken to northern Thailand refugee camps, and then moved with waves of immigrants to Minnesota and California in the United States, and to Australia. The writing system itself has had four Stages of development. In this document, the Romanized Popular Alphabet orthography (widely used by the Hmong in North America) is given alongside example text in Pahawh 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		
-b	ᒥ	v́	high-level
-m	ᒪ	v	low-glottalized
-d	∨	v̬	low-rising
-j	ᐟ	v̂	high-falling
-v	ᐼ	v̌	mid-rising
-Ø	ᑊ	v	mid-level
-s	ᒣ	v̀	low-level
-g	ᐠ	v̤	falling-breathy

1.1 The Source Version, Pahawh Pa (*Phajhauj Paj* ᗑᒼ ᑎ�m ᗑᒦ [pʰâ hâu pâ]), is not in current use. While containing the seeds of the system, in its structure and glyphs it is distinct from the later Stage Versions, and had little use as a practical system for writing Hmong. It is considered a separate but related script, and is not supported by this encoding.

1.2 The Second Stage Reduced Version, Pahawh Njia Dua O (*Phajhauj Ntsiab Duas Ob* ᗑᒼ ᑎm ᑍK ᗑᒧ ᑎᒼ [pʰâ hâu ndʒía dùa ʔɔ́]), is in current use. It was taught by Shong Lue Yang in April 1965, and is supported by the Australian Hmong Language Institute and by Hmong Script Software's ᑕᐯ ᗑᑎ *Cwjmem* [ʈ̂ mẹ] font; fonts are also available from the Hmong Language Institute in Minnesota. The Hmong user community in Australia uses the Second Stage Reduced Version.

1.3 The Third Stage Reduced Version, Pahawh Njia Dua Pe (*Phajhauj Ntsiab Duas Peb* ᗑᒼ ᑎm ᑍK ᗑᒧ ᗑᒦ [pʰâ hâu ndʒía dùa pé]), is in current use. It rationalizes some features of the Second Stage Reduced Version, and is said by Chia Koua Vang to have been introduced by Shong Lue Yang in August

1970. Some members of the Hmong user community in Minnesota use the Third Stage Reduced Version. A Third Stage font is available from Hmongwriting.com.

1.4 The Final Version, Pahawh Tsa (*Phajhauj Txha* ꟓꓘ ꓒꓘ ꓴꓲꓟ [pʰâ hâu tsʰa]), is not in regular use. It is a radical simplification of the Third Stage Reduced Version and is said by Chia Koua Vang to have been introduced in January 1971 by Shong Lue Yang about a month before his assassination. Smalley *et al*. 1990 state that it is not in use as a practical system, though some people who knew it use it as a kind of shorthand (and called it "shorthand" in English). In meetings in St Paul 2011 all of the users of Pahawh Hmong agreed that no one was using this version of the script. Nevertheless, the encoding proposed here can represent text written in all three of the Revisions.

The fact that Stage Two and Stage Three orthographies are both used makes character naming and placement of characters in the code table slightly problematic. In the Third Stage Reduced Version, base characters without diacritics end in *-b* (*v́* or high-level) or *-v* (*v̌* mid-rising) tones; these tones are represented by a more complex alternation of diacritics (*-b*, *-v*, *-Ø*, *-g*, *-m*) in the Second Stage Reduced Version. The easier Third Stage Reduced Version names have been used here—this does not imply a preference for either Stage, as UCS names are arbitrary. In the code charts, the vowel rimes follow the order taught by both Second Stage Reduced Version and Third Stage Reduced Version users, and the consonant onsets follow—by agreement with both groups—the order taught in the Source Version, since the later versions differed from both the Source Version and from each other. (The later versions both taught an order said to have been given to them by Shong Lue Yang, but as they were incompatible both groups chose to revert to the first order Shong Lue Yang taught.)

1.5 Sociolinguistic considerations. Users of Pahawh Hmong script respect the inventor, Shong Lue Yang, greatly. All users of the script know that it underwent modification from its original version in order to reduce the number of characters required. Users of the Second Stage Reduced Version have said that Shong Lue Yang told them that they should use that version until such time as the Hmong people were re-united. What such re-unification might mean is a matter of interpretation. Chia Koua Vang has said that Shong Lue Yang revealed the Third Stage Reduced Version to him in response to the difficulties he had implementing the Second Stage Reduced Version on a mechanical Laotian typewriter (a task given him by Shong Lue Yang). Users of the Second Stage Reduced Version say that they simply cannot verify whether this is true or not.

From the point of view of the UCS, this doesn't matter, as the proposed encoding supports both Second and Third Stages. Sociolinguistically, perhaps all that can be said is that users of the Third Stage Reduced Version are content to use that version, and that users of the Second Stage Reduced Version users will probably continue to use that orthography until they feel that Shong Lue Yang's prophesy of the re-unification of the Hmong has come to pass. Will UCS encoding and the use of Pahawh Hmong on the internet be interpreted as re-unification? Only time will tell. In my own view, I would venture to guess that most users of the Romanized Popular Alphabet who choose to take up Pahawh Hmong will find the Third Stage Reduced Version more congenial, because there is a one-to-one mapping between RPA tone mark letters and Third Stage tone diacritics. But most of them are satisfied to use RPA at present in any case.

2.0 Processing. Pahawh Hmong syllables are separated by spaces in text, and may contain one to four characters: base, base with diacritic, base + base, base with diacritic + base, base + base with diacritic, and base with diacritic + base with diacritic. Structurally, Pahawh Hmong is unique among the world's writing systems in that the vowel rime of a syllable (its vowel with or without tone diacritic) is written before the consonant onset of the syllable (its consonant with or without consonant-identifier diacritic). In the Examples 1 and 2, the structure of the words "Pahawh Hmong" (*Phajhauj Hmoob* [pʰâ hâu ʰmɔ́ŋ]) is

analyzed, given in Second and Third Stage Reduced Version (Final Version happens to be identical to Third Stage Reduced Version in this example).

ꬖ꬗ ꬄ꬟ ꬌꬣ
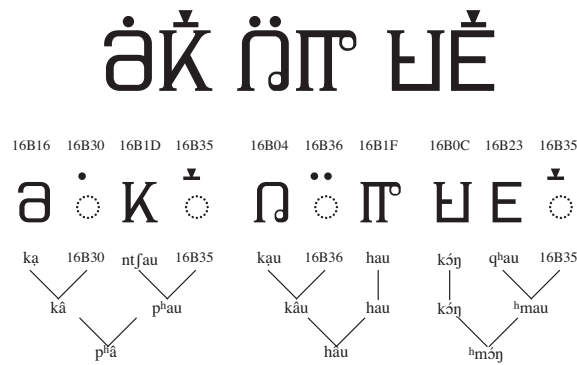
Example 1. Second Stage Reduced Version

ꬖ꬗ ꬄ꬟ ꬌꬣ
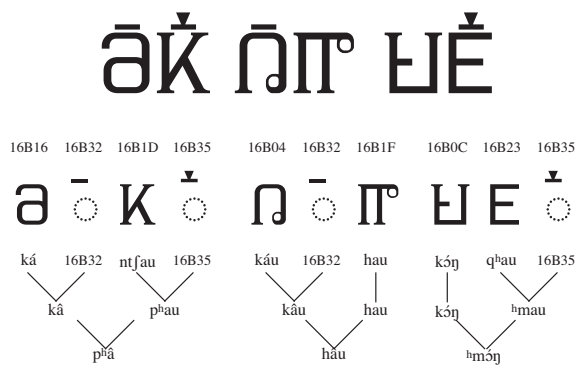
Example 2. Third Stage Reduced Version

2.1 Vowel rimes. Characters from 16B00..16B1B are vowel codas. Adding diacritics to these alters the tone. 16B1A..16B1B are long vowels. In Shong Lue Yang's system, Hmong Daw dialect syllables KIAB ꬂ, KIAV ꬃ, KAB ꭢ, and KAV ꭣ are used for Hmong Leng dialect *kab*, *kav*, *kaab* or *kaav* respectively. A revision of the script by Jay Kue of Hmong Script Software includes special characters for *kaab* ꭢ and *kaav* ꭣ (in Second Stage Reduced Version *kaam* and *kaav*). These are atomic characters with no decomposition. In the first place, decomposition would break the one-to-four character convention for representing Hmong syllables. In the second, the addition of a (non-productive) character ꭤ would be problematic as 16B50 ꭐ PAHAWH HMONG NUMBER ZERO looks quite like it.

2.2 Consonant onsets. Characters from 16B1C..16B2F are consonant heads. Adding diacritics to these changes the base consonant to a different, usually unrelated, consonant. Use of diacritics to affect various changes is unsystematic for the consonants. For the vowels, Stage Two Reduced Version, Stage Three Reduced Version, and Final Stage Pahawh Hmong offer an increasing rationalization of relationships, which in Final Stage Pahawh Hmong is quite systematic. The differences are orthographic, however, and do not affect the encoding. As stated above, the Stage Three Reduced Version was chosen as the basis for the character names in the encoding because it is more systematic than the Stage Two Reduced Version, and because the Final Stage is a subset of the Stage Three Reduced Version.

2.3 Combining diacritics are found at 16B30..16B36 and function in the usual way. Note that 16B34 and 16B35 could be composed (16B32 + 16B30 and 16B32 + 16B31 respectively). Such an encoding is not recommended (because decomposition would break the one-to-four character convention for representing Hmong syllables) and no canonical decomposition is given in the character properties. See Figure 3 for further discussion of grounds for encoding these as script-specific characters.

2.4 Encoding order. Visual-order encoding should be preferred for Pahawh Hmong because it will make implementation less expensive and it is what users expect. The logical "reversal" of coda and head from the pronounced syllable does not affect the sorting algorithm, which follows visual order as well. Inputting and display are also done according to visual order. Unlike Devanagari, where *a few* vowel signs appear before the base consonant but should be represented phonetically in the backing store, *all* Pahawh Hmong syllables are uniformly represented as V^{t}C even though the pronunciation is CV^t. All current implementations employ this method of encoding.

3.0 Non-alphabetic characters are used in Pahawh Hmong.

3.1.0 Punctuation marks similar in function to generic punctuation are found at ASCII 16B37..16B3F. Ordinary generic punctuation marks like ? ( ) . , ; : < > – — are used in Pahawh Hmong and can be represented by existing UCS characters.

3.1.1 Question mark 16B37 ⅄ PAWAWH HMONG SIGN VOS THOM is used as a question mark by users of the Second Stage Revised Version. Users of the Third Stage Reduced Version employ the generic question mark U+003F "?". (See Figures 5B, 9.)

3.1.2 Exclamation mark 16B38 Ū PAWAWH HMONG SIGN VOS TSHAB CEEB was devised by Pa Kao Her (*Paj Kaub Hawj* ꝺꞮꝳ ꝵ Ɪꝲꝵ [pâ káu hâw]) in 1985; Smalley and the Naadaa font retain a special glyph for this but the Cwjmem font either does not include it or prefers the generic exclamation mark. Shong Lue Yang also used U+0021 "!". (See Figure 17.)

3.1.3 Comma 16B39 ꜝ PAWAWH HMONG SIGN CIM CHEEM is used as a comma in mathematical texts written in the Second Stage Reduced Version. (See Figures 9, 11.)

3.1.4 Ampersand 16B3A ꜟ is derived from the ampersand and was also invented by Pa Kao Her. Smalley's font and the Naadaa font have a special glyph for this but in the Cwjmem font it faces the same direction as the generic ampersand. (See Figure 5B, 18.)

3.1.5 Percent sign 16B3B ⅍ is the percent sign. Smalley and the Naadaa font use a different glyph ⅊ for this but the Cwjmem font appears to modify the regular percent sign by having dots instead of rings. (See Figures 5B, 9, 18.)

3.1.6 Arithmetic operators are 16B3C ◁ PAHAWH HMONG XYEEM NTXIV (the plus sign), 16B3D ⊤ PAHAWH HMONG XYEEM RHO (the minus sign), 16B3E ↊ PAHAWH HMONG XYEEM TOV (the multiplication sign), and 16B3F ⊦ PAHAWH HMONG XYEEM FAIB (the division sign). Smalley *et al*. 1990 give them, with slightly different glyphs: ◁ ⊤ ⊓ ⊢. (See Figures 11, 13, 14.)

3.1.7 Intonation mark 16B40 ∶∙ PAHAWH HMONG SIGN VOS SEEV indicates the sung or chanted nature of the text. It was also used by some Second Stage Reduced Version users to mark the *-d* tone. (See Figures 5A, 5B, 9, 17.)

3.1.8 Foreign pronunciation mark 16B41 ꝵ PAHAWH HMONG SIGN MEEJ SUAB indicates a non-Hmong pronunciation of the syllable following: the syllable ꝺꞮꝲ *mam* [ma̠], when written ꝵꝺꞮꝲ, is pronounced [man], a Lao loanword meaning 'to prepare to do'. The character has no inherent pronunciation and is used rarely. (See Figure 5B.)

3.1.9 Reduplication mark 16B42 ꞏ PAHAWH HMONG SIGN VOS NRUA indicates reduplication of the syllable preceding: ÜḰꞏ = ÜḰ ÜḰ. *tsuag tsuag* [tʃu̠a tʃu̠a] 'hurry hurry'. (See Figures 5A, 5B, 9, 17.)

3.1.10 Replication mark 16B43 ꭃ PAHAWH HMONG SIGN IB YAM indicates that what precedes it is to be repeated, like "ditto" is in English. (See Figure 5B.)

3.1.11 Section mark 16B44 ꭄ PAHAWH HMONG SIGN XAUS is used to indicate the end of a section. (See Figures 5B, 13.)

3.1.12 Military mark 16B45 ꭅ PAHAWH HMONG SIGN CIM TSOV ROG is used to indicate that a text has military content. (See Figure 12.)

3.2.1 Digits. 16B50..16B59 are the decimal digits 0–9. Third Stage Reduced Version users employ 16B5A ꭚ PAHAWH HMONG DIGIT THIRD-STAGE ZERO while the Second Stage Reduced Version users make use of 16B50 ꭐ PAHAWH HMONG DIGIT ZERO, derived from the non-decimal tens number (see below). Both user groups agreed that it was not possible to unify these to characters. This is similar to the two digits 1 used in New Tai Lue.

3.2.2 Numbers. A nondecimal numeric system also exists, given at 16B5B..16B62. It is not in current use for arithmetic calculation, though it is still taught. Third Stage Reduced Version users employ 16B62 ꭢ PAHAWH HMONG NUMBER THIRD-STAGE TENS while the Second Stage Reduced Version users make use of 16B5B ꭛ PAHAWH HMONG NUMBER TENS, derived from the Source Version tens number. Both user groups agreed that it was not possible to unify these two characters. Good fonts should make some distinction between 16B50 ꭐ and 16B62 ꭢ.

3.3 Logographs. Characters encoded at 16B63..16B77 are logographs.

3.3.1 Grammatical classifier. 16B63 ꭣ PAHAWH HMONG SIGN VOS LUB represents the syllable *lub* ꭒꭜꭖ [lú], the most common grammatical classifier in the Hmong language. Smalley *et al*. 1990 give the example ꭣ ꭧꭨ *lub npe* [lú mbe] 'a name'. Shong Lue Yang created a sign for this because of the high frequency of the word in the language. Considering the similarity of the two glyphs used to write it, it seems that in devising the character Shong Lue Yang was being very practical indeed. (See Figures 5B, 15, 18.)

3.3.2 Logographs for periods of time. 16B64..16B6C are logographs naming periods of time: *xyoo* ꭤ 'year', *hli* ꭥ 'month', *zwj thaj* ꭦ 'date', *hnub* ꭧ 'day' respectively. Third Stage Reduced Version users employ 16B66 ꭦ PAHAWH HMONG SIGN THIRD-STAGE HLI while the Second Stage Reduced Version users make use of 16B65 ꭥ PAHAWH HMONG SIGN HLI; the two signs evidently have different origins. Other logographs in this category are *nqig* ꭩ 'waning moon', *xiab* ꭪ 'waxing moon', *ntuj* ꭫ 'season', and *av* ꭬ 'earth'. (It is not certain what the temporal use of *av* is, but it is clearly related to *ngiq*, *xiab*, and *ntuj*.) (See Figure 5B.)

3.3.3 Logographs for correspondence. 16B6D..16B77 are logographs used in correspondance in various ways: *txheej ceev* ꭭ 'urgent', *meej tseeb* ꭮ 'facts', *tau* ꭯ 'received', *los* ꭰ 'come', *mus* ꭱ 'go', *cim hais lus ntog ntog* ꭲ 'smooth', *cim cuam tshooj* ꭳ 'fraction', *cim txwv* ꭴ 'do not open', *cim txwv chwv* ꭵ 'do not touch', *cim pub dawb* ꭶ 'give freely', and *cim nres tos* ꭷ 'stop'. (See Figures 5B, 9.)

3.3.4 Logographs for clan names. 16B7E..16B8F are logographs for clan names. 16B7E..16B8B were devised by Shong Lue Yang, and 16B8C..16B8F were added by Chia Koua Vang (*Txiaj Kuam Vaj* ꭸꭹ ꭺꭻ ꭼꭽ [tsîa kụa vâ]). (See Figure 16.)

According to Hmong custom, men and women from the same clan cannot marry each other, and are restricted in their behavior in each other's presence. They are perceived to be like brothers and sisters so far as the

appropriateness of sexual contact is concerned, with considerably more restrictions than exist in a sibling relationship in the West. For example, men and women of the same clan should not throw the ball to each other at the Hmong New Year, a custom potentially leading to courtship; neither should they spend time alone together.…

Shong Lue Yang designed the clan logographs to be sewn into garments or worn as badges, or posted on desks or doors to identify a person's clan. This would enable people to behave appropriately. Such identification was needed in the resettlement camps in Laos to which many Hmong people had fled for protection from the communists. In those surroundings they did not know all of their neighbors, much less other people they met.

It is also sometimes hard to identify a person's clan even if you have heard the person's name. Order of given name and clan name is not fixed. Somebody called *Vaj Yaj* ꛊꛊ ꛊꚱ 'Vang Yang' might belong either to the *Vang* clan or the *Yang* clan, depending on which order is being used. Under conditions where strangers are regularly encountered, it is awkward to have to ask constantly what the other person's clan is.… (Smalley *et al*. 1990:83–84)

These characters are not in widespread current use, but are encoded for historical reasons. At least one font contains them. They are not "logos" or analogous to the character used by the artist formerly known as the Artist Formerly Known as Prince; they are more like Han characters used for family names.

4.0 Ordering. The ordering given in Lee Nao Long et al. 2001, which uses the Second Stage Reduced Version orthography, follows the relative order of the tones, namely *-b < -m < -d < -j < -v < -Ø < -s < -g* (*v́ < v < y < v̂ < v̌ < v < v̀ < v*). All stages use this tone-based ordering—where they differ is in which *characters* they use to represent the tones. This causes difficulties, in particular for a generic ordering based on the Second Stage Reduced Version.

In the presentation below, base characters are black, letters with CIM TUB are (using Web-named colours) dark slate blue, letters with CIM SO are dark goldenrod, letters with CIM KES are dark orange, letters with CIM KHAV are dark green, letters with CIM SUAM are crimson, letters with CIM HOM are dark magenta, and letters with CIM TAUM are dark cyan.

That is, while the Second Stage Reduced Version orthography begins:

$$\text{ꛟ }ké < \text{ꛟ }ke < \text{ꛟ }kȩ < \text{ꛟ }k\hat{e} < \text{ꛟ }k\check{e} < \text{ꛞ }ke < \text{ꛞ }k\grave{e} < \text{ꛞ }kȩ$$
$$keb < kem < ked < kej < kev < ke < kes < keg$$

The Third Stage Reduced Version orthography begins:

$$\text{ꛟ }ké < \text{ꛟ }ke < \text{ꛟ }kȩ < \text{ꛟ }k\hat{e} < \text{ꛞ }k\check{e} < \text{ꛞ }ke < \text{ꛞ }k\grave{e} < \text{ꛞ }kȩ$$
$$keb < kem < ked < kej < kev < ke < kes < keg$$

The Final Version orthography begins:

$$\text{ꛟ }ké < \text{ꛟ }ke < \text{ꛟ }kȩ < \text{ꛟ }k\hat{e} < \text{ꛟ }k\check{e} < \text{ꛟ }ke < \text{ꛟ }k\grave{e} < \text{ꛟ }kȩ$$
$$keb < kem < ked < kej < kev < ke < kes < keg$$

For the purposes of a default ordering that easily supports both Third Stage Reduced Version and Final Version orthographies, each of the consonants and each of the vowels can be given a primary weight. This applies diacritical marks used only in the Final Version orthography to vowel rimes which do not appear in that Version, but it does form a complete specification. Since the consonant onsets are uniform in all stages, the list below gives only those forms which occur.

This regular ordering accounts for all base letters and diacritic combinations—even those which are never used (unused combinations are underscored). Although CIM SO, CIM KES, CIM KHAV, CIM SUAM, and CIM TAUM are never used with consonant onsets (which is why they are not shown in here), this scheme could just as easily accommodate the sequences ꚉ < ꚉ̇ < ꚉ̣ < ꚉ̄ < ꚉ̂ < ꚉ̌ < ꚉ̃ < ꚉ̤, etc.

4.1 Generic ordering accommodating Third Stage Reduced Version and Final Version orthographies:
Vowel rimes:

-b < *-m* < *-d* < *-j* < *-v* < *-Ø* < *-s* < *-g* < *-v* < *-Ø* < *-s* < *-g* < — < — < — < — <

(character ordering table)

Consonant onsets:

(character ordering table)

    Notice that Ṫ *dlhau* is also found, in an orthography which supports Hmong Leng.

4.2 Generic ordering accommodating Second Stage Reduced Version orthography. Since all combinations have to be accommodated in the ordering, the previous table has been taken as a base, and only those characters that needed to be moved have been.
Vowel rimes:

-b < *-m* < *-d* < *-j* < — < — < — < — < *-v* < *-Ø* < *-s* < *-g* < — < — < — < — <

(character ordering table)

Consonant onsets:

(character ordering table)

    Notice that Ṫ *dlhau* is also found, in an orthography which supports Hmong Leng.

It should also be noted that there are two schemes for the ordering of the vowel rimes in the Second Stage Reduced Version, and no standard order for the consonant onsets. Taking only the base characters, we find:

4.3.1 Vowel rime order in Smalley 1990, www.pahauhhmong.org/yublas.html, Lee Nao Long 2001, Chia Koua Vang 2002

ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ .

4.3.2 Vowel rime order in www.cwjmemhmong.info/vowels.html

ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ < ꒊ .

4.4.1 Consonant onset order in Lee Nao Long *et al*. 2001

ꓚ ꓗ ꓡ ꓦ ꓴ ꓯ ꓵ ꓰ ꓪ ꓤ ꓡ ꓛ ꓮ ꓥ ꓟ ꓟ ꓴ ꓕ ꓮ ꓦ

4.4.2 Consonant onset order in Smalley *et al*. 1990

ꓚ ꓗ ꓡ ꓦ ꓴ ꓮ ꓮ ꓪ ꓥ ꓴ ꓕ ꓟ ꓡ ꓛ ꓰ ꓯ ꓟ ꓤ ꓵ ꓦ

4.4.3 Consonant onset order in www.pahauhhmong.org/yublas.html

ꓚ ꓗ ꓯ ꓡ ꓦ ꓴ ꓥ ꓡ ꓵ ꓮ ꓟ ꓪ ꓛ ꓰ ꓴ ꓟ ꓕ ꓮ ꓤ ꓦ

4.4.4 Consonant onset order in www.cwjmemhmong.info/vowels.html

ꓚ ꓗ ꓴ ꓥ ꓮ ꓪ ꓰ ꓛ ꓡ ꓴ ꓡ ꓵ ꓟ ꓟ ꓮ ꓕ ꓯ ꓦ ꓤ ꓦ

4.4.5 Consonant onset order in Chia Koua Vang 2002 (said to be based on consonant frequency)

ꓤ ꓮ ꓵ ꓯ ꓴ ꓦ ꓚ ꓴ ꓟ ꓡ ꓥ ꓮ ꓗ ꓡ ꓪ ꓕ ꓟ ꓰ ꓛ ꓦ

4.4.6 Consonant onset order based on the order used in the Source Version

ꓚ ꓗ ꓡ ꓦ ꓴ ꓯ ꓵ ꓰ ꓪ ꓤ ꓡ ꓛ ꓮ ꓥ ꓟ ꓟ ꓴ ꓕ ꓮ ꓦ

In the code charts, the order of characters follows 4.3.1 and 4.4.6 above.

5. Unicode Linebreaking Properties. The vowel rimes and consonant onsets 16B00..16B2F behave like letters. The marks 16B30..16B36 behave like combining diacritics. The punctuation marks 16B37..16B39 behave like 003F ?, 0021 !, and 002C , respectively. The punctuation marks 16B3A..16B3C behave like 0026 & and 0025 % respectively. The arithmetical symbols 16B3C..16B3F behave like 002B +, 2212 −, 00D7 ×, and 00F7 ÷ respectively. The digits and numbers 16B50..16B62 behave like numerals. The punctuation marks 16B40..16B45 behave like 00B6 ¶. The logographs 16B63..16B77 behave like letters. The clan signs 16B7E..16B8F behave like letters.

Collation of the logographs has yet to be established.

6.0 Character names.

The chief problem in encoding Pahawh Hmong involves what to name the vowel rimes, because the values given to the base letters in the Second Stage Reduced Version and the Third Stage Reduced Version are not compatible. The table to the right here shows the problem: the expected order is the order of the tones (left to right then top to bottom), regardless of the shape of the glyphs. The black glyphs in the table here (without diacritics) should be the source names for the characters.

In the code chart below, the names used are Third Stage Reduced Version names based on the regular paradigm.

Second Stage Reduced Version vowel rimes:

-b	-m	-d	-j	-v	-Ø	-s	-g
kéŋ	*kẹŋ*	*kẹŋ*	*kêŋ*	*kěŋ*	*keŋ*	*kèŋ*	*kẹŋ*
kí	*kị*	*kị*	*kî*	*kǐ*	*ki*	*kì*	*kị*
káu	*kạu*	*kạu*	*kâu*	*kau*	*kau*	*kàu*	*kạu*
kú	*kụ*	*kụ*	*kû*	*kǔ*	*ku*	*kù*	*kụ*
ké	*kẹ*	*kẹ*	*kê*	*kě*	*ke*	*kè*	*kẹ*
kái	*kại*	*kại*	*kâi*	*kǎi*	*kai*	*kài*	*kại*
kóŋ	*kọŋ*	*kọŋ*	*kôŋ*	*kǒŋ*	*koŋ*	*kòŋ*	*kọŋ*
káw	*kạw*	*kạw*	*kâw*	*kǎw*	*kaw*	*kàw*	*kạw*
kúa	*kụa*	*kụa*	*kûa*	*kǔa*	*kua*	*kùa*	*kụa*
kó	*kọ*	*kọ*	*kô*	*kǒ*	*ko*	*kò*	*kọ*
kía	*kịa*	*kịa*	*kîa*	*kǐa*	*kia*	*kìa*	*kịa*
ká	*kạ*	*kạ*	*kâ*	*kǎ*	*ka*	*kà*	*kạ*
kẃ	*kw̩*	*kw̩*	*kŵ*	*kw̌*	*kw*	*kẁ*	*kw̩*
káa	*kạa*	*kạa*	*kâa*	*kǎa*	*kaa*	*kàa*	*kạa*

Third Stage Reduced Version vowel rimes:

-b	-m	-d	-j	-v	-Ø	-s	-g
kéŋ	*kẹŋ*	*kẹŋ*	*kêŋ*	*kěŋ*	*keŋ*	*kèŋ*	*kẹŋ*
kí	*kị*	*kị*	*kî*	*kǐ*	*ki*	*kì*	*ki*
káu	*kạu*	*kạu*	*kâu*	*kǎu*	*kau*	*kàu*	*kau*
kú	*kụ*	*kụ*	*kû*	*kǔ*	*ku*	*kù*	*ku*
ké	*kẹ*	*kẹ*	*kê*	*kě*	*ke*	*kè*	*ke*
kái	*kại*	*kại*	*kâi*	*kǎi*	*kai*	*kài*	*kai*
kóŋ	*kọŋ*	*kọŋ*	*kôŋ*	*kǒŋ*	*koŋ*	*kòŋ*	*kọŋ*
káw	*kạw*	*kạw*	*kâw*	*kǎw*	*kaw*	*kàw*	*kaw*
kúa	*kụa*	*kụa*	*kûa*	*kǔa*	*kua*	*kùa*	*kua*
kó	*kọ*	*kọ*	*kô*	*kǒ*	*ko*	*kò*	*ko*
kía	*kịa*	*kịa*	*kîa*	*kǐa*	*kia*	*kìa*	*kia*
ká	*kạ*	*kạ*	*kâ*	*kǎ*	*ka*	*kà*	*ka*
kẃ	*kw̩*	*kw̩*	*kŵ*	*kw̌*	*kw*	*kẁ*	*kw*
káa	*kạa*	*kạa*	*kâa*	*kǎa*	*kaa*	*kàa*	*kaa*

Final Version vowel rimes:

-b	-m	-d	-j	-v	-Ø	-s	-g
kéŋ	*kẹŋ*	*kẹŋ*	*kêŋ*	*kěŋ*	*keŋ*	*kèŋ*	*kẹŋ*
kí	*kị*	*kị*	*kî*	*kǐ*	*ki*	*kì*	*ki*
káu	*kạu*	*kạu*	*kâu*	*kǎu*	*kau*	*kàu*	*kau*
kú	*kụ*	*kụ*	*kû*	*kǔ*	*ku*	*kù*	*ku*
ké	*kẹ*	*kẹ*	*kê*	*kě*	*ke*	*kè*	*ke*
kái	*kại*	*kại*	*kâi*	*kǎi*	*kai*	*kài*	*kai*
kóŋ	*kọŋ*	*kọŋ*	*kôŋ*	*kǒŋ*	*koŋ*	*kòŋ*	*kọŋ*
káw	*kạw*	*kạw*	*kâw*	*kǎw*	*kaw*	*kàw*	*kaw*
kúa	*kụa*	*kụa*	*kûa*	*kǔa*	*kua*	*kùa*	*kua*
kó	*kọ*	*kọ*	*kô*	*kǒ*	*ko*	*kò*	*ko*
kía	*kịa*	*kịa*	*kîa*	*kǐa*	*kia*	*kìa*	*kia*
ká	*kạ*	*kạ*	*kâ*	*kǎ*	*ka*	*kà*	*ka*
kẃ	*kw̩*	*kw̩*	*kŵ*	*kw̌*	*kw*	*kẁ*	*kw*
káa	*kạa*	*kạa*	*kâa*	*kǎa*	*kaa*	*kàa*	*kaa*

6.1 Resolving the Vowel Rime Names

For the Second Stage Reduced Version and Third State Reduced Version vowel rimes, whose names would be most accepted and used by the communities, the vowel rime names derived from the tables shown above would be:

Glyph	Second	Third
Ꝟ	keem	keeb
Ǝ	kee	keev
⅄	kim	kib
Ⅺ	ki	kiv
Ⴖ	kaum	kaub
Ø	kau	kauv
ႷႬ	kum	kub
Ⴖ	ke	kuv
⅃	kem	keb
Ħ	*kev*	*kev*
Ⱨ	kaim	kaib
ႁ	kai	kaiv
Ⴚ	*koob*	*koob*
ⱴ	*koov*	*koov*
Ⴎ	*kawb*	*kawb*
Ⱳ	kaw	kawv
ⴖ	kuam	kuab
Ⱳ	kua	kuav
Ⴖ	kom	kob
Ⴖ	kog	kov
⅃	*kiab*	*kiab*
ⴄ	kia	kiav
Ǝ	kam	kab
Ʋ	*kav*	*kav*
Ⴀ	kwm	kwb
Ⴖ	*kwv*	*kwv*
Ⴊ	kaam	kaab
Ⴖ	*kaav*	*kaav*

Where these vowel rime names are identical, they are simply used as the name for the corresponding character in the code chart. Where they are not identical (identical ones are *italicized* above), a choice has to be made for the encoded character name, and the proposed choice is to use the Third Stage Reduced Version names in those cases, for consistency. In all cases, where the Second Stage and Third Stage names differ, the Second Stage name is added to the code chart as an alias, so that users of either system can easily find names appropriate to their usage.

Note that while the spellings of these vowel rimes in Latin letters is rather different, the differences are in the final letters, which transcribe the tones for the syllables. So the actual difference in the syllables used to represent the names is just in the tones used for them.

7. Unicode Character Properties.

```
16B00;PAHAWH HMONG VOWEL KEEB;Lo;0;L;;;;;N;;;;;
16B01;PAHAWH HMONG VOWEL KEEV;Lo;0;L;;;;;N;;;;;
16B02;PAHAWH HMONG VOWEL KIB;Lo;0;L;;;;;N;;;;;
16B03;PAHAWH HMONG VOWEL KIV;Lo;0;L;;;;;N;;;;;
16B04;PAHAWH HMONG VOWEL KAUB;Lo;0;L;;;;;N;;;;;
16B05;PAHAWH HMONG VOWEL KAUV;Lo;0;L;;;;;N;;;;;
16B06;PAHAWH HMONG VOWEL KUB;Lo;0;L;;;;;N;;;;;
16B07;PAHAWH HMONG VOWEL KUV;Lo;0;L;;;;;N;;;;;
16B08;PAHAWH HMONG VOWEL KEB;Lo;0;L;;;;;N;;;;;
16B09;PAHAWH HMONG VOWEL KEV;Lo;0;L;;;;;N;;;;;
16B0A;PAHAWH HMONG VOWEL KAIB;Lo;0;L;;;;;N;;;;;
16B0B;PAHAWH HMONG VOWEL KAIV;Lo;0;L;;;;;N;;;;;
16B0C;PAHAWH HMONG VOWEL KOOB;Lo;0;L;;;;;N;;;;;
16B0D;PAHAWH HMONG VOWEL KOOV;Lo;0;L;;;;;N;;;;;
16B0E;PAHAWH HMONG VOWEL KAWB;Lo;0;L;;;;;N;;;;;
16B0F;PAHAWH HMONG VOWEL KAWV;Lo;0;L;;;;;N;;;;;
16B10;PAHAWH HMONG VOWEL KUAB;Lo;0;L;;;;;N;;;;;
16B11;PAHAWH HMONG VOWEL KUAV;Lo;0;L;;;;;N;;;;;
16B12;PAHAWH HMONG VOWEL KOB;Lo;0;L;;;;;N;;;;;
16B13;PAHAWH HMONG VOWEL KOV;Lo;0;L;;;;;N;;;;;
16B14;PAHAWH HMONG VOWEL KIAB;Lo;0;L;;;;;N;;;;;
16B15;PAHAWH HMONG VOWEL KIAV;Lo;0;L;;;;;N;;;;;
16B16;PAHAWH HMONG VOWEL KAB;Lo;0;L;;;;;N;;;;;
16B17;PAHAWH HMONG VOWEL KAV;Lo;0;L;;;;;N;;;;;
16B18;PAHAWH HMONG VOWEL KWB;Lo;0;L;;;;;N;;;;;
16B19;PAHAWH HMONG VOWEL KWV;Lo;0;L;;;;;N;;;;;
16B1A;PAHAWH HMONG VOWEL KAAB;Lo;0;L;;;;;N;;;;;
16B1B;PAHAWH HMONG VOWEL KAAV;Lo;0;L;;;;;N;;;;;
16B1C;PAHAWH HMONG CONSONANT VAU;Lo;0;L;;;;;N;;;;;
16B1D;PAHAWH HMONG CONSONANT NTSAU;Lo;0;L;;;;;N;;;;;
16B1E;PAHAWH HMONG CONSONANT LAU;Lo;0;L;;;;;N;;;;;
16B1F;PAHAWH HMONG CONSONANT HAU;Lo;0;L;;;;;N;;;;;
16B20;PAHAWH HMONG CONSONANT NLAU;Lo;0;L;;;;;N;;;;;
16B21;PAHAWH HMONG CONSONANT RAU;Lo;0;L;;;;;N;;;;;
16B22;PAHAWH HMONG CONSONANT NKAU;Lo;0;L;;;;;N;;;;;
16B23;PAHAWH HMONG CONSONANT QHAU;Lo;0;L;;;;;N;;;;;
16B24;PAHAWH HMONG CONSONANT YAU;Lo;0;L;;;;;N;;;;;
16B25;PAHAWH HMONG CONSONANT HLAU;Lo;0;L;;;;;N;;;;;
16B26;PAHAWH HMONG CONSONANT MAU;Lo;0;L;;;;;N;;;;;
16B27;PAHAWH HMONG CONSONANT CHAU;Lo;0;L;;;;;N;;;;;
16B28;PAHAWH HMONG CONSONANT NCHAU;Lo;0;L;;;;;N;;;;;
16B29;PAHAWH HMONG CONSONANT HNAU;Lo;0;L;;;;;N;;;;;
16B2A;PAHAWH HMONG CONSONANT PLHAU;Lo;0;L;;;;;N;;;;;
16B2B;PAHAWH HMONG CONSONANT NTHAU;Lo;0;L;;;;;N;;;;;
16B2C;PAHAWH HMONG CONSONANT NAU;Lo;0;L;;;;;N;;;;;
16B2D;PAHAWH HMONG CONSONANT AU;Lo;0;L;;;;;N;;;;;
16B2E;PAHAWH HMONG CONSONANT XAU;Lo;0;L;;;;;N;;;;;
16B2F;PAHAWH HMONG CONSONANT CAU;Lo;0;L;;;;;N;;;;;
16B30;PAHAWH HMONG MARK CIM TUB;Mn;230;NSM;;;;;N;;;;;
16B31;PAHAWH HMONG MARK CIM SO;Mn;230;NSM;;;;;N;;;;;
16B32;PAHAWH HMONG MARK CIM KES;Mn;230;NSM;;;;;N;;;;;
16B33;PAHAWH HMONG MARK CIM KHAV;Mn;230;NSM;;;;;N;;;;;
16B34;PAHAWH HMONG MARK CIM SUAM;Mn;230;NSM;;;;;N;;;;;
16B35;PAHAWH HMONG MARK CIM HOM;Mn;230;NSM;;;;;N;;;;;
16B36;PAHAWH HMONG MARK CIM TAUM;Mn;230;NSM;;;;;N;;;;;
16B37;PAHAWH HMONG SIGN VOS THOM;Po;0;L;;;;;N;;;;;
16B38;PAHAWH HMONG SIGN VOS TSHAB CEEB;Po;0;L;;;;;N;;;;;
16B39;PAHAWH HMONG SIGN CIM CHEEM;Po;0;L;;;;;N;;;;;
16B3A;PAHAWH HMONG SIGN VOS THIAB;Po;0;L;;;;;N;;;;;
16B3B;PAHAWH HMONG SIGN VOS FEEM;Po;0;L;;;;;N;;;;;
16B3C;PAHAWH HMONG SIGN XYEEM NTXIV;Sm;0;ES;;;;;N;;;;;
16B3D;PAHAWH HMONG SIGN XYEEM RHO;Sm;0;ES;;;;;N;;;;;
16B3E;PAHAWH HMONG SIGN XYEEM TOV;Sm;0;ES;;;;;N;;;;;
16B3F;PAHAWH HMONG SIGN XYEEM FAIB;Sm;0;ES;;;;;N;;;;;
16B40;PAHAWH HMONG SIGN VOS SEEV;Lm;0;L;;;;;N;;;;;
16B41;PAHAWH HMONG SIGN MEEJ SUAB;Lm;0;L;;;;;N;;;;;
16B42;PAHAWH HMONG SIGN VOS NRUA;Lm;0;L;;;;;N;;;;;
16B43;PAHAWH HMONG SIGN IB YAM;Lm;0;L;;;;;N;;;;;
16B44;PAHAWH HMONG SIGN XAUS;Lm;0;L;;;;;N;;;;;
16B45;PAHAWH HMONG SIGN CIM TSOV ROG;Lm;0;L;;;;;N;;;;;
16B50;PAHAWH HMONG DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
16B51;PAHAWH HMONG DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
16B52;PAHAWH HMONG DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
16B53;PAHAWH HMONG DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
16B54;PAHAWH HMONG DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
16B55;PAHAWH HMONG DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
16B56;PAHAWH HMONG DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
16B57;PAHAWH HMONG DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
16B58;PAHAWH HMONG DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
16B59;PAHAWH HMONG DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
16B5A;PAHAWH HMONG DIGIT THIRD-STAGE ZERO;Nd;0;L;;;0;0;N;;;;
16B5B;PAHAWH HMONG NUMBER TENS;No;0;L;;;;10;N;;;;;
16B5C;PAHAWH HMONG NUMBER HUNDREDS;No;0;L;;;;100;N;;;;;
16B5D;PAHAWH HMONG NUMBER TEN THOUSANDS;No;0;L;;;;10000;N;;;;;
16B5E;PAHAWH HMONG NUMBER MILLIONS;No;0;L;;;;1000000;N;;;;;
16B5F;PAHAWH HMONG NUMBER HUNDRED MILLIONS;No;0;L;;;;100000000;N;;;;;
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16B60;PAHAWH HMONG NUMBER TEN THOUSAND MILLIONS;No;0;L;;;;;10000000000;N;;;;;
16B61;PAHAWH HMONG NUMBER BILLIONS;No;0;L;;;;;1000000000000;N;;;;;
16B62;PAHAWH HMONG NUMBER THIRD-STAGE TENS;No;0;L;;;;;10;N;;;;;
16B63;PAHAWH HMONG SIGN VOS LUB;Lm;0;L;;;;;;N;;;;;
16B64;PAHAWH HMONG SIGN XYOO;So;0;L;;;;;;N;;;;;
16B65;PAHAWH HMONG SIGN HLI;So;0;L;;;;;;N;;;;;
16B66;PAHAWH HMONG SIGN THIRD-STAGE HLI;So;0;L;;;;;;N;;;;;
16B67;PAHAWH HMONG SIGN ZWJ THAJ;So;0;L;;;;;;N;;;;;
16B68;PAHAWH HMONG SIGN HNUB;So;0;L;;;;;;N;;;;;
16B69;PAHAWH HMONG SIGN NQIG;So;0;L;;;;;;N;;;;;
16B6A;PAHAWH HMONG SIGN XIAB;So;0;L;;;;;;N;;;;;
16B6B;PAHAWH HMONG SIGN NTUJ;So;0;L;;;;;;N;;;;;
16B6C;PAHAWH HMONG SIGN AV;So;0;L;;;;;;N;;;;;
16B6D;PAHAWH HMONG SIGN TXHEEJ CEEV;So;0;L;;;;;;N;;;;;
16B6E;PAHAWH HMONG SIGN MEEJ TSEEB;So;0;L;;;;;;N;;;;;
16B6F;PAHAWH HMONG SIGN TAU;So;0;L;;;;;;N;;;;;
16B70;PAHAWH HMONG SIGN LOS;So;0;L;;;;;;N;;;;;
16B71;PAHAWH HMONG SIGN MUS;So;0;L;;;;;;N;;;;;
16B72;PAHAWH HMONG SIGN CIM HAIS LUS NTOG NTOG;So;0;L;;;;;;N;;;;;
16B73;PAHAWH HMONG SIGN CIM CUAM TSHOOJ;So;0;L;;;;;;N;;;;;
16B74;PAHAWH HMONG SIGN CIM TXWV;So;0;L;;;;;;N;;;;;
16B75;PAHAWH HMONG SIGN CIM TXWV CHWV;So;0;L;;;;;;N;;;;;
16B76;PAHAWH HMONG SIGN CIM PUB DAWB;So;0;L;;;;;;N;;;;;
16B77;PAHAWH HMONG SIGN CIM NRES TOS;So;0;L;;;;;;N;;;;;
16B7E;PAHAWH HMONG CLAN SIGN YEEG;So;0;L;;;;;;N;;;;;
16B7F;PAHAWH HMONG CLAN SIGN LIS;So;0;L;;;;;;N;;;;;
16B80;PAHAWH HMONG CLAN SIGN LAUJ;So;0;L;;;;;;N;;;;;
16B81;PAHAWH HMONG CLAN SIGN XYOOJ;So;0;L;;;;;;N;;;;;
16B82;PAHAWH HMONG CLAN SIGN HAWJ;So;0;L;;;;;;N;;;;;
16B83;PAHAWH HMONG CLAN SIGN MUAS;So;0;L;;;;;;N;;;;;
16B84;PAHAWH HMONG CLAN SIGN THOJ;So;0;L;;;;;;N;;;;;
16B85;PAHAWH HMONG CLAN SIGN TSAB;So;0;L;;;;;;N;;;;;
16B86;PAHAWH HMONG CLAN SIGN KHAB;So;0;L;;;;;;N;;;;;
16B87;PAHAWH HMONG CLAN SIGN HAM;So;0;L;;;;;;N;;;;;
16B88;PAHAWH HMONG CLAN SIGN VAJ;So;0;L;;;;;;N;;;;;
16B89;PAHAWH HMONG CLAN SIGN YAJ;So;0;L;;;;;;N;;;;;
16B8A;PAHAWH HMONG CLAN SIGN KWM;So;0;L;;;;;;N;;;;;
16B8B;PAHAWH HMONG CLAN SIGN VWJ;So;0;L;;;;;;N;;;;;
16B8C;PAHAWH HMONG CLAN SIGN TSHEEJ;So;0;L;;;;;;N;;;;;
16B8D;PAHAWH HMONG CLAN SIGN KOO;So;0;L;;;;;;N;;;;;
16B8E;PAHAWH HMONG CLAN SIGN FAJ;So;0;L;;;;;;N;;;;;
16B8F;PAHAWH HMONG CLAN SIGN TSWB;So;0;L;;;;;;N;;;;;
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	16B0	16B1	16B2	16B3	16B4	16B5	16B6	16B7	16B8
0	ᬀ 16B00	ᬐ 16B10	ᬠ 16B20	ᬰ 16B30	16B40	I 16B50	16B60	16B70	16B80
1	16B01	16B11	16B21	16B31	16B41	16B51	16B61	16B71	16B81
2	16B02	16B12	16B22	16B32	16B42	16B52	I 16B62	16B72	16B82
3	16B03	16B13	E 16B23	16B33	16B43	16B53	16B63	16B73	16B83
4	16B04	16B14	16B24	16B34	16B44	16B54	16B64	16B74	16B84
5	16B05	16B15	16B25	16B35	16B45	16B55	16B65	16B75	16B85
6	16B06	16B16	16B26	16B36		C 16B56	16B66	16B76	16B86
7	16B07	16B17	16B27	16B37		K 16B57	16B67	16B77	16B87
8	16B08	16B18	16B28	16B38		K 16B58	I 16B68		16B88
9	16B09	16B19	16B29	16B39		K 16B59	16B69		16B89
A	16B0A	16B1A	16B2A	16B3A		O 16B5A	16B6A		16B8A
B	16B0B	16B1B	M 16B2B	16B3B		16B5B	16B6B		16B8B
C	16B0C	16B1C	U 16B2C	16B3C		16B5C	16B6C		16B8C
D	16B0D	K 16B1D	16B2D	16B3D		16B5D	16B6D		16B8D
E	16B0E	16B1E	A 16B2E	16B3E		16B5E	16B6E	16B7E	16B8E
F	16B0F	16B1F	V 16B2F	16B3F		16B5F	L 16B6F	16B7F	16B8F

The character names used for Pahawh Hmong follow the Third Stage Reduced Version orthography. Annotations give the character names in the Second Stage Reduced Version orthography.

Vowel rimes

16B00 Ꮙ PAHAWH HMONG VOWEL KEEB
  = keem
16B01 ꭴ PAHAWH HMONG VOWEL KEEV
  = kee
16B02 ꭵ PAHAWH HMONG VOWEL KIB
  = kim
16B03 ꭶ PAHAWH HMONG VOWEL KIV
  = ki
16B04 ꭷ PAHAWH HMONG VOWEL KAUB
  = kaum
16B05 ꭸ PAHAWH HMONG VOWEL KAUV
  = kau
16B06 ꭹ PAHAWH HMONG VOWEL KUB
  = kum
16B07 ꭺ PAHAWH HMONG VOWEL KUV
  = ke
16B08 ꭻ PAHAWH HMONG VOWEL KEB
  = kem
16B09 ꭼ PAHAWH HMONG VOWEL KEV
16B0A ꭽ PAHAWH HMONG VOWEL KAIB
  = kaim
16B0B ꭾ PAHAWH HMONG VOWEL KAIV
  = kai
16B0C ꭿ PAHAWH HMONG VOWEL KOOB
16B0D ꮀ PAHAWH HMONG VOWEL KOOV
16B0E ꮁ PAHAWH HMONG VOWEL KAWB
16B0F ꮂ PAHAWH HMONG VOWEL KAWV
  = kaw
16B10 ꮃ PAHAWH HMONG VOWEL KUAB
  = kuam
16B11 ꮄ PAHAWH HMONG VOWEL KUAV
  = kua
16B12 ꮅ PAHAWH HMONG VOWEL KOB
  = kom
16B13 ꮆ PAHAWH HMONG VOWEL KOV
  = kog
16B14 ꮇ PAHAWH HMONG VOWEL KIAB
16B15 ꮈ PAHAWH HMONG VOWEL KIAV
  = kia
16B16 ꮉ PAHAWH HMONG VOWEL KAB
  = kam
16B17 ꮊ PAHAWH HMONG VOWEL KAV
16B18 ꮋ PAHAWH HMONG VOWEL KWB
  = kwm
16B19 ꮌ PAHAWH HMONG VOWEL KWV
16B1A ꮍ PAHAWH HMONG VOWEL KAAB
  = kaam
16B1B ꮎ PAHAWH HMONG VOWEL KAAV

Consonant onsets

16B1C Ꮯ PAHAWH HMONG CONSONANT VAU
16B1D Ꮸ PAHAWH HMONG CONSONANT NTSAU
16B1E ꮐ PAHAWH HMONG CONSONANT LAU
16B1F ꮑ PAHAWH HMONG CONSONANT HAU
16B20 ꮒ PAHAWH HMONG CONSONANT NLAU
16B21 ꮓ PAHAWH HMONG CONSONANT RAU
16B22 ꮔ PAHAWH HMONG CONSONANT NKAU
16B23 Ꮛ PAHAWH HMONG CONSONANT QHAU
16B24 ꮖ PAHAWH HMONG CONSONANT YAU
16B25 Ꮗ PAHAWH HMONG CONSONANT HLAU
16B26 ꮘ PAHAWH HMONG CONSONANT MAU

16B27 Ꮭ PAHAWH HMONG CONSONANT CHAU
16B28 Ꭿ PAHAWH HMONG CONSONANT NCHAU
16B29 Ꮉ PAHAWH HMONG CONSONANT HNAU
16B2A ꮚ PAHAWH HMONG CONSONANT PLHAU
16B2B Ꮇ PAHAWH HMONG CONSONANT NTHAU
16B2C Ꮜ PAHAWH HMONG CONSONANT NAU
16B2D Ꮾ PAHAWH HMONG CONSONANT AU
16B2E Ꭺ PAHAWH HMONG CONSONANT XAU
16B2F Ꮴ PAHAWH HMONG CONSONANT CAU

Combining diacritical marks

16B30 ◌ PAHAWH HMONG MARK CIM TUB
16B31 ◌ PAHAWH HMONG MARK CIM SO
16B32 ◌ PAHAWH HMONG MARK CIM KES
16B33 ◌ PAHAWH HMONG MARK CIM KHAV
16B34 ◌ PAHAWH HMONG MARK CIM SUAM
16B35 ◌ PAHAWH HMONG MARK CIM HOM
16B36 ◌ PAHAWH HMONG MARK CIM TAUM

Punctuation

16B37 Ꮁ PAHAWH HMONG SIGN VOS THOM
  = question mark
16B38 Ꮜ PAHAWH HMONG SIGN VOS TSHAB CEEB
  = exclamation mark
16B39 ꜙ PAHAWH HMONG SIGN CIM CHEEM
  = comma
16B3A ꜚ PAHAWH HMONG SIGN VOS THIAB
  = ampersand
16B3B Ꙟ PAHAWH HMONG SIGN VOS FEEM
  = percent sign
16B3C ꜔ PAHAWH HMONG SIGN XYEEM NTXIV
  = plus sign
16B3D ꜕ PAHAWH HMONG SIGN XYEEM RHO
  = minus sign
16B3E ꜖ PAHAWH HMONG SIGN XYEEM TOV
  = multiplication sign
16B3F ꜗ PAHAWH HMONG SIGN XYEEM FAIB
  = division sign
16B40 ꞉ PAHAWH HMONG SIGN VOS SEEV
  = chanting intonation
16B41 ꓲ PAHAWH HMONG SIGN MEEJ SUAB
  = foreign pronunciation
16B42 ꜞ PAHAWH HMONG SIGN VOS NRUA
  = reduplication
16B43 ꜟ PAHAWH HMONG SIGN IB YAM
  = replication, ditto
16B44 Ꞇ PAHAWH HMONG SIGN XAUS
  • used to complete a section
16B45 ꭰ PAHAWH HMONG SIGN CIM TSOV ROG
  • used to indicate military topics

Digits

16B50 Ꮖ PAHAWH HMONG DIGIT ZERO
16B51 Ꮷ PAHAWH HMONG DIGIT ONE
16B52 Ꮢ PAHAWH HMONG DIGIT TWO
16B53 ꮹ PAHAWH HMONG DIGIT THREE
16B54 ꮺ PAHAWH HMONG DIGIT FOUR
16B55 ꮻ PAHAWH HMONG DIGIT FIVE
16B56 Ꮳ PAHAWH HMONG DIGIT SIX
16B57 Ꭱ PAHAWH HMONG DIGIT SEVEN
16B58 Ꮶ PAHAWH HMONG DIGIT EIGHT
16B59 Ꮶ PAHAWH HMONG DIGIT NINE
16B5A Ꮎ PAHAWH HMONG DIGIT THIRD-STAGE ZERO

Numbers

16B5B ꮽ PAHAWH HMONG NUMBER TENS
  = caum

16B5C ꭜ PAHAWH HMONG NUMBER HUNDREDS
   = pua
16B5D ꭝ PAHAWH HMONG NUMBER TEN THOUSANDS
   = vam
16B5E ꭞ PAHAWH HMONG NUMBER MILLIONS
   = neev
16B5F ꭟ PAHAWH HMONG NUMBER HUNDRED MILLIONS
   = billions
   = taw
16B60 ꭠ PAHAWH HMONG NUMBER TEN THOUSAND MILLIONS
   = ten billions
   = ruav
16B61 ꭡ PAHAWH HMONG NUMBER BILLIONS
   = trillions
   = tas
16B62 ꭢ PAHAWH HMONG NUMBER THIRD-STAGE TENS
   = caum

Logographs

16B63 ꭣ PAHAWH HMONG SIGN VOS LUB
   = classifier
16B64 ꭤ PAHAWH HMONG SIGN XYOO
   = year
16B65 ꭥ PAHAWH HMONG SIGN HLI
   = month
16B66 ꭦ PAHAWH HMONG SIGN THIRD-STAGE HLI
   = month
16B67 ꭧ PAHAWH HMONG SIGN ZWJ THAJ
   = date
16B68 ꭨ PAHAWH HMONG SIGN HNUB
   = day
16B69 ꭩ PAHAWH HMONG SIGN NQIG
   = waning moon
16B6A ꭪ PAHAWH HMONG SIGN XIAB
   = waxing moon
16B6B ꭫ PAHAWH HMONG SIGN NTUJ
   = season
16B6C ꭬ PAHAWH HMONG SIGN AV
   = earth
16B6D ꭭ PAHAWH HMONG SIGN TXHEEJ CEEV
   = urgent
16B6E ꭮ PAHAWH HMONG SIGN MEEJ TSEEB
   = facts
16B6F ꭯ PAHAWH HMONG SIGN TAU
   = received
16B70 ꭰ PAHAWH HMONG SIGN LOS
   = come
16B71 ꭱ PAHAWH HMONG SIGN MUS
   = go
16B72 ꭲ PAHAWH HMONG SIGN CIM HAIS LUS NTOG NTOG
   = smooth
16B73 ꭳ PAHAWH HMONG SIGN CIM CUAM TSHOOJ
   = fraction
16B74 ꭴ PAHAWH HMONG SIGN CIM TXWV
   = do not open
16B75 ꭵ PAHAWH HMONG SIGN CIM TXWV CHWV
   = do not touch
16B76 ꭶ PAHAWH HMONG SIGN CIM PUB DAWB
   = give freely
16B77 ꭷ PAHAWH HMONG SIGN CIM NRES TOS
   = stop

Logographs for clan names

16B7E ꭾ PAHAWH HMONG CLAN SIGN YEEG
   = Yeng
16B7F ꭿ PAHAWH HMONG CLAN SIGN LIS
   = Lee
16B80 ꮀ PAHAWH HMONG CLAN SIGN LAUJ
   = Lor
16B81 ꮁ PAHAWH HMONG CLAN SIGN XYOOJ
   = Xiong
16B82 ꮂ PAHAWH HMONG CLAN SIGN HAWJ
   = Her
16B83 ꮃ PAHAWH HMONG CLAN SIGN MUAS
   = Moua
16B84 ꮄ PAHAWH HMONG CLAN SIGN THOJ
   = Thao
16B85 ꮅ PAHAWH HMONG CLAN SIGN TSAB
   = Chang
16B86 ꮆ PAHAWH HMONG CLAN SIGN KHAB
   = Khang
16B87 ꮇ PAHAWH HMONG CLAN SIGN HAM
   = Hang
16B88 ꮈ PAHAWH HMONG CLAN SIGN VAJ
   = Vang
16B89 ꮉ PAHAWH HMONG CLAN SIGN YAJ
   = Yang
16B8A ꮊ PAHAWH HMONG CLAN SIGN KWM
   = Kw
16B8B ꮋ PAHAWH HMONG CLAN SIGN VWJ
   = Vue
16B8C ꮌ PAHAWH HMONG CLAN SIGN TSHEEJ
   = Cheng
16B8D ꮍ PAHAWH HMONG CLAN SIGN KOO
   = Kong
16B8E ꮎ PAHAWH HMONG CLAN SIGN FAJ
   = Fang
16B8F ꮏ PAHAWH HMONG CLAN SIGN TSWB
   = Chue

Figures.

TABLE 57.1: *104 Rime (vowel-tone) Symbols of the Third Stage Pahawh Hmong with Romanized Popular Alphabet Equivalents*

	´ high level	− low glottalized	� low rising	ˆ high falling	ˊ mid rising	− mid level	ˋ low level	− falling-breathy
[ɛŋ]	ʋ keeb	ʋ̇ keem	ʋ̣ keed	ʋ̄ keej	ɘ keev	ɘ̇ kee	ɘ̄ kees	ɘ̈ keeg
[i]	ʌ kib	ʌ̇ kim	ʌ̣ kid	ʌ̄ kij	ʌ kiv	ʌ̇ ki	ʌ̄ kis	ʌ̈ kig
[au]	ꭅ kaub	ꭅ̇ kaum	ꭅ̣ kaud	ꭅ̄ kauj	ꭅ kauv	ꭅ̇ kau	ꭅ̄ kaus	ꭅ̈ kaug
[u]	ꟺ kub	ꟺ̇ kum	ꟺ̣ kud	ꟺ̄ kuj	ꞁ kuv	ꞁ̇ ku	ꞁ̄ kus	ꞁ̈ kug
[e]	ɛ keb	ɛ̇ kem	ɛ̣ ked	ɛ̄ kej	ⱶ kev	ⱶ̇ ke	ⱶ̄ kes	ⱶ̈ keg
[ai]	н kaib	н̇ kaim	н̣ kaid	н̄ kaij	ʊ kaiv	ʊ̇ kai	ʊ̄ kais	ʊ̈ kaig
[ɔŋ]	ⱵJ koob	ⱵJ̇ koom	ⱵJ̣ kood	ⱵJ̄ kooj	ⱳ koov	ⱳ̇ koo	ⱳ̄ koos	ⱳ̈ koog
[aɨ]	ꭆ kawb	ꭆ̇ kawm	ꭆ̣ kawd	ꭆ̄ kawj	ɯ kawv	ɯ̇ kaw	ɯ̄ kaws	ɯ̈ kawg
[ua]	ꭎ kuab	ꭎ̇ kuam	ꭎ̣ kuad	ꭎ̄ kuaj	ɯ kuav	ɯ̇ kua	ɯ̄ kuas	ɯ̈ kuag
[ɔ]	ꭅ kob	ꭅ̇ kom	ꭅ̣ kod	ꭅ̄ koj	ꭒ kov	ꭒ̇ ko	ꭒ̄ kos	ꭒ̈ kog
[ia]	↓ kiab	↓̇ kiam	↓̣ kiad	↓̄ kiaj	Ɑ kiav	Ɑ̇ kia	Ɑ̄ kias	Ɑ̈ kiag
[a]	ꞁ kab	ꞁ̇ kam	ꞁ̣ kad	ꞁ̄ kaj	ʊ kav	ʊ̇ ka	ʊ̄ kas	ʊ̈ kag
[ɨ]	ꭥ kwb	ꭥ̇ kwm	ꭥ̣ kwd	ꭥ̄ kwj	ꞁ kwv	ꞁ̇ kw	ꞁ̄ kws	ꞁ̈ kwg

combination). In this version, illustrated here, the rime symbols are developing unique associations with vowel qualities, while the rime diacritics are developing unique associations with tonal values. This line of development is fully realized in the last version of Pahawh Hmong which Shong Lue Yang created shortly before his death: in this Final Version (ᵴ̄ǩ ꞁ̄ɪꭅ ꞁ̇Ꞁ *Phajhauj Txha* [pʰâ hâu tsʰa] 'core Pahawh'), each vowel quality is associated with one symbol, and each tone with one diacritic. However, the Final Version is not used by supporters of the Pahawh; although more linguistically advanced, it is not as important culturally, and is reserved for note-taking.

The onset and rime elements of each syllable are written in reverse order from the way they are pronounced, that is, rime–onset, although the monosyllabic morphemes themselves are written from left to right across the page. Spaces are used to separate morphemes, which are thus typically represented by pairs of symbols.

Figure 1a. Chart of Third Stage Revised Version vowel rimes from Ratliff 1996.

TABLE 57.2: *Sixty Onset (consonant) Symbols of the Third Stage Pahawh Hmong with Romanized Popular Alphabet Equivalents*

Symbol	IPA	Symbol	IPA	Symbol	IPA
C vau	[v-]	Ċ nrau	[ɳʈ-]	C̈ fau	[f-]
�𝑛 nkau	[ŋk-]	ṅ ntxau	[nts-]	n̈ rhau	[ʈʰ-]
A xau	[s-]	Ȧ au	[ʔ-]	Ä nyau	[ɲ-]
V cau	[c-]	V̇ ntshau	[ntʃʰ-]	V̈ txau	[ts-]
ın lau	[l-]	ın̊ dau	[ʔd-]	ın̈ dhau	[ʔdʰ-]
к ntsau	[ntʃ-]	к̇ tsau	[tʃ-]	к̈ phau	[pʰ-]
ᨅ hlau	[ʰl-]	ᨅ̇ zau	[ʒ-]	ᨅ̈ ntxhau	[ntsʰ-]
ʉ rau	[ʈ-]	ʉ̇ nphau	[mpʰ-]	ʉ̈ nphlau	[mpʰl-]
ᴙ hnau	[ʰn-]	ᴙ̇ khau	[kʰ-]	ᴙ̈ ntau	[nt-]
m plhau	[pʰl-]	ṁ tshau	[tʃʰ-]	m̈ pau	[p-]
M nthau	[ntʰ-]	Ṁ nplau	[mpl-]	M̈ nkhau	[ŋkʰ-]
ᴈ chau	[cʰ-]	ᴈ̇ xyau	[ç-]	ᴈ̈ tau	[t-]
ᴜ nau	[n-]	ᴜ̇ nqau	[ɴq-]	ᴜ̈ nqhau	[ɴqʰ-]
ᴜ̃ nlau	[ml-]	ᴜ̇̃ hnlau	[ʰml-]	ᴜ̈̃ gau	[ŋ-]
E qhau	[qʰ-]	Ė nyhau	[ʰɲ-]	Ë hmau	[ʰm-]
ᴦ hau	[h-]	ᴦ̇ thau	[tʰ-]	ᴦ̈ plau	[pl-]
ᴃ nchau	[ɲcʰ-]	ᴃ̇ nrhau	[ɳʈʰ-]	ᴃ̈ npau	[mp-]
R mau	[m-]	Ṙ txhau	[tsʰ-]	R̈ qau	[q-]
ɯ yau	[j-]	ɯ̇ ncau	[ɲc-]	ɯ̈ sau	[ʃ-]
ɤ 'au	Ø	ɤ̇ ndlau	[ndl-]	ɤ̈ ndlhau	[ndʰl-]

Figure 1b. Chart of consonant onsets from Ratliff 1996.

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Figure 2. Chart of Second Stage Revised Version vowel rimes and consonant onsets from Lee Nao Long *et al*. 2001.
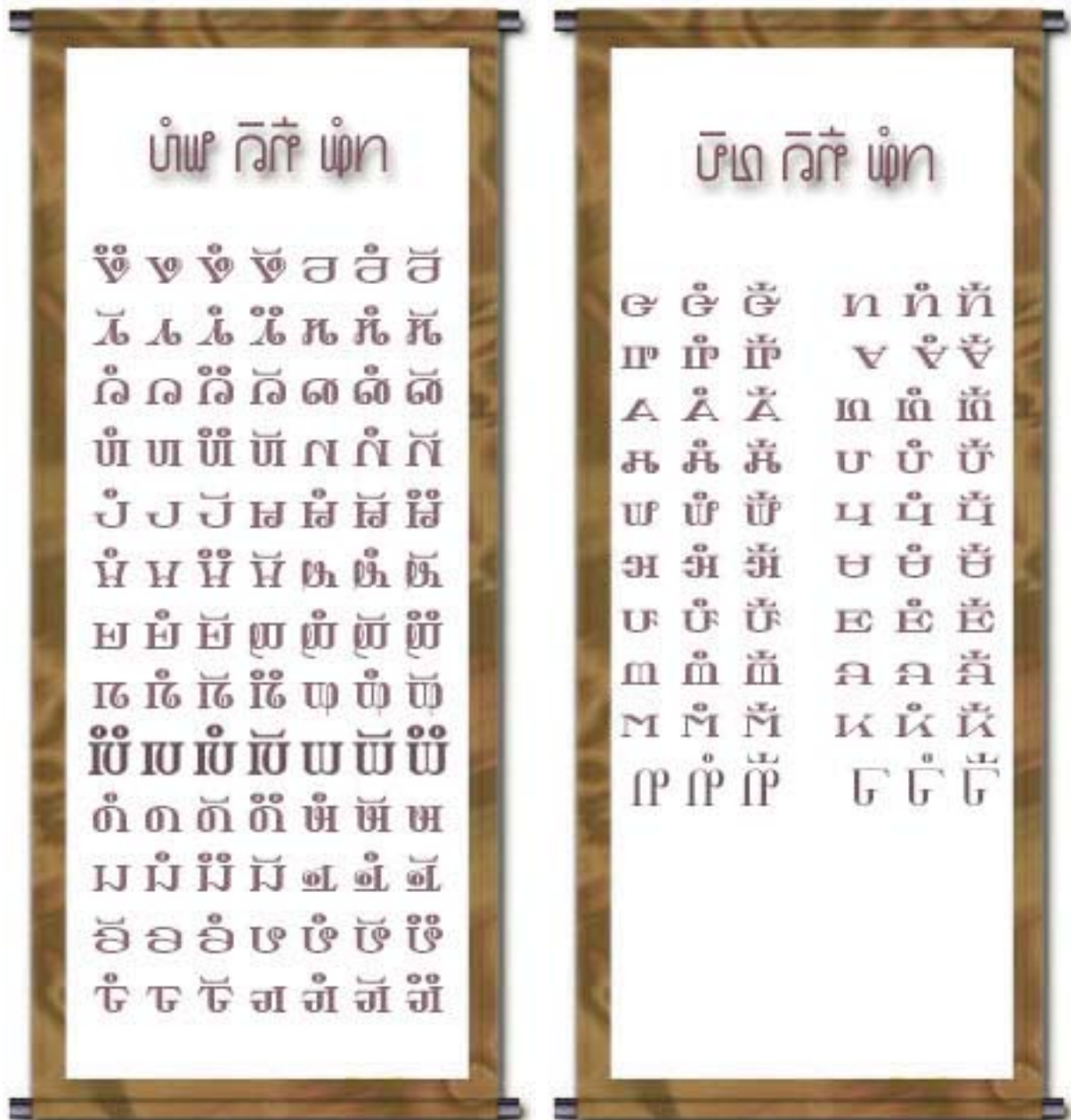
Figure 3. Chart of Second Stage Revised Version vowel rimes and consonant onsets from http://www.pahauhhmong.org/. Notice the glyph shapes of the diacritics in both the monoline font at the top and the more decorative font below. Compare these with the glyphs in the code chart. The shape of U+16B30 PAHAWH HMONG MARK CIM TUB (literally 'son mark') and U+16B36 PAHAWH HMONG MARK CIM TAUM ('beans mark') have hollow forms here, but are filled in other font styles. Similarly, the horizontal bar in U+16B32 PAHAWH HMONG MARK CIM KES ('line mark') and U+16B35 PAHAWH HMONG MARK CIM HOM ('kind mark') has a distinctive shape in the decorative font.

The Pahawh Hmong diacritics were devised by Shong Lue Yang in isolation, and have no genetic relation to similar-looking punctuation in the European tradition (DOT ABOVE, DIAERESIS, MACRON). Since it can also typically take shapes which are different from the typical shapes that European punctuation has, it would be inappropriate to attempt to unify Pahawh Hmong diacritics with characters in the General Punctuation mark. (Similar arguments were given for N'Ko diacritics.)

Figure 4a. Chart of Second Stage Revised Version vowel rimes from http://www.cwjmemhmong.info/.

Figure 4b. Chart of Second Stage Revised Version consonant onsets from
http://www.cwjmemhmong.info/.

Figure 5a. Keyboard layout from **hmongscript.cwjmemhmong.info**.

Figure 5b. Keyboard layout from **www.pahauhhmong.org**.

Figure 6. On the left, vowel rimes, on the right, consonant onsets, in the Third Stage Reduced Version from Chia Koua Vang's 2002 *Hmong Language: Second Grade*.

Figure 7. A page of text in the Third Stage Reduced Version from Chia Koua Vang's 2002 *Hmong Language: Second Grade*.

Figure 8. A page of text from a Second Stage Reduced Version dictionary (no bibliographic details).
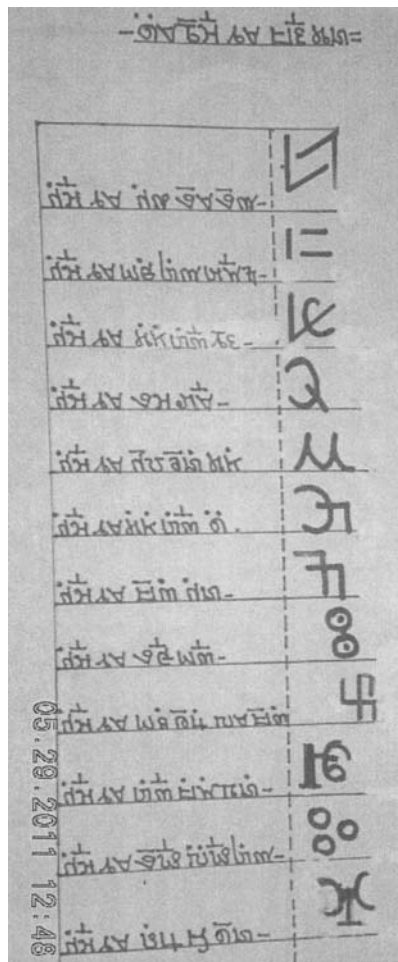
Figure 9. Various logographs and symbols. Shown here are Ⴈ TXHEEJ CEEV, ⊫ CIM HAIS LUS NTOG NTOG, Ⅼᘓ CIM TXWV, ₰ CIM CHEEM, ⅄ VOS THOM, Ⴢ CIM TXWV CHWV, ꓶ VOS NRUA, 8 VOS FEEM, Ⴓ CIM CUAM TSHOOJ, Ⴌ CINM PUB DAWB, ∶∙ VOS SEEV, Ж CIM NRES TOS.

Figure 10. Arithmetical symbols in the Third Stage Reduced Version from Smalley et al. 1990.
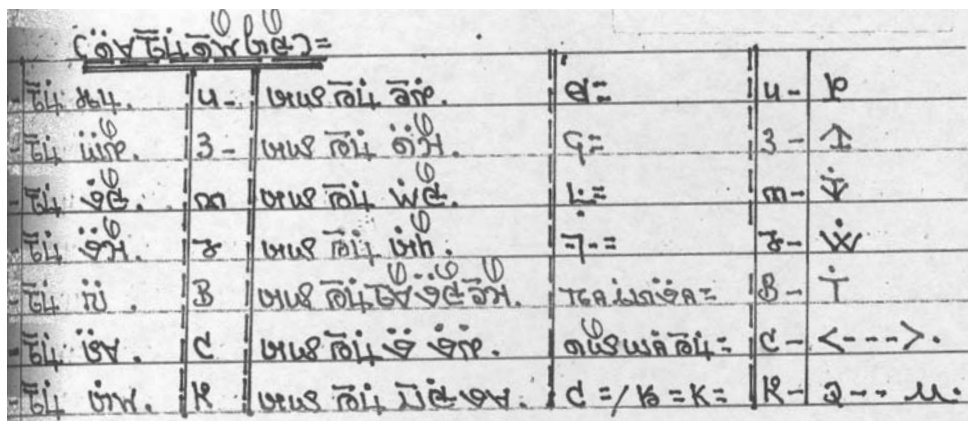

Figure 11. Arithmetical symbols ⊲ ⸂ꓥ꓾ in a Second Stage Reduced Version maths book. Also seen are the symbols ⇑ NQIG, ⇓ XIAB, Ẇ HLI, Ť NTUJ, and ₰ COMMA, and ⅄ VOS THOM
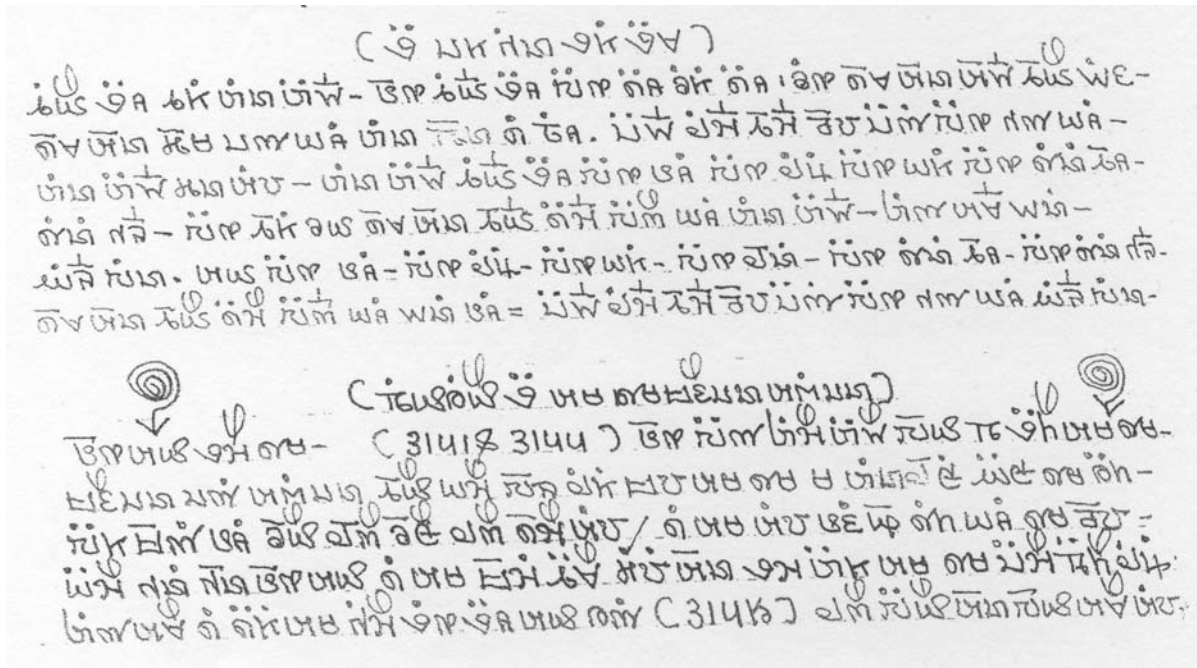
Figure 12. The military symbol ⚇ CIM TSOV ROG in a Second Stage Reduced Version history book.
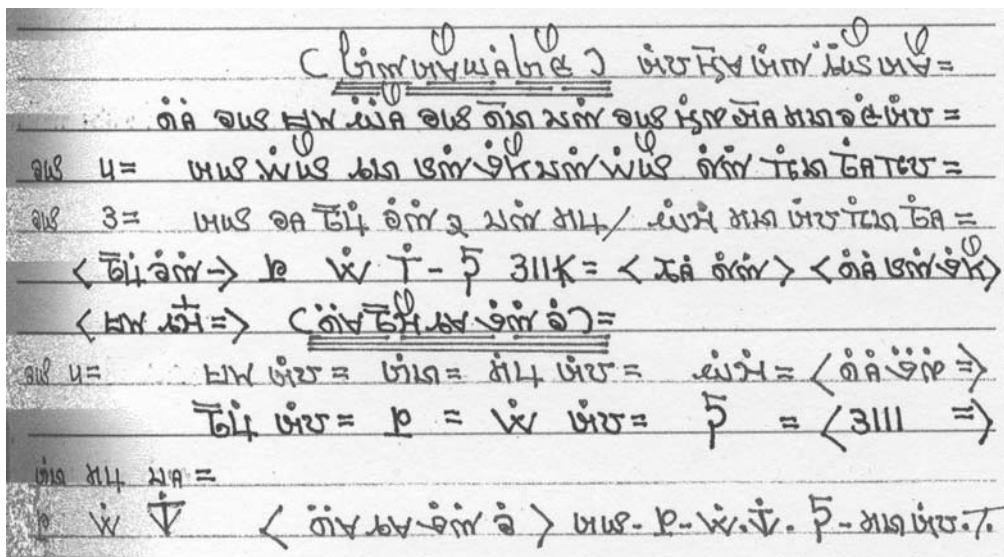

Figure 13. Logograph symbols in a Second Stage Reduced Version school book. Shown here are ⚇ HLI, ⊤ NTUJ, ⊅ XYOO, ⊻ XIAB, ⊤ XAUS, and evidently ℒ LUB.

Table 29. Symbols for periods of time

Symbol	Hmong Name		English Equivalent
⊅	𝓁𝓃	xyoo	year
𝓃	𝓁𝓊	hli	month
𝓌	𝓉𝓊 𝓃𝓉	zwj thaj	date
𝓍	𝓊𝓊	hnub	day
⊤	𝓃𝓊	ntuj	season

Figure 14. Symbols for periods of time in the Third Stage Reduced Version from Smalley et al. 1990.

Table 30. Logographs in sample sentence (p. 82)

Symbol	Substitute for		Meaning
Ⴔ	ሠበ	lub	'classifier'
З	ᴧᴋ́	tsib	'five'
ត̃	ᴧ̌ч	hli	'month'
†	ᴜ̃ᴧ̌	ntuj	'season'
Ɀ	ᴜᴌ	hnub	'day'
ᴎ	ᵵ̃ч ᴈᴎ̌	zwj thaj	'date'
ч	ᴧᴀ̀	ib	'one'
Ƽ	ᴘᴈᴎ̀	xyoo	'year'
ᴋ	ᴜ̃ᴠ	cuaj	'nine'

Figure 15. Logographs in the Third Stage Reduced Version from Smalley et al. 1990.

Table 31. Logographs for clan names. The first fourteen were designed by Shong Lue Yang, the last four by Chia Koua Vang. The logos apply equally to Hmong Daw and Hmong Leng.

Symbol	Substitute for		English
ᴆ̃	ᴈᴝ̃	Yeeg	Yeng
ᴚ	ᴧ̃ᴎ	Lis	Lee
ᴴ	ᴅᴎ̀	Lauj	Lor
ᴤ	ᴇᴃᴎ̀	Xyooj	Xiong
ᴍ	ᴎ̃ᴦ	Hawj	Her
ᴴ	ᴜ̃ᴙ	Muas	Moua
ᴘ	ᴎ̃ᴎ̀	Thoj	Thao
ᴪ	ᴈᴋ́	Tsab	Chang
ᴍ̃	ᴈᴀ̀	Khab	Khang
ᴡ	ᴈ̀ᴦ	Ham	Hang
ᴀ	ᴈ̃ᴇ	Vaj	Vang
ᴙ	ᴈᴝ̃	Yaj	Yang
ᴙ	ᵵ	Kwm	Kw
ᴪ	ᵵᴇ	Vwj	Vue
ᴀ̃	ᴠ̃ᴎ́	Tsheej	Cheng
ᴎᴴ	ᴇ̃	Koo	Kong
ᴀ̃	ᴈ̃ᴇ̃	Faj	Fang
ᴙ	ᴛᴋ́	Tswb	Chue

Figure 16. Clan name logographs in the Third Stage Reduced Version from Smalley et al. 1990.

Table 21. Pahawh Hmong punctuation marks

Symbol	Hmong Name		English Equivalent
.	ᴆᴇ ᴎ̃ᴝ	vos rwg	.
,	ᴆᴇ ᴠ̀ᴈ	vos cheem	,
;	ᴆᴇ ᴨᴈ̀	vos twv	;
:	ᴆᴇ ᴇᴆ̃ ᴜ̃ᴎ̀	vos txooj sua	:
?	ᴆᴇ ᴎ̃ᴦ	vos thom	?
ᴟ̃	ᴆᴇ ᴈᴎ̃ ᴠᴠ	vos tshab ceeb	!
(	ᴆᴇ ᴈᴙ̀	vos tab	(
)	ᴆᴇ ᴜ̃ᴙ	vos txhais	)
⟨	ᴆᴇ ᴧᴇ	vos qhib	⟨
⟩	ᴆᴇ ᴌ̀	vos kaw	⟩
—	ᴆᴇ ᴨᴠ ᴠ̀ᴇ	vos cawb veem	—
-	ᴆᴇ ᴎ̃ᴇ̀	vos nrug	-
"	ᴆᴇ ᴧᴎ̃	vos piv	"
ꜧ	ᴆᴇ ᴜ̃ᴇ̀	vos nrua	(reduplicate)
⸱	ᴆᴇ ᴈᴝ̌	vos seev	(singing, chanting style)

Figure 17. Punctuation in the Third Stage Reduced Version from Smalley et al. 1990.

Table 22. Pahawh Hmong symbols of *vos* category that are not punctuation marks

Symbol	Hmong Name		English Equivalent
/	ᠣᠢᠧ ᠌ᠥᠡ	vos cav	/
ꘞ	ᠣᠢᠧ ᠌ᠦᠥ	vos feem	%
=	ᠣᠢᠧ ᠌ᠥᠥ	vos tseeb	=
ꕯ	ᠣᠢᠧ ᠌ᠡᠥ	vos thiab	&
·	ᠣᠢᠧ ᠌ᠥᠥ	vos ntsua	·
→	ᠣᠢᠧ ᠌ᠥᠥ	vos taw	→
ꘖ	ᠣᠢᠧ ᠌ᠡᠡ	vos lub	' (shorthand for *lub;* classifier)

Figure 18. Logographs in the Third Stage Reduced Version from Smalley et al. 1990.

Figure 19. Signatures of Second Stage Reduced Version participants in the meetings which led to this proposal.

A. Administrative

1. Title
Preliminary proposal for encoding the Pahawh 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
2012-01-20
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
Pahawh 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
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?
Michael Everson and Jason Glavy
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.
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.)?
Yes.
2b. If YES, with whom?
Anthony Lee, Chia Koua Vang, Tzianeng Vang, Gymbay Moua, Shong Yang
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?
Historical and contemporary cultural use by Hmongs and historians of Hmong culture.