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 for encoding Mon and S'gaw Karen characters in the UCS**
Source: **Michael Everson and Martin Hosken**
Status: **Individual Contribution**
Replaces: **N2768, N1883R; L2/05-178**
Action: **For consideration by JTC1/SC2/WG2 and UTC**
Date: **2006-04-08**

Since the Myanmar script was first encoded, it has been known that a number of additions used by minority languages would be needed. This proposal requests the addition of characters for two of those languages, Mon and S'gaw Karen. It contains the proposal summary form.

Most of the characters proposed here are spacing letters, but combining vowel signs, combining medial consonant signs, and combining tone marks are also proposed.

The history of the Myanmar script is not one of a single line of development. The Mon script, in fact, is probably the oldest of the traditions, though the letterforms of the former have been "Burmicized" due to later influence, particularly that of typography. A number of language-specific differences arose during the period of development, much as has happened with the Arabic and Cyrillic scripts. Most of the letters are used in common, but some letters have language-specific forms. These are not unifiable with "standard" Myanmar letters., For instance, books in Burmese about Mon naturally use both of them concurrently. In the discussion of the additions below, the language-specific letters are listed, in the brief shorthand "*x* contrasts with Burmese *y*".

The new rendering model proposed in N3043 which disunifies visible ⟨ ASAT from stacking ▢ VIRAMA applies to the characters here. The general implication of this is that when following VIRAMA, the LETTERS here should be rendered below and usually slightly smaller than the base letter. Where there is a departure from the mainstream stacking behaviour for Burmese, characters have been added here to facilitate minority-language usage. For example, ⟨ LETTER NA and ⟨ LETTER MA subjoin as expected in Burmese ⟨ ⟨ so the special Mon subjoined forms ⟨ CONSONANT SIGN MON MEDIAL NA and ⟨ CONSONANT SIGN MON MEDIAL MA are encoded as dependent consonant signs.

Additions for Mon
A number of characters contrast with Burmese characters: ⟨ LETTER MON E contrasts with Burmese ⟨ LETTER E; ⟨ LETTER MON NGA contrasts with Burmese ⟨ LETTER NGA; ⟨ LETTER MON JHA contrasts with Burmese ⟨ LETTER JHA; ⟨ VOWEL SIGN MON II contrasts with Burmese ⟨ VOWEL SIGN II. Other characters are unique to Mon: ⟨ VOWEL SIGN MON O represents *open o*; ⟨ LETTER MON BBA and ⟨ LETTER MON BBE represent bilabial implosives; ⟨ CONSONANT SIGN MON MEDIAL NA and ⟨ CONSONANT SIGN MON MEDIAL MA are mentioned above; ⟨ CONSONANT SIGN MON MEDIAL LA is used in S'gaw Karen for *ya*, where it contrasts with Burmese ⟨ CONSONANT SIGN MEDIAL YA proposed in N3043. A clarification should be given regarding ⟨ LETTER MON NGA which merits discussion. While Burmese ⟨ LETTER NGA stacks as expected—

ကျ—Mon ç LETTER NGA stacks by rendering only its "diacritic" ကျ; that is, *ကျ does not occur. It could be possible to treat the diacritic as a medial (like ွ CONSONANT SIGN MON MEDIAL NA and ွ CONSONANT SIGN MON MEDIAL MA) but this is impractical due to attested glyph variants of the letter. Both ç and ę are attested glyph variants of the letter, and if *ွ were encoded as a medial, it could be confusing to users as to whether it should be applied to c LETTER NGA or to ေ VOWEL SIGN E (which isn't an independent letter, but a dependent vowel). The encoding proposed here is simpler. (Figures 1, 2, 3, 3a, 6, and 8.)

Additions for S'gaw Karen

Four characters used in S'gaw Karen are not used in Burmese: ၡ LETTER SGAW KAREN SHA contrasts with Burmese ၡ *rha* (which is ရ LETTER RA + the ှ CONSONANT SIGN MEDIAL HA proposed in N3043); ၢ VOWEL SIGN SGAW KAREN EU serves as a vowel [ɤ] and (with the ် SIGN ASAT proposed in N3043) as a tone mark ၢ်; ၣ SIGN SGAW KAREN HATHI and ၤ SIGN SGAW KAREN KE PHO are tone marks. The former only occurs with the ် SIGN ASAT, thus ၣ်. It should also be noted that in S'gaw Karen the ါ VOWEL SIGN TALL AA proposed in N3043 is used as a vowel (in all contexts following all consonants), and ာ VOWEL SIGN AA is used as a tone mark, only occurring with the ် SIGN ASAT, thus ာ်. (Figures 4, 5, 6, 7, 8, 9, and 10.)

Ordering

The unified order for the Myanmar script incorporating the characters here is given below. Ordering is syllable-based, so this is indicative of only one level of ordering.

ka < kha < ga < gha < nga < mon-nga <
ca < cha < ja < jha < mon-jha < sgaw-karen-sha < nya < nnya <
tta < ttha < dda < ddha < nna <
ta < tha < da < dha < na <
pa < pha < ba < bha < ma <
ya < ra < la < wa < sha < ssa < sa < great-sa < ha < lla < mon-bba <
a << i < ii < u < uu < vocalic-r < vocalic-rr < vocalic-l < vocalic-ll < e < mon-bbe < mon-e < o < au

Issues

As noted above, it may be observed that ၡ LETTER SGAW KAREN SHA looks as though it could be a sequence of ရ LETTER RA + the ှ CONSONANT SIGN MEDIAL HA proposed in N3043. At a "Workshop on Myanmar Language Processing", held in Yangon 13-15 February 2006 (cf N3043R), this was discussed at length with the S'gaw Karen experts present. The letter has its own place in the alphabet of the languages which use it (it is also used in Western Pwo Karen). In S'gaw Karen, ၡ LETTER SGAW KAREN SHA is sorted between ဇ LETTER JA and ည LETTER NNYA; where the ှ CONSONANT SIGN MEDIAL HA is used elsewhere in S'gaw Karen the letter is sorted as expected under the base letter (so ဆှ sorts within ဆ LETTER CHA). In Western Pwo Karen, it is sorted between ည LETTER NNYA and တ LETTER TA. In both languages, the base letter ရ *ra* does take a genuine medial (ရွ *rwa*) which is sorted as expected under ရ *ra*. In better typography and in handwriting, ၡ LETTER SGAW KAREN SHA contrasts with ၡ *rha* (though much printed matter is not exemplary of the best typography). Since the Myanmar script is to be a unified set to deal with all of these languages, it seems best to let ှ CONSONANT SIGN MEDIAL HA be used in its traditional productive medial role in the Burmese, Mon, and S'gaw Karen languages, but to encode as unique letters like ၡ LETTER SGAW KAREN SHA. Precedent for this can be found in the letterforms used for *jha*: In Burmese, alongside ဈ is found the form ၛ, which looks as though it is a ligature of ဇ *ca* and ျ *-ya* (but it isn't), and in Mon the forms ၛ and ၛ are often found, probably better rendered ၛ in a generic font; the letter is not ဇ *ja* (+ ှ *-ha*) + ျ *-ya*.

Unicode Character Properties

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1028;MYANMAR LETTER MON E;Lo;0;L;;;;;N;;;;;
1033;MYANMAR VOWEL SIGN MON II;Mn;0;NSM;;;;;N;;;;;
1034;MYANMAR VOWEL SIGN MON O;Mn;0;NSM;;;;;N;;;;;
105A;MYANMAR LETTER MON NGA;Lo;0;L;;;;;N;;;;;
105B;MYANMAR LETTER MON JHA;Lo;0;L;;;;;N;;;;;
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105C;MYANMAR LETTER MON BBA;Lo;0;L;;;;;N;;;;;
105D;MYANMAR LETTER MON BBE;Lo;0;L;;;;;N;;;;;
105E;MYANMAR CONSONANT SIGN MON MEDIAL NA;Mn;0;NSM;;;;;N;;;;;
105F;MYANMAR CONSONANT SIGN MON MEDIAL MA;Mn;0;NSM;;;;;N;;;;;
1060;MYANMAR CONSONANT SIGN MON MEDIAL LA;Mn;0;NSM;;;;;N;;;;;
1061;MYANMAR LETTER SGAW KAREN SHA;Lo;0;L;;;;;N;;;;;
1062;MYANMAR VOWEL SIGN SGAW KAREN EU;Mc;0;L;;;;;N;;;;;
1063;MYANMAR SIGN SGAW KAREN HATHI;Mc;0;L;;;;;N;;;;;
1064;MYANMAR SIGN SGAW KAREN KE PHO;Mc;0;L;;;;;N;;;;;
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Bibliography

Halliday, R. 1955. *A Mon-English dictionary*. Rangoon: Mon Cultural Section, Ministry of Union Culture, Government of the Union of Burma. (Repring of the 1922 edtion published by the Siam Society, Bangkok.)

Nai Pan Hla. 1989. *An introduction to Mon language*. Kyoto: Center for Southeast Asian Studies, Kyoto University.

Nai Tun Way. 1997. The modern English-Mon dictionary: ပြကိုဟ်အဘိဓာန် အင်္ဂလိက်-မန်. Bangkok. The Open Society Insititute Burma Project.

မွန်ဘာသာ: သင်ကြားနည်း (Mon grammar book).

ပှ်ဖှို့ရှီဆၢခဲ့ၠ ဒဲ ပယ့ၤအဒီၢပယီၢ = ပိုးကရင်-မြန်မာအဘိဓါန် = *Pwo Kayin-Myanmar Dictionary*. 1989. (Western Pwo Karen).

Acknowledgements

Figures

12 MON VOWELS

သွၟ်မန် (၁၂) အခဝ်၊

အ	အာ	ဣ	ဣ	ဥ	ဥ၊
ဨ	အဲ	ဩ	အံ	အံ	အး

VOWEL-SYMBOLS

လက္ခန်သွၟ်

–	–ာ	–ံ	–ံ	–ၞ	–ၟ
ေ–	–ဲ	ေ–ာ	–ၞ	–ံ	–ஃ

Figure 1. Sample from Nai Pan Hla's 1989 Mon dictionary, showing LETTER MON E, VOWEL SIGN MON II, and VOWEL SIGN MON O.

35 MON CONSONANTS

ခန်သွှော်န် (၂) လွေင်ဖျန်

က	ခ	ဂ	ဃ	င
စ	ဆ	ဇ	ဈ	ည
ဋ	ဌ	ဍ	ဎ	ဏ
တ	ထ	ဒ	ဓ	န
ပ	ဖ	ဗ	ဘ	မ
ယ	ရ	လ	ဝ	သ
ဟ	ဠ	အ	အ	ဗ

Figure 2. Sample from Nai Pan Hla's 1989 Mon dictionary, showing LETTER MON NGA, LETTER MON JHA, LETTER MON BBA, and LETTER MON BBE.

Subscript Letters	Symbols	with combination
c	၅ၞ	တၞ tña/təŋaʔ/
ည	ၟ	ကၟ kña/kəɲaʔ/
ၡ	ၟ	တ tḍa/təɗaʔ/
ၞ	ၮ	တ tna/tənaʔ/
မ	ၟ	တ tma/təmaʔ/
ၐ	ၞ	ကျ kya/caʔ/
ၡ	၉	ကြ kra/kraʔ/
ၜ	ၞ	က kla/klaʔ/
၀	ၞ	ကွ kwa/kwaʔ/
ၜ	ၞ	ကၟ kḍa/k6aʔ/
ၜ	ၞ	လှ lha/hlaʔ/

Figure 3. Sample from Nai Pan Hla's 1989 Mon dictionary, showing CONSONANT SIGN MON MEDIAL NA, CONSONANT SIGN MON MEDIAL MA, and CONSONANT SIGN MON MEDIAL LA. In the first line the incorrect form for LETTER MON NGA is shown; elsewhere in the book it is regularly shown correctly as in Figure 2 and in Figure 3a here:

က ə ဂ ဃ ၄

ka/kaʔ/;   kha/khaʔ/;   ga/kɛ̀ʔ/;   gha/khɛ̀ʔ/;   ṅa/ŋɛʔ/;

Figure 4. Sample from a reader in S'gaw Karen, showing LETTER SGAW KAREN SHA.

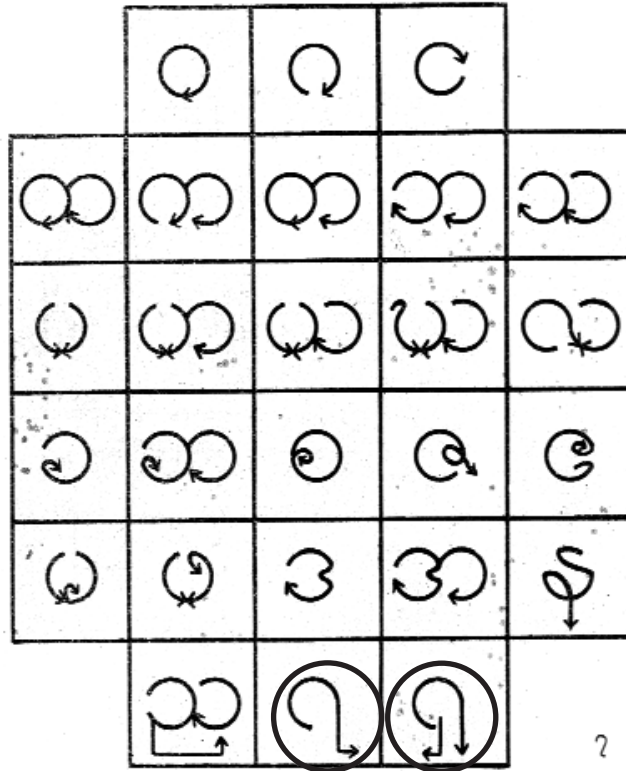လံၢ်ဖျၣ်မိၢ်ပှၢ်တၢ်ကျူၤကျ့ၤလၢအည့ဆူဉအကီ

ဒီး

တၢ်ကွဲးအကျ

Figure 5. Sample from a reader in S'gaw Karen, showing the ductus for writing S'gaw Karen letters. Note the difference between LETTER RA and LETTER SGAW KAREN SHA.

Figure 6. Sample from a reader in S'gaw Karen, showing CONSONANT SIGN MON MEDIAL LA (used in S'gaw Karen for *ya*) alongside characters proposed in N3043, CONSONANT SIGN MEDIAL HA (used in S'gaw Karen for *ga*), CONSONANT SIGN MEDIAL RA, CONSONANT SIGN MEDIAL YA (used in S'gaw Karen for *la*), and CONSONANT SIGN MEDIAL WA.

Figure 7. Sample from a reader in S'gaw Karen, showing vowels and tone marks, including VOWEL SIGN TALL AA (proposed in N3043), VOWEL SIGN SGAW KAREN EU, SIGN SGAW KAREN HATHI, SIGN SGAW KAREN KE PHO, and CONSONANT SIGN MON MEDIAL LA.

Figure 8. Sample from a reader in S'gaw Karen, showing SIGN SGAW KAREN HATHI and SIGN SGAW KAREN KE PHO. The CONSONANT SIGN MEDIAL WA (proposed in N3043) is shown with a triangular glyph.
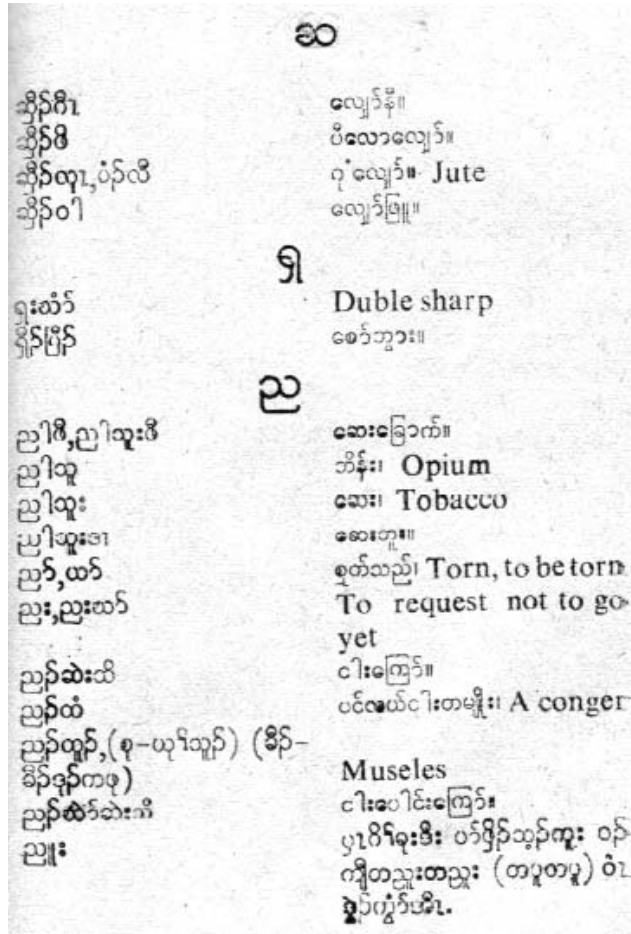
Figure 9. Sample from a short dictionary of S'gaw Karen, showing LETTER SGAW KAREN SHA in its position between LETTER CHA and LETTER NNYA.

Figure 10. Two samples from Western Pwo Karen primers, showing LETTER SGAW KAREN SHA in its position between LETTER NNYA and LETTER TA.

TABLE XX - Row 10: MYANMAR

	100	101	102	103	104	105	106	107	108	109
0	သ	ဆ	၉	ိုL	၀	ၐ	၂			
1	ခ	ဈ	အ	ေိ	၁	ၑ	ရ			
2	ဂ	ဉ		့	၂	ၒ	� ၁			
3	ဃ	ဈ	ဩ	ိ	၃	ၓ	� ၃			
4	င	ည	ဪ	ဲ	၄	ၔ	၁			
5	စ	ဋ	၉		၅	ၕ				
6	ဆ	ဌ	၆	ံ	၆	ၖ				
7	ဇ	ဍ	ဈ	့	၇	ၗ				
8	ၡ	ဎ	၆	း	၈	ၘ				
9	ၣ	ဏ	ၡ	+	၉	ၙ				
A	ၥ	ထ	ၜၚ်	�	၊	၄				
B	ၦ	ရ	ါ	ျ	။	ၾ				
C	ၤ	လ	၁	ၠ	၌	◉				
D	ၧ	ဝ	ိ	ဗ	၍	ၿ				
E	ပ	၀	ိ	ျ	၎	၄				
F	ဘ	ဟ	ိ	ဿ	၏	၄				

G = 00
P = 00

9

TABLE XX - Row 10: MYANMAR

hex	Name	hex	Name
00	MYANMAR LETTER KA	59	MYANMAR VOWEL SIGN VOCALIC LL
01	MYANMAR LETTER KHA	5A	MYANMAR LETTER MON NGA
02	MYANMAR LETTER GA	5B	MYANMAR LETTER MON JHA
03	MYANMAR LETTER GHA	5C	MYANMAR LETTER MON BBA
04	MYANMAR LETTER NGA	5D	MYANMAR LETTER MON BBE
05	MYANMAR LETTER CA	5E	MYANMAR CONSONANT SIGN MON MEDIAL NA
06	MYANMAR LETTER CHA	5F	MYANMAR CONSONANT SIGN MON MEDIAL MA
07	MYANMAR LETTER JA	60	MYANMAR CONSONANT SIGN MON MEDIAL LA
08	MYANMAR LETTER JHA	61	MYANMAR LETTER SGAW KAREN SHA
09	MYANMAR LETTER NYA	62	MYANMAR LETTER SGAW KAREN EU
0A	MYANMAR LETTER NNYA	63	MYANMAR SIGN SGAW KAREN HATHI
0B	MYANMAR LETTER TTA	64	MYANMAR SIGN SGAW KAREN KE PHO
0C	MYANMAR LETTER TTHA	65	(This position shall not be used)
0D	MYANMAR LETTER DDA	66	(This position shall not be used)
0E	MYANMAR LETTER DDHA	67	(This position shall not be used)
0F	MYANMAR LETTER NNA	68	(This position shall not be used)
10	MYANMAR LETTER TA	69	(This position shall not be used)
11	MYANMAR LETTER THA	6A	(This position shall not be used)
12	MYANMAR LETTER DA	6B	(This position shall not be used)
13	MYANMAR LETTER DHA	6C	(This position shall not be used)
14	MYANMAR LETTER NA	6D	(This position shall not be used)
15	MYANMAR LETTER PA	6E	(This position shall not be used)
16	MYANMAR LETTER PHA	6F	(This position shall not be used)
17	MYANMAR LETTER BA	70	(This position shall not be used)
18	MYANMAR LETTER BHA	71	(This position shall not be used)
19	MYANMAR LETTER MA	72	(This position shall not be used)
1A	MYANMAR LETTER YA	73	(This position shall not be used)
1B	MYANMAR LETTER RA	74	(This position shall not be used)
1C	MYANMAR LETTER LA	75	(This position shall not be used)
1D	MYANMAR LETTER WA	76	(This position shall not be used)
1E	MYANMAR LETTER SA	77	(This position shall not be used)
1F	MYANMAR LETTER HA	78	(This position shall not be used)
20	MYANMAR LETTER LLA	79	(This position shall not be used)
21	MYANMAR LETTER A	7A	(This position shall not be used)
22	(This position shall not be used)	7B	(This position shall not be used)
23	MYANMAR LETTER I	7C	(This position shall not be used)
24	MYANMAR LETTER II	7D	(This position shall not be used)
25	MYANMAR LETTER U	7E	(This position shall not be used)
26	MYANMAR LETTER UU	7F	(This position shall not be used)
27	MYANMAR LETTER E	80	(This position shall not be used)
28	MYANMAR LETTER MON E	81	(This position shall not be used)
29	MYANMAR LETTER O	82	(This position shall not be used)
2A	MYANMAR LETTER AU	83	(This position shall not be used)
2B	MYANMAR VOWEL SIGN TALL AA	84	(This position shall not be used)
2C	MYANMAR VOWEL SIGN AA	85	(This position shall not be used)
2D	MYANMAR VOWEL SIGN I	86	(This position shall not be used)
2E	MYANMAR VOWEL SIGN II	87	(This position shall not be used)
2F	MYANMAR VOWEL SIGN U	88	(This position shall not be used)
30	MYANMAR VOWEL SIGN UU	89	(This position shall not be used)
31	MYANMAR VOWEL SIGN E	8A	(This position shall not be used)
32	MYANMAR VOWEL SIGN AI	8B	(This position shall not be used)
33	MYANMAR VOWEL SIGN MON II	8C	(This position shall not be used)
34	MYANMAR VOWEL SIGN MON O	8D	(This position shall not be used)
35	(This position shall not be used)	8E	(This position shall not be used)
36	MYANMAR SIGN ANUSVARA	8F	(This position shall not be used)
37	MYANMAR SIGN DOT BELOW	90	(This position shall not be used)
38	MYANMAR SIGN VISARGA	91	(This position shall not be used)
39	MYANMAR SIGN VIRAMA	92	(This position shall not be used)
3A	MYANMAR SIGN ASAT	93	(This position shall not be used)
3B	MYANMAR CONSONANT SIGN MEDIAL YA	94	(This position shall not be used)
3C	MYANMAR CONSONANT SIGN MEDIAL RA	95	(This position shall not be used)
3D	MYANMAR CONSONANT SIGN MEDIAL WA	96	(This position shall not be used)
3E	MYANMAR CONSONANT SIGN MEDIAL HA	97	(This position shall not be used)
3F	MYANMAR LETTER GREAT SA	98	(This position shall not be used)
40	MYANMAR DIGIT ZERO	99	(This position shall not be used)
41	MYANMAR DIGIT ONE	9A	(This position shall not be used)
42	MYANMAR DIGIT TWO	9B	(This position shall not be used)
43	MYANMAR DIGIT THREE	9C	(This position shall not be used)
44	MYANMAR DIGIT FOUR	9D	(This position shall not be used)
45	MYANMAR DIGIT FIVE	9E	(This position shall not be used)
46	MYANMAR DIGIT SIX	9F	(This position shall not be used)
47	MYANMAR DIGIT SEVEN		
48	MYANMAR DIGIT EIGHT		
49	MYANMAR DIGIT NINE		
4A	MYANMAR SIGN LITTLE SECTION		
4B	MYANMAR SIGN SECTION		
4C	MYANMAR SYMBOL LOCATIVE		
4D	MYANMAR SYMBOL COMPLETED		
4E	MYANMAR SYMBOL AFOREMENTIONED		
4F	MYANMAR SYMBOL GENITIVE		
50	MYANMAR LETTER SHA		
51	MYANMAR LETTER SSA		
52	MYANMAR LETTER VOCALIC R		
53	MYANMAR LETTER VOCALIC RR		
54	MYANMAR LETTER VOCALIC L		
55	MYANMAR LETTER VOCALIC LL		
56	MYANMAR VOWEL SIGN VOCALIC R		
57	MYANMAR VOWEL SIGN VOCALIC RR		
58	MYANMAR VOWEL SIGN VOCALIC L		

A. Administrative

1. Title
Proposal for encoding Mon and S'gaw Karen characters in the UCS.
2. Requester's name
Michael Everson and Martin Hosken
3. Requester type (Member body/Liaison/Individual contribution)
Individual contribution.
4. Submission date
2006-04-08
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)
No.
Proposed name of script
1b. The proposal is for addition of character(s) to an existing block
Yes.
1c. Name of the existing block
Myanmar.
2. Number of characters in proposal
14
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. Proposed Level of Implementation (1, 2 or 3)
Level 2
4b. Is a rationale provided for the choice?
Yes.
4c. If YES, reference
Brahmic Level 2 implementation.
5a. Is a repertoire including character names provided?
Yes.
5b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?
Yes.
5c. Are the character shapes attached in a legible form suitable for review?
Yes.
6a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?
Michael Everson.
6b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:
Michael Everson, Fontographer.
7a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?
No.
7b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?
Yes.
8. Special encoding issues: Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?
Yes.
9. Additional Information: Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script.
See above.

C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.
Yes. See N2768.
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?

San Lwin (Director General, Myanmar Language Commission), **Tun Tint** (Myanmar Language Commission), **Thein Oo** (President, Myanmar Computer Federation), **Kyaw Thein** (Vice-President, Myanmar Computer Federation), **Myint Myint Than** (Director, Myanmar Computer Federation), **Zaw Htut** (Myanmar Computer Professional Association, Myanmar's NET), **Htoo Myint Naung** (MyMyanmar Project, Technomation Studios, Universities of Computer Studies Yangon), **Myint Thu** (MyMyanmar Project, Myanmar Heritage Publications), **Ngwe Tun** (Mon—Myanmar Computer Professional Association, Solveware Solution, Myanmar Info-Tech), **Maung Maung Thant** (Myanmar Computer Professional Association), **Jai Pah Bung Mein** (Shan—SSi Technologies), **Saw Hare Sei** (S'gaw Karen—Ayeyawady Data Centre), **Saw Baldwin Khaing Oo** (S'gaw Karen—Ayeyawady Data Centre), **Nant Silver Tun** (Western Pwo Karen—Pwo Kayin Conference), **William Wai Lin Kyaw** (Myanmar Computer Professional Association, Myanmar Linux Users Group), **Ye Myat Thu** (Alpha Mandalay, Alpha Info-Tech), **Keith Stribley** (Thanlwinsoft).

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?

People in Myanmar.

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

Common.

4b. Reference

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

Yes.

5b. If YES, where?

In Myanmar.

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

Yes.

6b. If YES, is a rationale provided?

Yes.

6c. If YES, reference

Contemporary use and accordance with the Roadmap.

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

N/A.

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

See "Issues" above.

11a. Does the proposal include use of combining characters and/or use of composite sequences?

Yes.

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

Yes.

11c. If YES, reference

Brahmic vowel and consonant signs.

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?