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

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| **Doc Type:** | **Working Group Document** |
| **Title:** | **Preliminary Proposal to add the Tangsa Script in the SMP of the UCS** |
| **Source:** | **Stephen Morey (partly based on an earlier document by Anshuman Pandey)** |
| **Action:** | **For consideration by JTC1/SC2/WG2** |
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**1. Introduction**: Tangsa is a script developed since 1990 by Mr Lakhum Mossang, of Namphai Nong, Miao, Arunachal Pradesh, for writing the Tangsa languages (included under ISO639:3 nst) spoken in Arunachal Pradesh, India and across the border in the north of Sagaing Region, Myanmar. It is a recently developed alphabetic script and is genetically unrelated to existing scripts. The script has been revised a couple of times. The 2020 January version consists of 89 characters: 79 letters (48 listed as vowels and 31 listed as consonants) and 10 digits.

The name Tangsa was coined in the 1950s by Indian Government officials to cover a range of diverse tribes inhabiting what is now Changlang district of Arunachal Pradesh (including what is now the Tirap Trans-ferred Area, now in Assam state). On the India side of the border there are around 40 'sub-tribes' of Tangsa, each of which has its own speech variety. Some of these varieties are fully mutually intelligible with each other (like the Cholim and Longri, and some are fully mutually unintelligible, like the Hahcheng and Cham-pang). While the script is intended by its creator for all these language varieties, at present it is only in active use for one variety, Muishaung (Mossang) [1].

The script being proposed for inclusion in Unicode includes of 48 symbols for vowels and sounds considered by the script's inventor to be vowel-like (including final -ŋ and syllabic nasal sounds). It also includes 31 consonants and 10 numerals which are fully decimal. The phonetic values (in inventor's own Mossang / Muishaung variety of Tangsa) are discussed in Section 7. A key design feature of the script is that for each vowel there are four symbols, corresponding to four different tones in Tangsa languages. These have been named TONE ONE, TONE TWO, TONE THREE and TONE FOUR according to tone numbers used in aca-demic works like Morey (2015, 2017) and van Dam (2018). Tone FOUR corresponds to stop final syllables, whereas the other three are categories with open finals (vowels, nasals, and sometimes -l and -r). In Mossang, Tone ONE is low falling, Tone TWO is mid-high falling and Tone THREE is mid-high level or rising. But the form or realization of the tones differs from variety to variety.

The script is a type of alphabet following the Daniels definition (https://en.wikipedia.org/wiki/Writing_system, (under Functional Classification) in the sense that symbols represent either consonants or vowels and each vowel symbol is written independently of consonants, following (to the right) of the consonant that commences a syllable. So the Muishaung word for 'to go' ᪨ᪿ (TANGSA LETTER KA - U+16AA0) + TANGSA VOWEL A TONE ONE – U+16A70), consists of the initial consonant /k/ and the vowel /a/ carry-ing Tone ONE (low tone in Muishaung). This word can be rendered in IPA as [ka¹].

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[1] Note that the different varieties of Tangsa have multiple names. The form Muishaung is an autonym, the name used by the people themselves, written in the Roman orthography developed by Rev. Gam Win. It would be [mɯ²ʃauŋ²] in IPA where the superscript 2 stands for the tone category 2. Mossang is a 'general name' used by others to refer to the group. In this paper we will use autonym (general name) in that order. Each group has it's own name for each other group, so the Mossang are also called [mjɔ²xaŋ₂] by the Cholim, [mjaŋ₂sa₂] by the Lauchäng, [mɯ₂ʃa₂] by the Shecyü &c.

There are some differences between this writing system and other alphabets. The first is that, as already discussed above, vowels and tones are merged into single symbols, so there are four symbols for each vowel, representing each of the four tones. The second is that there is one group of symbols, ꪘ ꪘ ꪘ ꪘ (TANGSA VOWEL UIU TONE ONE U+16A98 through to TANGSA VOWEL UIU TONE TWO, U+ 16A9B) which are actually diphthongs, the combination of two vowels together [ɯ] plus [u] , combined with the four tones. Thirdly, there is a different symbol the velar nasal in syllable initial position, where it is written with ꪣ (TANGSA LETTER NGA, U+16AA3), but in final position it is written with ꪐ (TANGSA VOWEL FINAL NG, U+16A90). The latter symbol is listed with the vowels. Thus the word for 'feel jealous' is written as ꪣꪀꪐ (TANGSA LETTER NGA, U+16AA3, TANGSA VOWEL E TONE TWO, U+16A7F, and TANGSA VOWEL FINAL NG, U+16A90) [ŋeŋ²]. By contrast, the other nasal sounds /m/ and /n/ can be written both at the beginning and at the end of a syllable, as with the final part of the word ꪚꪬꪚꪬ [kʰun²nen²] (a song language word meaning 'tendency of a person to desire others not to get a benefit'), where in the second syllable, ꪬꪚꪬ, TANGSA LETTER NA, U+16AAC is used in both initial and final position.

The script has been taught in a handwritten form by Mr. Lakhum Mossang over the past 30 years. A small number (perhaps around 12) people have learned to use the script fluently, all of them members of the Muishaung (Mossang) community. An example of the kind of work produced by the users of the script is a handwritten text of a traditional song (examples, Figure 2 below).

Until around 2012, the script was only used in handwriting by Mr Lakhum Mossang and a small band of his devoted students, all of them speakers of Muishaung (Mossang). From around 2012, the development of a font began, firstly by a PhD student, Ms Karen Parker. This font that has subsequently been revised and overhauled and included in the 'Private Use' area of the Unicode by Dr. Kellen Parker van Dam, a former student of Stephen Morey now based at the University of Zürich. An earlier version of the font was used to produce the first printed document in the script, a document prepared by the Tangsa Script Development Committee to distribute at the Pangsau Pass festival in January 2020. Portions of this document, including both English language text and various Tangsa languages in the script, are given as Figures 3-6 below in the 'Examples' section.

As at April 2020, a primer to teach the script, at least for the Muishaung variety is being prepared. The draft version of the first two lessons of the Primer, which introduces the script, is shown in the Examples as Figure 8.

Mr. Lakhum Mossang has devised the script with the intention that it can be used for all of the very diverse Tangsa varieties (See Morey 2015, 2017). The script covers almost all of the consonant sounds found in the various varieties. See Khämlan and Owen 2018 for a list of consonants recorded in a range of Tangsa (termed Tangshang in Myanmar) languages, There are vowels in some other varieties not yet included in the script (for example, a contrast between /e/ and /ɛ/ in the Rera (Ronrang) variety), and for this reason additional glyphs may be needed if the script is to be applied to all Tangsa / Tangshang languages. It is perfectly adequate as it stands for the Muishaung variety, and probably for many of the other Tangsa varieties.

The application of the script to other varieties would involve developing a convention for writing the tones using the existing symbols. As already mentioned, in Muishaung (Mossang), what we are calling TONE ONE is low falling, TONE TWO is mid-high falling and TONE THREE is mid-high level or rising. The cognate tones in Rera (Ronrang) are as follows: TONE ONE high, TONE TWO mid and TONE THREE low. Since in most cases the same group of words carry TONE ONE in both varieties (though realised with a low tone in Muishaung and a high tone in Rera), a meeting held on January 27th at Namphai Nong village suggested that the TONE ONE symbols be used for this group of words in each variety, to be realised differently in each variety. This has not yet been brought into full application for any variety other than Muishaung.

Already, a revision was agreed in late 2019, to add the short /a/ like vowels (the series from U+16A78 to U+16A7B, named as TANGSA VOWEL A TONE ONE &c), as well as a glottal stop final symbol for the vowel pronounced in Muishaung (Mossang) as [ɔ] (U+16A8A, TANGSA VOWEL AW TONE FOUR) and for the letter [z] (U+16ABE, TANGSA LETTER Z.) These changes were approved following the adoption of the script by the newly set up Tangsa Script Development Committee which met on the 2nd November 2019

to appoint officers and a committee, details of which are outlines in the Examples, Figure 3 and Figure 4 below. The revised set of symbols promoted by that committee is included as Figure 7.

On January 27th 2020, a meeting was held at Namphai Nong village in Assam, attended by members of the script committee and in principle decisions were taken about how the tones of a variety other than Muishaung would be treated. This is discussed in section 9 below:

The script has been submitted to the State Government of Arunachal Pradesh Directorate of Elementary Education.

### 1.1 A note on 'Tangsa', 'Tangshang and 'Naga, Tase', various versions of ISO 639-3: nst.

The situation of ISO 639-3 code nst is complex. It arose originally from the division of a range of diverse language varieties into two 'tribes': Tangsa and Nocte, done in India some 60 years ago and largely based on geographical rather than linguistic criteria. Nocte was given the code ISO 639-3: njb. More recently, on the Myanmar side, both of these have been grouped together as one and called Tangshang. In the current versions of *Ethnologue*, the main entry for nst (https://www.ethnologue.com/language/nst) is headed 'Naga, Tangshang' and this subsumes what would be njb, (and we presume also Tutsa tvt and Wancho nnp) under a single heading on the Myanmar side. The *Ethnologue* entry for Naga, Tangsa in India includes fewer varieties, and does not subsume njb, tvt and nnp.

The ISO reference (https://iso639-3.sil.org/code/nst) does not make it clear whether the current ISO coding includes njb, tvt or nnp, in other words follows the Myanmar entry for nst in *Ethnologue*, or whether it does include them and follows the India entry for nst in *Ethnologue*. As mentioned earlier, these codes are originally based on post-Independence classifications in India that are primarily not linguistic. Whether the India side classification of Tangsa or the broader Myanmar side classification of Tangshang are used, these ISO codes include multiple language varieties, some of which are fully mutrually intelligible and some of which are most defintely not mutually intelligible.

While the Script is designed to be dialect-agostic (variety-agnostic) at present it is fully in use for Muishaung.

**2. Structure**: The characters are all written left to right. Many of the words in the language are monosyllabic, and these syllables take the form of:

> INITIAL CONSONANT  (a very small number of words have initial vowels)
>
> VOWEL + TONE
>
> OPTIONAL SECOND VOWEL + TONE
>
> OPTIONAL FINAL CONSONANT

For example, the word for 'sky', written as [rauŋ²] phonemically, is given as Ꚉꞁꞁꞁ (TANGSA LETTER RA (U+16AB2), TANGSA VOWEL AA TONE TWO (U+16A77), TANGSA VOWEL U TONE TWO (U+16A87), TANGSA VOWEL FINAL NG (U+16A90).

When a vowel is followed by a final glottal stop, it is possible to write this in two ways. Consider the word /kaʔ/. This can be written as ꞁꞁ (TANGSA LETTER KA (U+16AA0), TANGSA VOWEL AA TONE FOUR (U+16A76),   or it can be written with an additional vowel symbol, as ꞁꞁꞁ (TANGSA LETTER KA (U+16AA0), TANGSA VOWEL AA TONE ONE (U+16A74) TANGSA VOWEL AA TONE FOUR (U+16A76). The latter is preferred by the founder of the script, Mr Lakhum Mossang, but some users feel that the former is sufficient since U+16A76 is equivalent to /-aʔ/

When diphthongs are written with any one of the the three open tones (ONE, TWO or THREE), the two vowel symbols are written carrying the same tone, as seen above with the word for 'sky'. However with words having

final stops, it is usual to write the /a/ vowel as tone ONE and the /u/ vowel as tone FOUR, as in the example of /tauk/ (1ˢᵗ person singular past marker), which is written ᐗᒪᕼᑎ (TANGSA LETTER TA (U+16AB0), TANGSA VOWEL AA TONE ONE (U+16A74) TANGSA VOWEL U TONE FOUR (U+16A86), TANGSA LETTER KA (U+16AA0).

**3. Digits**: The ten digits listed as U+16AC0 to U+16AC9. This is a fully decimal system that operates in the same way as the 'Arabic numerals'

**4. Punctuation**: There are no special punctuation marks and it is intended that the Roman punctuation marks be used if required. The question mark will not be used as there is a question particle as ᕿᒪ (TANGSA LETTER HA (U+16AAd), TANGSA VOWEL AA TONE ONE (U+16A74).

**5. Word spacing**: The Tangsa script employs spaces between words.

**6. Variant Forms**: No variant forms have been recorded

**7. Character Naming**: The suggested character names are descriptive of each character. Vowels are arranged in groups of four, so that the first four symbols are named as TANGSA VOWEL O TONE ONE (U+16A70) [o¹], TANGSA VOWEL O TONE THREE (U+16A71) [o²], TANGSA VOWEL O TONE FOUR (U+16A72) [oʔ] and TANGSA VOWEL O TONE TWO (U+16A73) [o³]. The ordering of the vowels is that used in Lakhum Mossang's original system. The numbering of the tones used in these names has followed the system in use in Morey (2015, 2017) and van Dam (2018). The numbering also follows the usual order of numbering in existing Roman based orthographies.

The IPA symbols for these four vowels employ the vowel [o] in combination with the tones as they are realised in the Mossang (Muishaung) variety of Tangsa, where tone 1 (Low tone) [o¹] is low falling, tone 2 (mid tone) [o²] is mid-high falling and tone 3 (high tone) [o³] is high and sometimes rising. In other Tangsa varieties, the tones are realised differently.

The full list of vowel names and their corresponding approximate phonetic values are given as follows:

TANGSA VOWEL O = [o]

TANGSA VOWEL AA = [a]

TANGSA VOWEL A = [ə]

TANGSA VOWEL E = [e]

TANGSA VOWEL I = [i]

TANGSA VOWEL U = [u]

TANGSA VOWEL AW = [ɔ]

TANGSA VOWEL UI = [ɯ]

TANGSA VOWEL UE = [ɤ]

TANGSA VOWEL UIU = [ɯu]

The group of sounds listed as TANGSA VOWEL SYLLABIC NASAL can be phonetically represented as [m̩]

The consonants are listed after the vowels, and named as TANGSA LETTER KA, TANGSA LETTER KHA &c.

The names of the letters employ the Roman based orthography that was developed by Rev. Gam Win for Muishaung variety. Most of the names are transparent, so that TANGSA LETTER KA refers to [k] and TANGSA LETTER KHA refers to [kha]. However the following consonants have phonetic forms in Muishaung that may not be transparent from the Rev Gam Win system. These are given together with their phonetic equivalent In one case, the voiceless [tɕ] sound, we are suggesting the name TANGSA LETTER CA, rather than using Rev. Gam Win's orthographic <j>.

| Number | Symbol | Name of letter | Phonetic equivalent | Notes |
|--------|--------|----------------|---------------------|-------|
| 16AAF | ꙺ | TANGSA LETTER HTA | [tʰ] | |
| 16AB3 | ꙺ | TANGSA LETTER NHA | [n̪] | dental nasal |
| 16AB5 | ꙺ | TANGSA LETTER CA | [tɕ] | written with <j> in Gam Win's system |
| 16AB7 | ꙺ | TANGSA LETTER GHA | [ɣ] | |
| 16AB8 | ꙺ | TANGSA LETTER HTTA | [t̪ʰ] | aspirated voiceless dental stop |
| 16AB9 | ꙺ | TANGSA LETTER THA | [t̪] | unaspirated voiceless dental stop |
| 16ABC | ꙺ | TANGSA LETTER DHA | [ð] | a voiced dental fricative |
| 16ABD | ꙺ | TANGSA LETTER CHA | [tɕʰ] | aspirated |

The numerals are listed last after the vowels and the consonants.

**8. Sort order**: The order is based on the original order as developed by Lakhum Mossang and further amended in January 2020. The only change to this is one required by Unicode. Whereas Lakhum Mossang listed the numerals with TANGSA DIGIT ONE, U=16AC1 first and TANGSA DIGIT ZERO, U=16AC0, Unicode rules require the listing of ZERO first.

**9. Issues**:

There are a number of issues relating to the script that need to be pointed out

1) There is a special symbol for final /-ŋ/ in the vowel series TANGSA VOWEL FINAL NG (U+16A90) rather than using the consonant TANGSA LETTER NGA (U+16AA3). For the other final nasals, /-m/ and /-n/ there is no such special symbol.

2) Four consonant symbols for consonants not used in Muishaung (Mossang) were created using other consonant symbols with 'combining marks' that are like diacritics written above symbols for other LETTERS. These are listed below:

| 16ABB | ꙺ | TANGSA LETTER FA |
|-------|-----|------------------|
| 16ABC | ꙺ | TANGSA LETTER DHA |
| 16ABD | ꙺ | TANGSA LETTER CHA |

| 16ABE | 𖪾 | TANGSA LETTER ZA |
|-------|-----|------------------|

For example, the TANGSA LETTER FA is made up of th symbol U+16AA9, TANGSA LETTER PHA with a small symbol above it. At this time these 'diacritics' are not proposed for encoding as separate entities as they are not currently productive; however if further consonants need to be added to the script in order to write varieties other than Muishaung, they may become productive.

4) Two symbols that are largely prosodic in nature, and one is used for a toneless prefix. Together with the TANGSA VOWEL UE series (U+16A91 to U+16A94), they are termed by Lakhum Mossang as the 'seven sisters', a reference to a well known term for the seven states of Northeast India. As far as we know, these symbols are not used for any words in citation form.

| 16A91 | 𖪑 | TANGSA VOWEL UE LONG MID FALLING TONE |
|-------|-----|------------------|
| 16A92 | 𖪒 | TANGSA VOWEL UE SHORT TONE ONE |
| 16A93 | 𖪓 | TANGSA VOWEL AW SHORT TONE TWO |

The two prosodic symbols, 16A91 and 16A93 are used as follows. A long falling tone is used in the phrase 𖪑𖪑 𖪑𖪑𖪑𖪑 [nɤː² kəra²] ,'**very very** far' where the first word uses TANGSA LETTER NA, U+16AAC and TANGSA VOWEL UE LONG MID FALLING TONE, U+16A91 rather than being 𖪑𖪑 [nɤ²], a distal deictic ('far') which is TANGSA LETTER NA, U+16AAC and TANGSA VOWEL UE TONE TWO, U+16A97.

The short AW [ɔ] sound is used in the phrase 𖪑𖪑𖪑 𖪑𖪓 [vrɤ² lɔ²ʔ], a phrase meaning 'let it be only so much' with a short final [ɔ²] vowel (Tone TWO, mid falling). The second syllable of this phrase 𖪑𖪓 [lɔ²ʔ], an imperative particle, is written with TANGSA LETTER LA, U+16AAE, and TANGSA VOWEL AW SHORT TONE TWO, U+16A93.

In the Muishaung language there are two quite distinct sounds that are written in Rev. Gam Win's Roman based orthography with the letter v. On the one hand there are tone marked vowels that occur in syllables like 𖪑𖪑𖪑 (TANGSA LETTER HA, U+16AAD, TANGSA VOWEL A TONE TWO, U+16A7B, TANGSA LETTER LA, U+16AAE)[həl²] 'good'. There is also a toneless prefix, which is a phonetically different sounds from the vowels in the TANGSA VOWEL A set (U+16A78 to 16A7B), and recently the symbol U+16A92 (𖪒) (TANGSA VOWEL UE SHORT TONE ONE ), has been adopted for this, as shown in the following table:

| English | Gam Win Spelling | IPA | Tangsa |
|---------|------------------|-----|--------|
| blood | tvghuiyz | təɣɯi¹ | 𖪑𖪑𖪑𖪑𖪑 |
| bone | vrawz | ərɔ¹ | 𖪑𖪑𖪑 |
| fat/grease | vpuiz | əpɯ¹ | 𖪑𖪑𖪑 |

This symbol can be used for a sound that is phonetically different from the short A sound that is written by U+16A78 through to U+16A7B

6

4) There are three syllabic nasals that are largely used in Muishaung (Mossang) as exclamations and confirmation particles (yes)

16A9d ⅏ TANGSA VOWEL SYLLABIC NASAL TONE THREE

16A9e 𖪞 TANGSA VOWEL SYLLABIC NASAL TONE FOUR

16A9f ħ TANGSA VOWEL SYLLABIC NASAL TONE TWO

(5) Potential additional characters

In some other Tangsa / Tangshang varieties there is a vowel that could be written as [y] or [ø] (see Khämlan Binkhäm and Owen 2018: 23). It will be necessary to add a series of four symbols to cover this set of vowels

Recent work by Deepjyoti Goswami on the Rera (Ronrang) variety strongly suggests that there is a distinction between /e/ and /ɛ/. This distinction is not mentioned in Khämlan Binkhäm and Owen (2018: 23), but to write Rera using the script, a further set of four symbols would be needed.

Consonant phonemes discussed by Khämlan Binkhäm and Owen (2018: 23) that are not so far included in the script would be [tsʰ], [j] (where it is a distinct phoneme from [dʒ] / [dʑ] and possibly [ɬ]. Note that this latter is included by Khämlan Binkhäm and Owen (2018: 23) because the variety in which it is found is included under Tangshang in Myanmar. But that variety (sometimes termed Chuyo) would likely be listed as a Wancho variety in India.

Another possibly additional symbol would be a toneless prefixal [ɪ] that is found in varieties like Cholim (Tonglum)

6) Application of the script to varieties other than Muishaung (Mossang)

As mentioned earlier, the vowel symbols combine vowel and tone, but the tones of other Tangsa varieties are different from Muishaung (Mossang). At a meeting on January 27th, it was agreed that the vowel symbols would be used according to the tone categories.

Thus, in Rera, the group of words which belong to Tone ONE are realised with a high tone, while that same group of words in Muishaung (Mossang) are realised with a low tone (see van Dam 2018). It was agreed that these words would be written with the TONE ONE group of symbols, and interpreted differently in the different varieties (i.e. pronounced with a low tone in Muishaung and a high tone in Rera). Annotations to the names list will be provided to indicate this.

This is similar to the use of <ch> in Roman script which in the word *chat* is pronounced [ʧ] in English and [ʃ] in French

Note that there are some Tangsa varieties, like Champang, where tone has such a functional load that it is not clear that tones are still a phonemic feature of the language. How a toneless language would be written using this script is not clear.

7) Use of the script.

Several communities in India (representing differentsub-tribes) have expressed that they wish to use a Roman-based orthography in conjunction with the Tangsa script for the time being, as they begin the development of literature. It should be noted that on the Myanmar side a number of Roman based orthographies are currently being promoted by different sub-tribes. One of these orthographies is the Tangshang Naga Unified Orthography (Khämlan Binkhäm and Owen), but there are others which are not currently documented in published sources.

| | 16A7 | 16A8 | 16A9 | 16AA | 16AB | 16AC |
|---|---|---|---|---|---|---|
| **0** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **1** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **2** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **3** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **4** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **5** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **6** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **7** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **8** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **9** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | ꙗ |
| **A** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | |
| **B** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | |
| **C** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | |
| **D** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | |
| **E** | ꙭ | ꙑ | ꙣ | ꙓ | ꙕ | |
| **F** | ꙭ | ꙑ | ꙣ | ꙓ | | |

## Vowels

| Code | Glyph | Name |
|---|---|---|
| 16A70 | ᩰ | TANGSA VOWEL O TONE ONE |
| 16A71 | | TANGSA VOWEL O TONE THREE |
| 16A72 | | TANGSA VOWEL O TONE FOUR |
| 16A73 | | TANGSA VOWEL O TONE TWO |
| 16A74 | | TANGSA VOWEL AA TONE ONE |
| 16A75 | | TANGSA VOWEL AA TONE THREE |
| 16A76 | | TANGSA VOWEL AA TONE FOUR |
| 16A77 | | TANGSA VOWEL AA TONE TWO |
| 16A78 | | TANGSA VOWEL A TONE ONE |
| 16A79 | | TANGSA VOWEL A TONE THREE |
| 16A7A | | TANGSA VOWEL A TONE FOUR |
| 16A7B | | TANGSA VOWEL A TONE TWO |
| 16A7C | | TANGSA VOWEL E TONE ONE |
| 16A7D | | TANGSA VOWEL E TONE THREE |
| 16A7E | | TANGSA VOWEL E TONE FOUR |
| 16A7F | | TANGSA VOWEL E TONE TWO |
| 16A80 | | TANGSA VOWEL I TONE ONE |
| 16A81 | | TANGSA VOWEL I TONE THREE |
| 16A82 | | TANGSA VOWEL I TONE FOUR |
| 16A83 | | TANGSA VOWEL I TONE TWO |
| 16A84 | | TANGSA VOWEL U TONE ONE |
| 16A85 | | TANGSA VOWEL U TONE THREE |
| 16A86 | | TANGSA VOWEL U TONE FOUR |
| 16A87 | | TANGSA VOWEL U TONE TWO |
| 16A88 | | TANGSA VOWEL AW TONE ONE |
| 16A89 | | TANGSA VOWEL AW TONE THREE |
| 16A8A | | TANGSA VOWEL AW TONE FOUR |
| 16A8B | | TANGSA VOWEL AW TONE TWO |
| 16A8C | | TANGSA VOWEL UI TONE ONE |
| 16A8D | | TANGSA VOWEL UI TONE THREE |
| 16A8E | | TANGSA VOWEL UI TONE FOUR |
| 16A8F | | TANGSA VOWEL UI TONE TWO |
| 16A90 | | TANGSA VOWEL FINAL NG |
| 16A91 | | TANGSA VOWEL UE LONG MID FALLING TONE |
| 16A92 | | TANGSA VOWEL UE SHORT TONE ONE |
| 16A93 | | TANGSA VOWEL AW SHORT TONE TWO |
| 16A94 | | TANGSA VOWEL UE TONE THREE |
| 16A95 | | TANGSA VOWEL UE TONE ONE |
| 16A96 | | TANGSA VOWEL UE TONE FOUR |
| 16A97 | | TANGSA VOWEL UE TONE TWO |
| 16A98 | | TANGSA VOWEL UIU TONE ONE |
| 16A99 | | TANGSA VOWEL UIU TONE THREE |
| 16A9A | | TANGSA VOWEL UIU TONE FOUR |
| 16A9B | | TANGSA VOWEL UIU TONE TWO |
| 16A9C | | TANGSA VOWEL SYLLABIC NASAL TONE ONE |
| 16A9D | | TANGSA VOWEL SYLLABIC NASAL TONE THREE |
| 16A9E | | TANGSA VOWEL SYLLABIC NASAL TONE FOUR |
| 16A9F | | TANGSA VOWEL SYLLABIC NASAL TONE TWO |

## Consonants

| Code | Glyph | Name |
|---|---|---|
| 16AA0 | | TANGSA LETTER KA |
| 16AA1 | | TANGSA LETTER KHA |
| 16AA2 | | TANGSA LETTER GA |
| 16AA3 | | TANGSA LETTER NGA |
| 16AA4 | | TANGSA LETTER SA |
| 16AA5 | | TANGSA LETTER YA |
| 16AA6 | | TANGSA LETTER WA |
| 16AA7 | | TANGSA LETTER PA |
| 16AA8 | | TANGSA LETTER NYA |
| 16AA9 | | TANGSA LETTER PHA |
| 16AAA | | TANGSA LETTER BA |
| 16AAB | | TANGSA LETTER MA |
| 16AAC | | TANGSA LETTER NA |
| 16AAD | | TANGSA LETTER HA |
| 16AAE | | TANGSA LETTER LA |
| 16AAF | | TANGSA LETTER HTA |
| 16AB0 | | TANGSA LETTER TA |
| 16AB1 | | TANGSA LETTER DA |
| 16AB2 | | TANGSA LETTER RA |
| 16AB3 | | TANGSA LETTER NHA |
| 16AB4 | | TANGSA LETTER SHA |
| 16AB5 | | TANGSA LETTER CA |
| 16AB6 | | TANGSA LETTER TSA |
| 16AB7 | | TANGSA LETTER GHA |
| 16AB8 | | TANGSA LETTER HTTA |
| 16AB9 | | TANGSA LETTER THA |

| 16ABA | TANGSA LETTER XA | 16AC1 | TANGSA DIGIT ONE |
|---|---|---|---|
| 16ABB | TANGSA LETTER FA | 16AC2 | TANGSA DIGIT TWO |
| 16ABC | TANGSA LETTER DHA | 16AC3 | TANGSA DIGIT THREE |
| 16ABD | TANGSA LETTER CHA | 16AC4 | TANGSA DIGIT FOUR |
| 16ABE | TANGSA LETTER ZA | 16AC5 | TANGSA DIGIT FIVE |
| | | 16AC6 | TANGSA DIGIT SIX |
| | | 16AC7 | TANGSA DIGIT SEVEN |
| | | 16AC8 | TANGSA DIGIT EIGHT |
| | | 16AC9 | TANGSA DIGIT NINE |

## Digits

| 16AC0 | TANGSA DIGIT ZERO |
|---|---|

## Unicode Properties

16A70;TANGSA VOWEL O TONE ONE;Lo;0;L;;;;;N;;;;;
16071;TANGSA VOWEL O TONE THREE;Lo;0;L;;;;;N;;;;;
Etc.

16AC0;TANGSA DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
16AC1;TANGSA DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
16AC2;TANGSA DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
16AC3;TANGSA DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
16AC4;TANGSA DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
16AC5;TANGSA DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
16AC6;TANGSA DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
16AC7;TANGSA DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
16AC8;TANGSA DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
16AC9;TANGSA DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;

# Examples

(Note: As far as we know the only printed document in the script was part of the document produced by the Script Committee in 2020, samples of which appear in Figures 3-6)

*Figure 1: Full list of Lakhum Mossang's script (2003 version)*

*Figure 2: Wihu Song Manuscript written by Lakhum Mossang*

*Figure 3: Page 1, document produced by Tangsa Script Development Committee, January 2020*

## TANGSA SCRIPT DEVELOPMENT COMMITTEE

**HISTORICAL PROFILE :-** *In order to preserve our various Tangsa Sub-Tribes dialects our well known Pioneer Shri. Lakhum Jogka Mossang started studying & researching on developing the Tangsa Script in the year 1990. At the meantime he has sacrificed many thing while researching and propagating the Script.*

*However fortunately, after conducting several meetings and campaigns as supported by various Public Leaders, Social Workers and Publics on 2nd Nov. 2019 a meeting held at Jairampur under the conduct of TC&LS the Script was unanimously accepted and declared as the Tangsa Script by the representatives of various Sub-Tribes of Tangsa and on the same day the regular committee body was also formed as "Tangsa Script Development Committee(TSDC)".*

**SOFTWARE STATUS:-** *The specific software for this Script is also already designed and created since few years ago by one of a well-known Australian Professor Stephen Morey along with his team. This software can be easily installed in laptops/desktops and with the help of the same the script can be typed and printed easily.*

**STATUS OF SCRIPT RECOGNITION APPROVAL FROM THE GOVERNMENT:-** *All the essential required documents and necessary papers has been submitted to the Directorate of Elementary Education (DEE), Itanagar (A.P.) by the Committee of Tangsa Script and the concern Directorate assured positively upon the approval and further necessary actions.*

**APPEAL TO ALL TANGSA PEOPLE:-** *First of all we on behalf of the Tangsa Script Development Committee (TSDC) would like to sincerely THANK all the individuals and Sub-Tribes Associations those who has financially contributed to support for preparing & printing out these leaflets.*

*We highly appreciate and encourage such individuals & community's associations to support and co-operate with us in such manners for the development of our Script till its final stage.*

Shri. Kamjai Taisim
**V/President, TSDC**
Contact :- +91-9774209575

Shri Sengkhum Mossang
**General Secy., TSDC**
Contact :- +91-7641023479

*Figure 4: Page 2, document produced by Tangsa Script Development Committee, January 2020*

## IMPORTENCE OF DEVELOPING TANGSA SCRIPT.

1. Each and every sub - Tribe dialects that are in the constant fear of extinction can be preserved for generations to come through this script.

2. The ability to understand the dialects among our Tangsa Tribe can be restored through this script paving the way for harmonious existence as one single Tangsa Tribe.

3. The phonetic sound in every word can be differentiated with the help of this script.

4. All of our Folk songs can be preserved through this script .

5. If we value this script, our dialects can be introduced as third language in the elementary schools which will guard our children from loosing own dialects.

6. Our Tribe's recognition in the international arena as one Tribe can be made known if this script is once gets registered that will certainly attract the scholars and would help from getting extinct.

### Executive Committee Members :-

| 1. | **Vice President** | : Shri Kamjai Taisim (Over all Administration) |
| 2. | **Vice President** | : Shri Nanman Jugli ( Field Administration ) |
| 3. | **General Secretary** | : Shri Sengkhum Mossang . |
| 4. | **Treasurer** | : Shri Phanchang Tikhak . |

The following members has been selected as committee members comprising all sub-tribes of Tangsa for further guidance and correspondence: -

1. Shri Jokthai Mossang
2. Shri Wanglung Mossang
3. Shri Tenlung Mossang
4. Shri Wangong Mossang.
5. Shri Kamtu Mamai.
6. Dr. Wangraw Taidong.
7. Shri Sengkam Jugli.
8. Shri T. John Jugli.
9. Shri Izmir Tikhak
10. Shri C. Simai.
11. Shri H.K.Morang.
12. Shri Salman Mungrey.
13. Shri Kimlong Lungri.
14. Shri Nyemkha Lungri.
15. Shri Honmey Mitai .
16. Shri Thangngam Tangha.
17. Shri Sengwang Sungkho.
18. Shri Wenkheng Solting .
19. Shri Gopang Ngemu .
20. Shri Wanglong Ronrang .
21. Shri Sheykhum Rongrang
22. Shri Sengman Rongrang .
23. Shri Tehon Ronrang.

Diverse way of expressing in Tangsa dialects

Mossang- How are you/ Are you fine?

ᒪᗄᗯᒐᕽᚳ ᕽᒪ

Moklum-

ᒪᒫᗯᒐᕽᚳ ᐺᕽ

Longchang-

ᒪᕽᚳᚴ ᕽᒪ

Kimsing-

ᒪᕽᕽᒐᕼ ᙎᘺ

Longri-

ᒪᕽᕽᚳ ᐴᕼ

Mungrey-

ᒪᒫᒐᕼ ᙈᒪ

Cholim-

ᒪᒫᒐᕼᕽᚳ ᒪᙈᒪ

17

Local proverbs
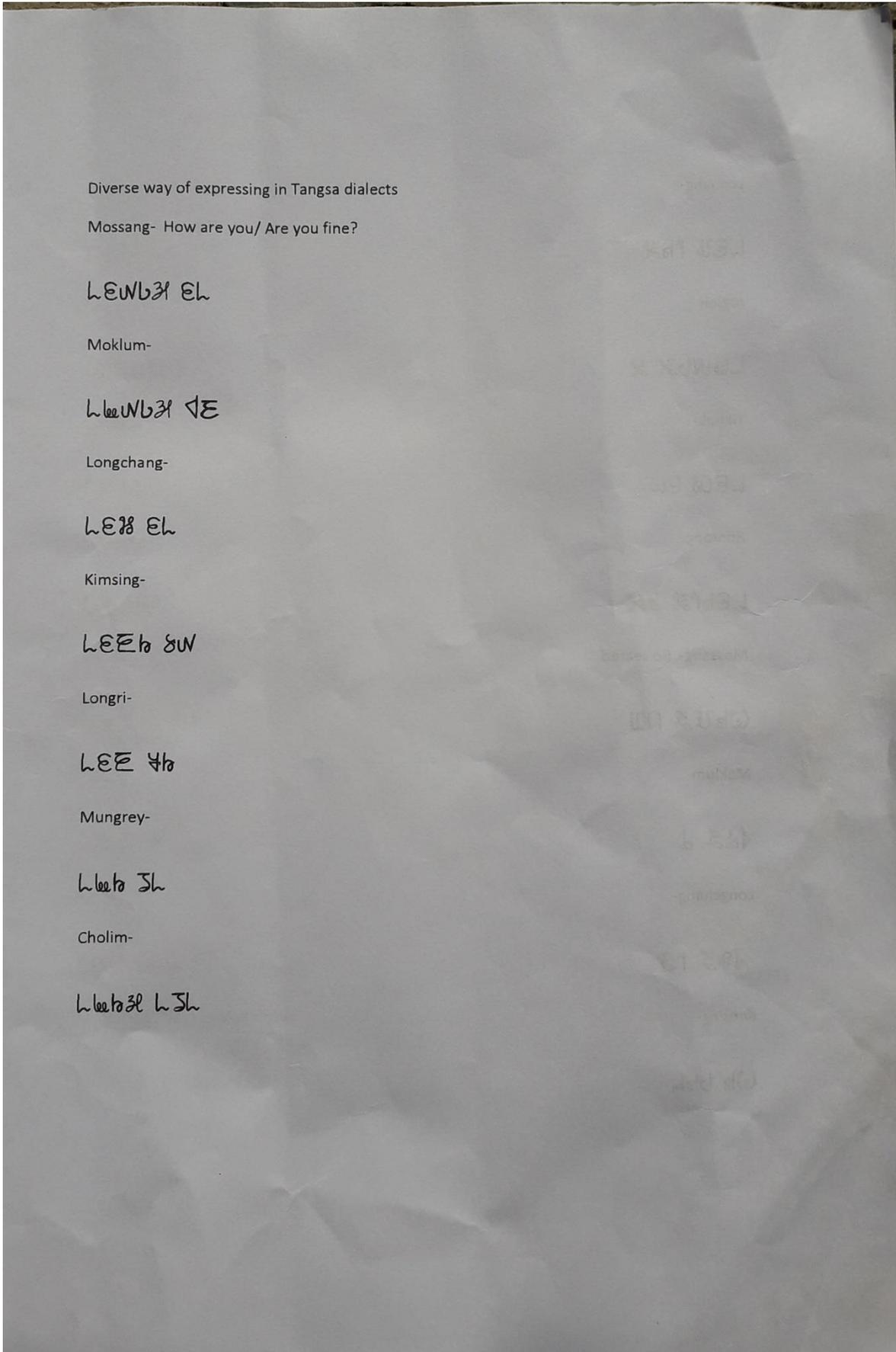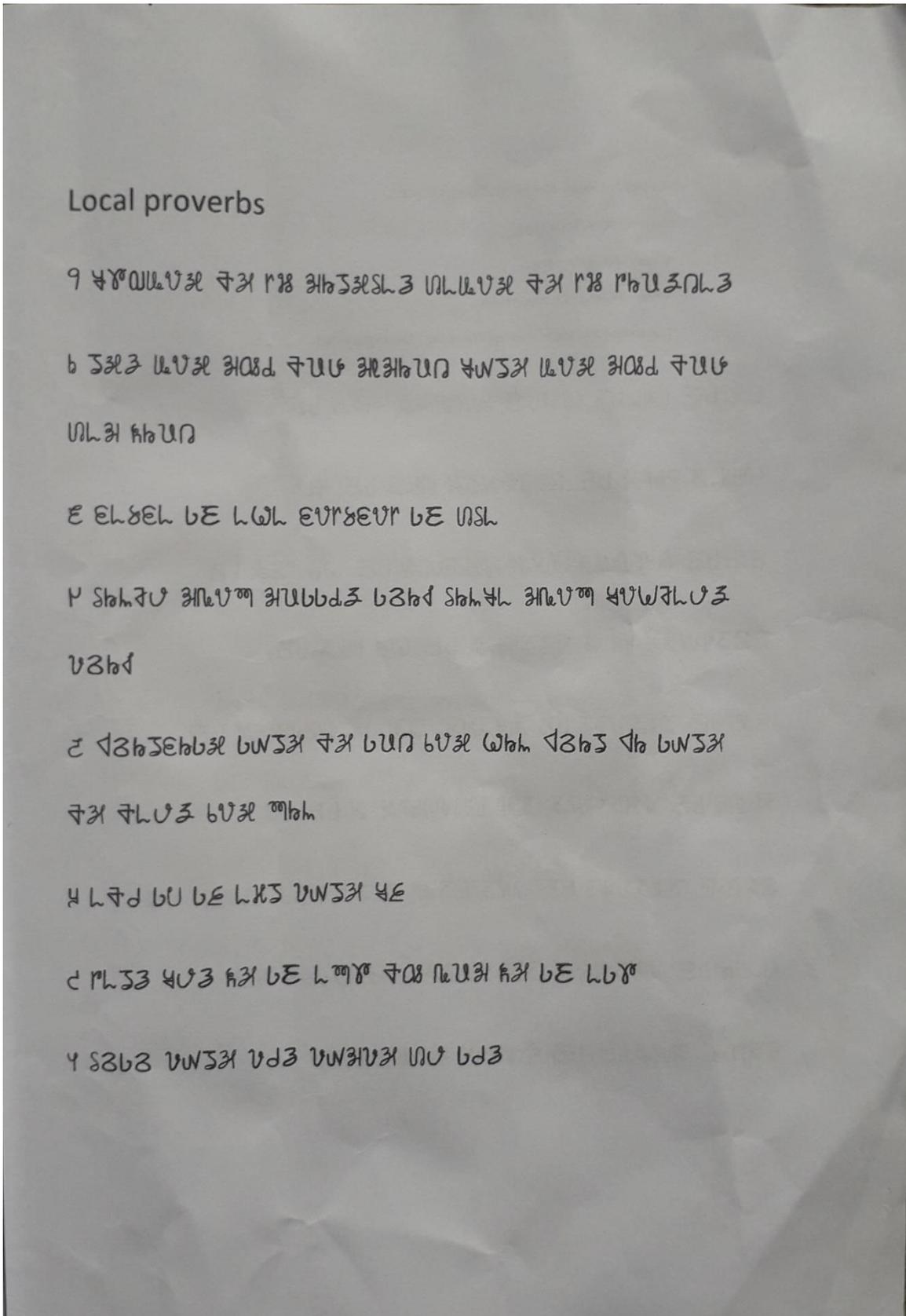
*Figure 7: Revised list of Lakhum Mossang Characters January 2020*
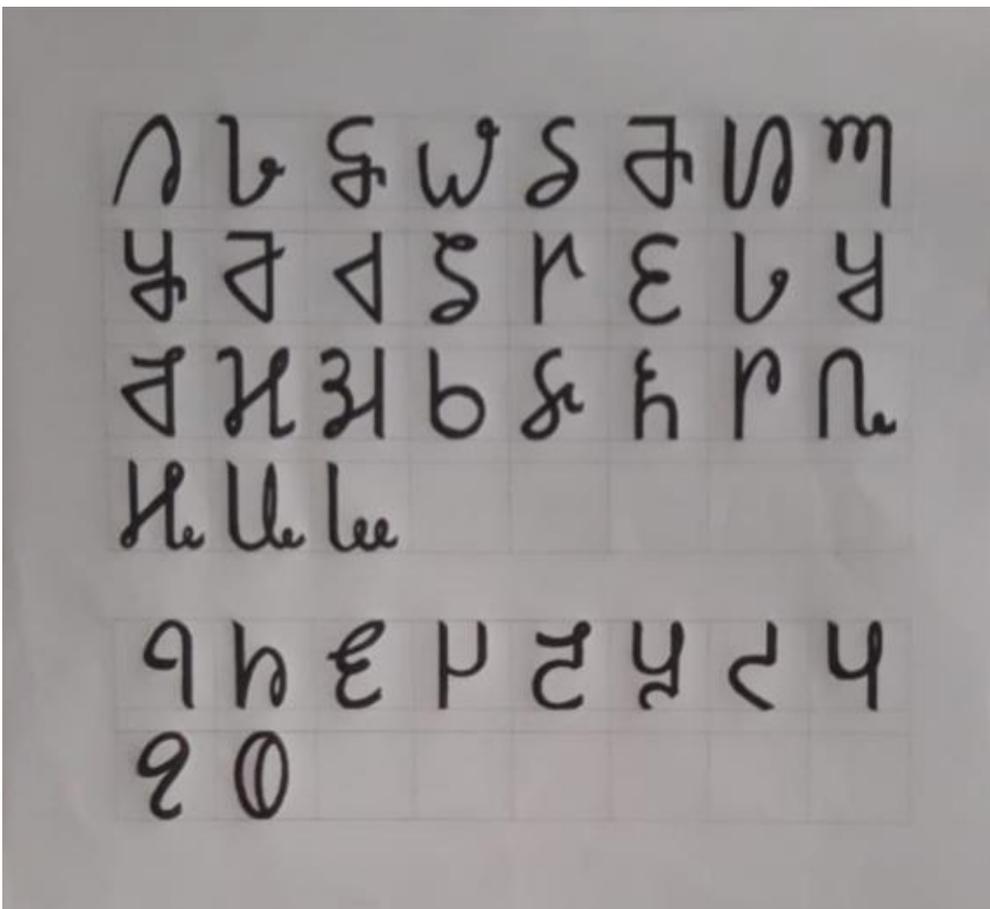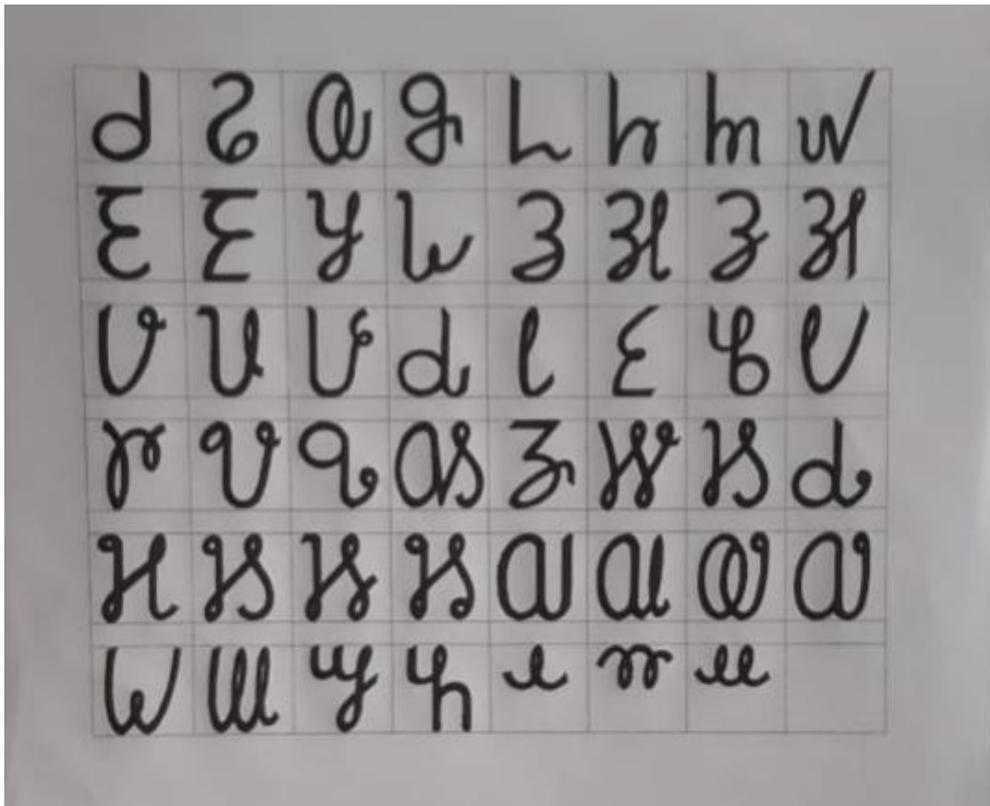
*Figure 8: Samples of first two 'lessons' of the draft Primer, April 2020*

ᲕᲮᲡᲣᲕ Ი                                                    Ი

**(Lesson 1)**

ᲡᲧᲠᲤᲘᲚ (Vowels)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| oz | oc | oq | ox | az | ac | aq | ax |
| vz | vc | vq | vx | ez | ec | eq | ex |
| iz | ic | iq | ix | uz | uc | uq | ux |
| uiz | uic | uiq | uix | awz | awc | awq | awx |
| eng | uex | uezz | awx | uec | uec | ueq | uex |
| uiuz | uiuc | uiuq | uiux | mz | mc | mq | mx |

ᲡᲧᲠᲤᲡᲚ (Consonants)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| k | kh | g | ng | s | y | w | p |
| ny | ph | b | m | n | h | l | ht |
| t | d | r | nh | sh | j | ts | gh |
| htt | th | x | f | dh | ch | z | |

ᲚᲘᲠᲡᲚᲠᲘᲡ (Numerals)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

(Lesson 2)

ᑯ ᑰ ᑰ ᑰᖅ ᑯᐃ ᑰᐃ ᑰᐃᖅ ᑯᑲ ᑰᑲ ᑰᑲᖅ ᑯᕐ ᑰᕐ ᑰᕐᖅ ᑯᖕ ᑰᖕ ᑰᖕᖅ

| ᓇᑯ ᓇᑰ ᓇᑰ ᓇᑰᖅ | ᓇᑯᐃ ᓇᑰᐃ ᓇᑰᐃᖅ | ᓇᑯᑲ ᓇᑰᑲ ᓇᑰᑲᖅ | ᓇᑯᕐ ᓇᑰᕐ ᓇᑰᕐᖅ | ᓇᑯᖕ ᓇᑰᖕ ᓇᑰᖕᖅ |
|---|---|---|---|---|
| ᕕᑯ ᕕᑰ ᕕᑰ ᕕᑰᖅ | ᕕᑯᐃ ᕕᑰᐃ ᕕᑰᐃᖅ | ᕕᑯᑲ ᕕᑰᑲ ᕕᑰᑲᖅ | ᕕᑯᕐ ᕕᑰᕐ ᕕᑰᕐᖅ | ᕕᑯᖕ ᕕᑰᖕ ᕕᑰᖕᖅ |
| ᕝᑯ ᕝᑰ ᕝᑰ ᕝᑰᖅ | ᕝᑯᐃ ᕝᑰᐃ ᕝᑰᐃᖅ | ᕝᑯᑲ ᕝᑰᑲ ᕝᑰᑲᖅ | ᕝᑯᕐ ᕝᑰᕐ ᕝᑰᕐᖅ | ᕝᑯᖕ ᕝᑰᖕ ᕝᑰᖕᖅ |
| ᐅᑯ ᐅᑰ ᐅᑰ ᐅᑰᖅ | ᐅᑯᐃ ᐅᑰᐃ ᐅᑰᐃᖅ | ᐅᑯᑲ ᐅᑰᑲ ᐅᑰᑲᖅ | ᐅᑯᕐ ᐅᑰᕐ ᐅᑰᕐᖅ | ᐅᑯᖕ ᐅᑰᖕ ᐅᑰᖕᖅ |
| ᖃᑯ ᖃᑰ ᖃᑰ ᖃᑰᖅ | ᖃᑯᐃ ᖃᑰᐃ ᖃᑰᐃᖅ | ᖃᑯᑲ ᖃᑰᑲ ᖃᑰᑲᖅ | ᖃᑯᕐ ᖃᑰᕐ ᖃᑰᕐᖅ | ᖃᑯᖕ ᖃᑰᖕ ᖃᑰᖕᖅ |
| ᕿᑯ ᕿᑰ ᕿᑰ ᕿᑰᖅ | ᕿᑯᐃ ᕿᑰᐃ ᕿᑰᐃᖅ | ᕿᑯᑲ ᕿᑰᑲ ᕿᑰᑲᖅ | ᕿᑯᕐ ᕿᑰᕐ ᕿᑰᕐᖅ | ᕿᑯᖕ ᕿᑰᖕ ᕿᑰᖕᖅ |
| ᒪᑯ ᒪᑰ ᒪᑰ ᒪᑰᖅ | ᒪᑯᐃ ᒪᑰᐃ ᒪᑰᐃᖅ | ᒪᑯᑲ ᒪᑰᑲ ᒪᑰᑲᖅ | ᒪᑯᕐ ᒪᑰᕐ ᒪᑰᕐᖅ | ᒪᑯᖕ ᒪᑰᖕ ᒪᑰᖕᖅ |
| ᒻᑯ ᒻᑰ ᒻᑰ ᒻᑰᖅ | ᒻᑯᐃ ᒻᑰᐃ ᒻᑰᐃᖅ | ᒻᑯᑲ ᒻᑰᑲ ᒻᑰᑲᖅ | ᒻᑯᕐ ᒻᑰᕐ ᒻᑰᕐᖅ | ᒻᑯᖕ ᒻᑰᖕ ᒻᑰᖕᖅ |
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| ᐸᑯ ᐸᑰ ᐸᑰ ᐸᑰᖅ | ᐸᑯᐃ ᐸᑰᐃ ᐸᑰᐃᖅ | ᐸᑯᑲ ᐸᑰᑲ ᐸᑰᑲᖅ | ᐸᑯᕐ ᐸᑰᕐ ᐸᑰᕐᖅ | ᐸᑯᖕ ᐸᑰᖕ ᐸᑰᖕᖅ |
| ᔪᑯ ᔪᑰ ᔪᑰ ᔪᑰᖅ | ᔪᑯᐃ ᔪᑰᐃ ᔪᑰᐃᖅ | ᔪᑯᑲ ᔪᑰᑲ ᔪᑰᑲᖅ | ᔪᑯᕐ ᔪᑰᕐ ᔪᑰᕐᖅ | ᔪᑯᖕ ᔪᑰᖕ ᔪᑰᖕᖅ |
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| ᖕᑯ ᖕᑰ ᖕᑰ ᖕᑰᖅ | ᖕᑯᐃ ᖕᑰᐃ ᖕᑰᐃᖅ | ᖕᑯᑲ ᖕᑰᑲ ᖕᑰᑲᖅ | ᖕᑯᕐ ᖕᑰᕐ ᖕᑰᕐᖅ | ᖕᑯᖕ ᖕᑰᖕ ᖕᑰᖕᖅ |
| ᖠᑯ ᖠᑰ ᖠᑰ ᖠᑰᖅ | ᖠᑯᐃ ᖠᑰᐃ ᖠᑰᐃᖅ | ᖠᑯᑲ ᖠᑰᑲ ᖠᑰᑲᖅ | ᖠᑯᕐ ᖠᑰᕐ ᖠᑰᕐᖅ | ᖠᑯᖕ ᖠᑰᖕ ᖠᑰᖕᖅ |
| ᕗᑯ ᕗᑰ ᕗᑰ ᕗᑰᖅ | ᕗᑯᐃ ᕗᑰᐃ ᕗᑰᐃᖅ | ᕗᑯᑲ ᕗᑰᑲ ᕗᑰᑲᖅ | ᕗᑯᕐ ᕗᑰᕐ ᕗᑰᕐᖅ | ᕗᑯᖕ ᕗᑰᖕ ᕗᑰᖕᖅ |
| ᔭᑯ ᔭᑰ ᔭᑰ ᔭᑰᖅ | ᔭᑯᐃ ᔭᑰᐃ ᔭᑰᐃᖅ | ᔭᑯᑲ ᔭᑰᑲ ᔭᑰᑲᖅ | ᔭᑯᕐ ᔭᑰᕐ ᔭᑰᕐᖅ | ᔭᑯᖕ ᔭᑰᖕ ᔭᑰᖕᖅ |
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| ᖦᑯ ᖦᑰ ᖦᑰ ᖦᑰᖅ | ᖦᑯᐃ ᖦᑰᐃ ᖦᑰᐃᖅ | ᖦᑯᑲ ᖦᑰᑲ ᖦᑰᑲᖅ | ᖦᑯᕐ ᖦᑰᕐ ᖦᑰᕐᖅ | ᖦᑯᖕ ᖦᑰᖕ ᖦᑰᖕᖅ |
| ᖅᑯ ᖅᑰ ᖅᑰ ᖅᑰᖅ | ᖅᑯᐃ ᖅᑰᐃ ᖅᑰᐃᖅ | ᖅᑯᑲ ᖅᑰᑲ ᖅᑰᑲᖅ | ᖅᑯᕐ ᖅᑰᕐ ᖅᑰᕐᖅ | ᖅᑯᖕ ᖅᑰᖕ ᖅᑰᖕᖅ |
| ᖨᑯ ᖨᑰ ᖨᑰ ᖨᑰᖅ | ᖨᑯᐃ ᖨᑰᐃ ᖨᑰᐃᖅ | ᖨᑯᑲ ᖨᑰᑲ ᖨᑰᑲᖅ | ᖨᑯᕐ ᖨᑰᕐ ᖨᑰᕐᖅ | ᖨᑯᖕ ᖨᑰᖕ ᖨᑰᖕᖅ |
| ᖬᑯ ᖬᑰ ᖬᑰ ᖬᑰᖅ | ᖬᑯᐃ ᖬᑰᐃ ᖬᑰᐃᖅ | ᖬᑯᑲ ᖬᑰᑲ ᖬᑰᑲᖅ | ᖬᑯᕐ ᖬᑰᕐ ᖬᑰᕐᖅ | ᖬᑯᖕ ᖬᑰᖕ ᖬᑰᖕᖅ |
| ᖮᑯ ᖮᑰ ᖮᑰ ᖮᑰᖅ | ᖮᑯᐃ ᖮᑰᐃ ᖮᑰᐃᖅ | ᖮᑯᑲ ᖮᑰᑲ ᖮᑰᑲᖅ | ᖮᑯᕐ ᖮᑰᕐ ᖮᑰᕐᖅ | ᖮᑯᖕ ᖮᑰᖕ ᖮᑰᖕᖅ |
| ᖰᑯ ᖰᑰ ᖰᑰ ᖰᑰᖅ | ᖰᑯᐃ ᖰᑰᐃ ᖰᑰᐃᖅ | ᖰᑯᑲ ᖰᑰᑲ ᖰᑰᑲᖅ | ᖰᑯᕐ ᖰᑰᕐ ᖰᑰᕐᖅ | ᖰᑯᖕ ᖰᑰᖕ ᖰᑰᖕᖅ |
| ᕘᑯ ᕘᑰ ᕘᑰ ᕘᑰᖅ | ᕘᑯᐃ ᕘᑰᐃ ᕘᑰᐃᖅ | ᕘᑯᑲ ᕘᑰᑲ ᕘᑰᑲᖅ | ᕘᑯᕐ ᕘᑰᕐ ᕘᑰᕐᖅ | ᕘᑯᖕ ᕘᑰᖕ ᕘᑰᖕᖅ |
| ᖲᑯ ᖲᑰ ᖲᑰ ᖲᑰᖅ | ᖲᑯᐃ ᖲᑰᐃ ᖲᑰᐃᖅ | ᖲᑯᑲ ᖲᑰᑲ ᖲᑰᑲᖅ | ᖲᑯᕐ ᖲᑰᕐ ᖲᑰᕐᖅ | ᖲᑯᖕ ᖲᑰᖕ ᖲᑰᖕᖅ |
| ᖴᑯ ᖴᑰ ᖴᑰ ᖴᑰᖅ | ᖴᑯᐃ ᖴᑰᐃ ᖴᑰᐃᖅ | ᖴᑯᑲ ᖴᑰᑲ ᖴᑰᑲᖅ | ᖴᑯᕐ ᖴᑰᕐ ᖴᑰᕐᖅ | ᖴᑯᖕ ᖴᑰᖕ ᖴᑰᖕᖅ |
| ᕚᑯ ᕚᑰ ᕚᑰ ᕚᑰᖅ | ᕚᑯᐃ ᕚᑰᐃ ᕚᑰᐃᖅ | ᕚᑯᑲ ᕚᑰᑲ ᕚᑰᑲᖅ | ᕚᑯᕐ ᑯᑰᕐ ᕚᑰᕐᖅ | ᕚᑯᖕ ᕚᑰᖕ ᕚᑰᖕᖅ |

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Khämlan Binkhäm and W. Owen (2018). *Orthography and text engineering statement for the Tangshang Naga Unified Orthography*. Published by the authors.

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# Acknowledgements

**ISO/IEC JTC 1/SC 2/WG 2**
**PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS**
**FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646**[2]
**Please fill all the sections A, B and C below.**
**Please read Principles and Procedures Document (P & P) from** http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html **for guidelines and details before filling this form.**
**Please ensure you are using the latest Form from** http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html.
**See also** http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**

**A. Administrative**

1. **Title:** *Tangsa*
2. Requester's name: *Stephen Morey*
3. Requester type (Member body/Liaison/Individual contribution): *Individual contribution*
4. Submission date: *2020*
5. Requester's reference (if applicable): *?*
6. Choose one of the following:
    This is a complete proposal: *X*
    (or) More information will be provided later:

**B. Technical – General**

1. Choose one of the following:
    a. This proposal is for a new script (set of characters): *X*
        Proposed name of script: *Tangsa*
    b. The proposal is for addition of character(s) to an existing block:
        Name of the existing block:
2. Number of characters in proposal: *89*
3. Proposed category (select one from below - see section 2.2 of P&P document):
    A-Contemporary *?*    B.1-Specialized (small collection)    B.2-Specialized (large collection)
    C-Major extinct    D-Attested extinct    E-Minor extinct
    F-Archaic Hieroglyphic or Ideographic    G-Obscure or questionable usage symbols
4. Is a repertoire including character names provided? *yes*
        a. If YES, are the names in accordance with the "character naming guidelines"
            in Annex L of P&P document? *yes*
        b. Are the character shapes attached in a legible form suitable for review? *yes*
5. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for
    publishing the standard? *Stephen Morey and Kellen Parker van Dam*
    If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools
    used:
6. References:
        a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? *yes*
        b. Are published examples of use (such as samples from newspapers, magazines, or other sources)
        of proposed characters attached? *yes*
7. Special encoding issues:
        Does the proposal address other aspects of character data processing (if applicable) such as input,
        presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? *no*

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in 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 http://www.unicode.org/Public/UNIDATA/UCD.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

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[2] Form number: N3102-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03)

23

## C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?     *yes*

    If YES explain     *Introductory proposal by Anshuman Pandey  L2/13-231.*

2. Has contact been made to members of the user community (for example: National Body,
    user groups of the script or characters, other experts, etc.)?     *yes*

    If YES, with whom?     *Tangsa Script Development Committee in India*

    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*

    Reference:     *this document*

4. The context of use for the proposed characters (type of use; common or rare)     *rare, but developing*

    Reference:

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

    If YES, where? Reference:

6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely
    in the BMP?     *no*

    If YES, is a rationale provided?

    If YES, reference:

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

8. Can any of the proposed characters be considered a presentation form of an existing
    character or character sequence?     *no*

    If YES, is a rationale for its inclusion provided?

    If YES, reference:

9. Can any of the proposed characters be encoded using a composed character sequence of either
    existing characters or other proposed characters?     *no*

    If YES, is a rationale for its inclusion provided?

    If YES, reference:

10. Can any of the proposed character(s) be considered to be similar (in appearance or function)
    to an existing character?     *no*

    If YES, is a rationale for its inclusion provided?

    If YES, reference:

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

    If YES, is a rationale for such use provided?     *yes*

    If YES, reference:     *this document*

    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?     *no*

    If YES, reference:

12. Does the proposal contain characters with any special properties such as
    control function or similar semantics?     *no*

    If YES, describe in detail (include attachment if necessary)

13. Does the proposal contain any Ideographic compatibility character(s)?     *no*

    If YES, is the equivalent corresponding unified ideographic character(s) identified?

    If YES, reference: