

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

Doc Type: Working Group Document
Title: Annotations for New Tai Lue block
Source: Eiso Chan (陈永聪)
Status: Individual Contribution to UTC
Action: For consideration by UTC
Date: 2022-05-11

0. Introduction

The Unicode Standard Core Specification shows “The New Tai Lue script uses visual ordering—a characteristic it shares with the Thai and Lao scripts. This means that the four New Tai Lue vowels that occur visually on the left side of their associated consonant are stored ahead of those consonants in text.” But the core specification and the code chart don’t show which four letters are the letters mentioned above, that are recorded in IndicPositionalCategory.txt.

Under “Visual_Order_Left” part, several vowels in Thai, Lao, Tai Viet and New Tai Lue scripts are included. When we checked the Thai, Lao and Tai Viet blocks in the code charts, this kind of vowels are marked with the clear annotations, which precede a consonant in visual order, but there is any annotation in New Tai Lue block. The clear annotations in the code charts will be useful for the end users and the future encoding works.

1. Annotation methods

In Thai and Lao, this kind of vowels are encoded continuously without any break, so it’s better to put the sentence “These vowels precede a consonant in visual order.” before this kind of vowels in the code charts. They are U+0E40 ື, U+0E41 ຸ, U+0E42 ື, U+0E43 ື, U+0E44 ື; U+0EC0 ຸ, U+0EC1 ຸ, U+0EC2 ຸ, U+0EC3 ຸ, U+0EC4 ຸ.

In Tai Viet, this kind of vowels are inserted among other vowels, so it’s better to add the annotations under the code points. They are U+AAB5 ຸ, U+AAB6 ຸ, ..., U+AAB9 ຸ, ..., U+AABB ຸ, U+AABC ຸ.

The encoding order of this kind of vowels in New Tai Lue in the code chart is similar to that of Tai Viet, so the annotation method for Tai Viet is also suitable for New Tai Lue.

2. Which vowels?

IndicPositionalCategory.txt shows they are U+19B5 ຸ, U+19B6 ຸ, U+19B7 ຸ, ..., U+19BA ຸ.

In the paper *Xishuangbanna Dai Script* (《西双版纳傣文》) written by Mr. Dao Shixun (刀世勋) who is one of the important Xishuangbanna Dai Script reformers with Mr. Fu Maoji (傅懋勳) and [WG2 N2242 \(L2/00-290\)](#) submitted by China NB all show the same results. Note that U+19B6 ຸ is not listed separately in N2242.

| | | | | | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ǎ - ㄚ 或字本身 | | ĩ - ㄨ - ㄨ | ũ - ㄩ - ㄩ | ẽ - ㄛ - ㄛ | ɛ̃ - ㄛ - ㄛ | o - ㄛ - ㄛ | o - ㄛ - ㄛ | ũ - ㄨ - ㄨ | ĩ - ㄨ - ㄨ |
| | a - ㄚ - ㄚ | i - ㄨ - ㄨ | u - ㄩ - ㄩ | e - ㄛ - ㄛ | ɛ - ㄛ - ㄛ | o - ㄛ - ㄛ | o - ㄛ - ㄛ | u - ㄨ - ㄨ | ĩ - ㄨ - ㄨ |
| ǎi - ㄚ - ㄚ | ai - ㄚ - ㄚ | | ui - ㄩ - ㄩ | | | oi - ㄛ - ㄛ | oi - ㄛ - ㄛ | ui - ㄨ - ㄨ | ĩi - ㄨ - ㄨ |
| ǎu - ㄚ - ㄚ | au - ㄚ - ㄚ | iu - ㄨ - ㄨ | | eu - ㄛ - ㄛ | ɛu - ㄛ - ㄛ | | | | ĩu - ㄨ - ㄨ |
| ǎŋ - ㄚ - ㄚ | aŋ - ㄚ - ㄚ | iŋ - ㄨ - ㄨ | uŋ - ㄩ - ㄩ | eŋ - ㄛ - ㄛ | ɛŋ - ㄛ - ㄛ | oŋ - ㄛ - ㄛ | oŋ - ㄛ - ㄛ | uŋ - ㄨ - ㄨ | ĩŋ - ㄨ - ㄨ |
| ǎn - ㄚ - ㄚ | an - ㄚ - ㄚ | in - ㄨ - ㄨ | un - ㄩ - ㄩ | en - ㄛ - ㄛ | ɛn - ㄛ - ㄛ | on - ㄛ - ㄛ | on - ㄛ - ㄛ | un - ㄨ - ㄨ | ĩn - ㄨ - ㄨ |
| ǎm - ㄚ - ㄚ | am - ㄚ - ㄚ | im - ㄨ - ㄨ | um - ㄩ - ㄩ | em - ㄛ - ㄛ | ɛm - ㄛ - ㄛ | om - ㄛ - ㄛ | om - ㄛ - ㄛ | um - ㄨ - ㄨ | ĩm - ㄨ - ㄨ |
| ǎk - ㄚ - ㄚ | ak - ㄚ - ㄚ | ik - ㄨ - ㄨ | uk - ㄩ - ㄩ | ek - ㄛ - ㄛ | ɛk - ㄛ - ㄛ | ok - ㄛ - ㄛ | ok - ㄛ - ㄛ | uk - ㄨ - ㄨ | ĩk - ㄨ - ㄨ |
| ǎt - ㄚ - ㄚ | at - ㄚ - ㄚ | it - ㄨ - ㄨ | ut - ㄩ - ㄩ | et - ㄛ - ㄛ | ɛt - ㄛ - ㄛ | ot - ㄛ - ㄛ | ot - ㄛ - ㄛ | ut - ㄨ - ㄨ | ĩt - ㄨ - ㄨ |
| ǎp - ㄚ - ㄚ | ap - ㄚ - ㄚ | ip - ㄨ - ㄨ | up - ㄩ - ㄩ | ep - ㄛ - ㄛ | ɛp - ㄛ - ㄛ | op - ㄛ - ㄛ | op - ㄛ - ㄛ | up - ㄨ - ㄨ | ĩp - ㄨ - ㄨ |

Fig. 1 Vowel list in the paper Xishuangbanna Dai Script

| | |
|-----|-----|
| ㄚ | 041 |
| ㄛ | 042 |
| - ㄚ | 043 |
| - ㄨ | 044 |
| ㄚ- | 045 |

Fig. 2 041, 042 & 045 in WG2 N2242

3. Suggestion

I suggest update the annotation information for U+19B5 ᦅ, U+19B6 ᦆ, U+19B7 ᦇ, and U+19BA ᦈ in NamesList.txt as below.

| | |
|------|---|
| 19B5 | NEW TAI LUE VOWEL SIGN E |
| | * precedes consonant in visual order |
| 19B6 | NEW TAI LUE VOWEL SIGN AE |
| | * precedes consonant in visual order |
| 19B7 | NEW TAI LUE VOWEL SIGN O |
| | * precedes consonant in visual order |
| 19BA | NEW TAI LUE VOWEL SIGN AY |
| | * precedes consonant in visual order |

4. Bibliography

刀世勋: 《西双版纳傣文》, 《民族语文》, 1980.04, pp. 70-75

GB/T 28176-2011 *Information technology—Universal multiple-octet coded character set—Universal keyboard layout of the alphanumeric zone for New Xishuang Banna Dai*

(End of Document)