

Universal Multiple-Octet Coded Character Set
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Title: Proposal to encode additional Tai Viet characters for the Jinping Dai
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0 Executive Summary

This proposal is a revised version of:

- [L2/20-207](#): “Preliminary proposal to encode the Tai Khao script in UCS”
- [L2/22-098](#): “Updated proposal to encode the Tai Don script in UCS”
- [L2/22-210](#): “Final proposal to add 22 characters for Tai Don writing system”

and it incorporates comments made by the UTC Script Ad Hoc Committee and other experts in:

- [L2/21-016](#): “Recommendations to UTC #166 January 2021 on Script Proposals”
- [L2/22-068](#): “Recommendations to UTC #171 April 2022 on Script Proposals”
- [L2/20-208](#): “A response to Kushim JIANG, ‘Preliminary proposal to encode the Tai Khao script in UCS’”
- [L2/22-099](#): “Comments on ‘Updated proposal to encode the Tai Don script’”
- [L2/22-272](#): “Comments on the Tai Don or Tai Khao encoding”
- [L2/22-273](#): “Response to Eiso CHAN’s ‘Comments on the Tai Don or Tai Khao encoding’”

to propose adding 22 Tai Viet characters in order to support the Jinping Dai writing system.

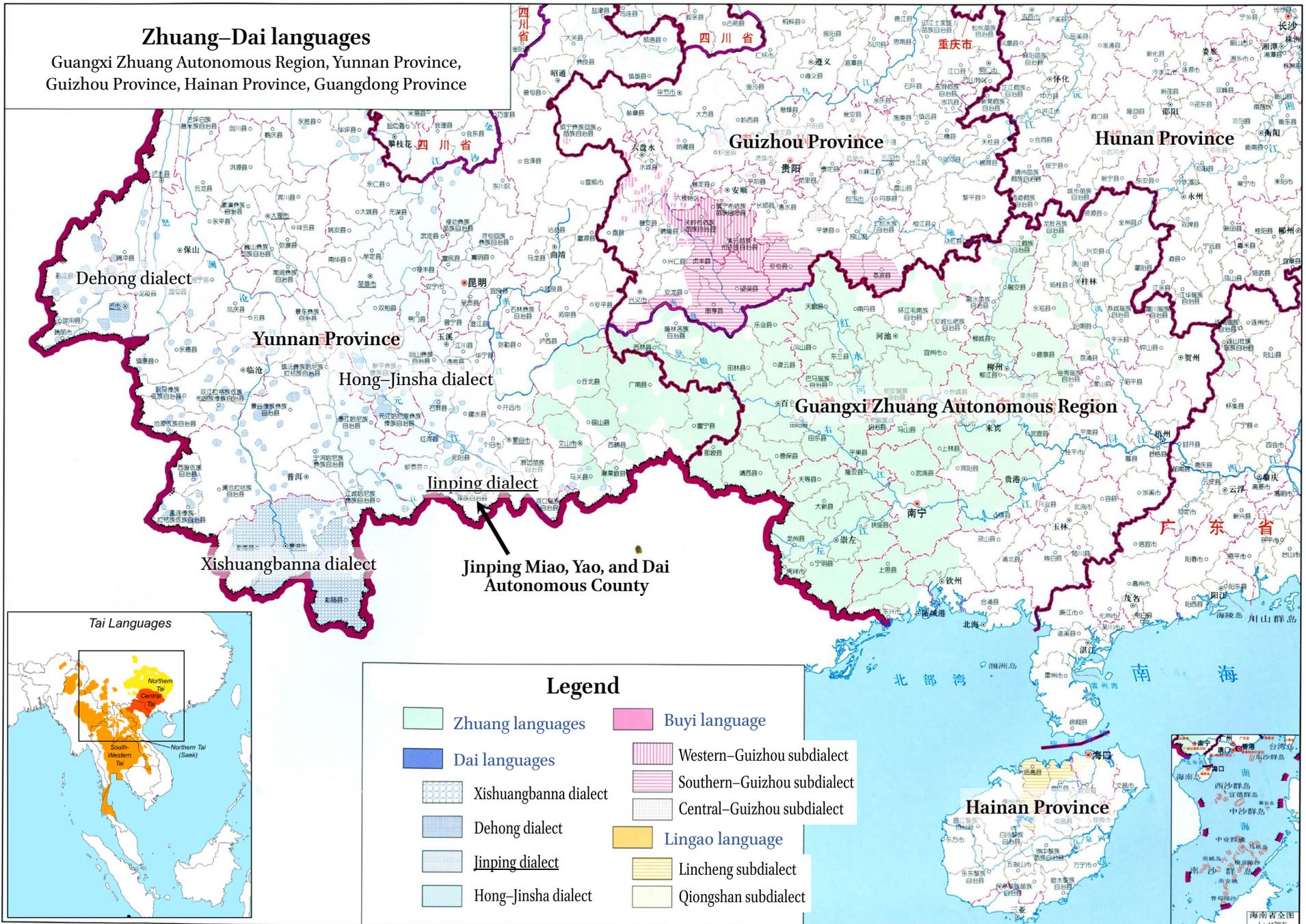
1 Introduction

The Jinping Dai writing system (金平傣文) is used to record the Jinping dialect of the Dai languages (傣语金平方言) by Dai Duan people (傣端) of the Dai minzu (傣族), where:

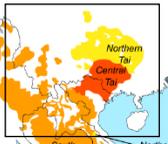
- “Jinping” comes from the place name of the main settlement of Dai Duan people, that is, Jinping Miao, Yao, and Dai Autonomous County (金平苗族瑶族傣族自治县).
- “Dai languages” is the collective name for the various dialects of the [Tai languages](#) (ISO 639-2/5: [tai](#)) in China. The words Dai, Tai and Thai are cognate. The Dai languages in China are usually divided into four dialects ([ZHOU & LUO, 2001](#)), please see the figure on the next page taken from the [Language Atlas of China](#) and [Wikimedia](#).
- “Dai Duan people” comes from the endonym /tăi⁴³ dɔn⁵⁵/ ([Tai Dón people](#) in Vietnamese), meaning “White Dai” (白傣). Therefore, the dialect spoken by the Dai Duan people is also known as [Tai Dón language](#) (ISO 639-3: [twh](#)) and the writing system is also known as Tai Dón writing system.
- Another endonym for Dai Duan people is /tăi⁴³ xau³³/ “Tai Khao people” (傣皓), also meaning “White Dai”.
- Dai Duan people also live in Vietnam, mainly in Lai Châu Province, Sơn La Province and Điện Biên Province ([LAN et al, 2015](#)); in Laos, mainly in Bolikhamxai Province ([HAO et al, 2016](#)); and in Thailand. This proposal does not cover their writing systems due to information and contact limitations.

Zhuang–Dai languages

Guangxi Zhuang Autonomous Region, Yunnan Province, Guizhou Province, Hainan Province, Guangdong Province



Tai Languages



Legend

- Zhuang languages
- Dai languages
- Xishuangbanna dialect
- Dehong dialect
- Jinping dialect
- Hong-Jinsha dialect
- Buyi language
- Western-Guizhou subdialect
- Southern-Guizhou subdialect
- Central-Guizhou subdialect
- Lingao language
- Lincheng subdialect
- Qiongshan subdialect

The Jinping Dai writing system is related to the Tai Viet script (ISO 15924: [Tavt, 359](#)) which has been partially encoded with the release of Unicode version 5.2. According to [L2/06–041 \(NGÔ & BRASE, 2006\)](#) and [L2/07–039R \(BRASE, 2007\)](#), the Tai Viet script was constructed from several writing system, they are, Tai Dam, Tai Dón, Tai Daeng and Thai Song, which were considered to be cognate, to become a universal script used in Vietnam. The result of the encoding, according to [L2/07–039R \(BRASE, 2007\)](#), “is focused on the use of the script by the Tai Dam of Sơn La Province, Vietnam”. The existing character set “contains the traditional Sơn La character set as a whole, plus three pairs of aspirated consonants required by the Tai Dón language of Lai Châu Province”. And,

Tai Dón can be written with the resulting character set, but only if one uses the orthographic conventions of Sơn La Province. If one wishes to write Tai Dón in one of their traditional styles, some additional characters will probably be needed. The author of [L2/07–039R \(BRASE, 2007\)](#) has identified four consonants and two vowels which have definite or probably contrast with characters from the Sơn La tradition, and 12 to 14 characters which use significantly different forms, although not in a contrastive way. However, these require additional study, and hopefully the input of someone who is an expert in Tai Dón, before they can be proposed for the character set.

To meet the needs of the Jinping Dai writing system in China, this proposal will request to add all characters used in the Jinping Dai writing system to the existing character set of Tai Viet script.

2 Script Details

2.1 Encoding Model

The existing encoding model of the Tai Viet script is based on visual order. Therefore, the character used in Jinping Dai will be added either as a base character or as a combining mark and no reordering will occur.

2.2 Character Name

The character name consists of the writing system name with the Latinization string to the character. There is currently no Latinization scheme for Jinping Dai in use. This proposal gives a Latinization scheme modified from the Latinization scheme of New Tai Lue script (ISO 15924: [Talu, 354](#)) showing below.

/b/	/ʔ/	/d/	/ts/	/k/	/x/	/kʰ/	/h/	/t/	/tʰ/	/p/	/pʰ/	/tsʰ/	/f/	/s/	/n/	/m/	/l/	/ŋ/	/v/	/j/	/r/
B	Q	D	TS	K	X	KH	H	T	TH	P	PH	TSH	F	S	N	M	L	NG	V	Y	NY
/a/	/aː/	/i/	/e/	/ɛ/	/ɔ/	/o/	/u/	/ə/	/uː/												
A	AA	I	EE	EH	O	OO	U	E	UE												

2.3 Consonants

[Table 1](#) shows a list of the consonant letters used in Tai Viet, Tai Dam and Tai Dón writing system. The letters used in Tai Viet, Tai Dam and Tai Dón in Mường Lay (Điện Biên Province), Phong Thổ (Lai Châu Province), Phú Yên (Sơn La Province) and Mộc Châu (Sơn La Province) are taken from *Bảng chữ Thái các vùng và chữ Thống nhất* quoted by [CHAN, 2022](#). And the letters used in Jinping Dai are taken from [DAO et al, 2019](#).

The phoneme of each letter comes from [L2/22–272 \(BRASE, 2008\)](#). The difference between the phonetic values in Jiumeng Village, Mengla Town, Jinping County (金平县勐拉镇旧勐村) (shown in [Appendix A.1](#)) and [Table 1](#) are:

- The high class and low class are the exact opposite, for example, *n* /k_L/ belongs to the high class in Jinping;
- /tɕ/ corresponds /ts/, /tɕʰ/ corresponds to /tsʰ/, /ɲ/ corresponds to /r/.

Table 1 Consonants used in Tai Don writing system

Codepoint	Tai Viet	Tai Dam	Tai Dón				
			Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA80							
	/k _L /	/k _L /	/k _L /	/k _L /	/k _L /	/k _L /	/k _L /
AA81							
	/k _H /	/k _H /		/x _H /		/x _H /	
AAC3							
			/k _H /	/k _H /	/k _H /		/k _H /
AA82							
	/k ^h _L /		/k ^h _L /	/k ^h _L /	/k ^h _L /		
AA83							
	/k ^h _H /		/k ^h _H /		/k ^h _H /		
AA84							
	/x _L /	/x _L /	/x _L /	/x _L /	/x _L /	/x _L /	/x _L /
AA85							
	/x _H /	/x _H /	/x _H /		/x _H /	/t ^h _H /	
AA88							
	/ŋ _L /	/ŋ _L /					
AAC4							
			/ŋ _L /	/ŋ _L /	/ŋ _L /	/v _L /	/v _L /
AA89							
	/ŋ _H /	/ŋ _H /	/ŋ _H /	/ŋ _H /	/ŋ _H /	/v _H /	/v _H /
AA8A							
	/tɕ _L /	/tɕ _L /	/tɕ _L /	/tɕ _L /	/tɕ _L /	/tɕ _L /	/tɕ _L /
AA8B							
	/tɕ _H /	/tɕ _H /	/tɕ _H /	/tɕ _H /	/tɕ _H /	/tɕ _H /	/tɕ _H /
AA8C							
	/tɕ ^h _L /		/tɕ ^h _L /	/tɕ ^h _L /	/tɕ ^h _L /		
AA8D							
	/tɕ ^h _H /		/tɕ ^h _H /	/tɕ ^h _H /	/tɕ ^h _H /		
AA8E							
	/s _L /	/s _L /				/k _H /, /s _L /	/s _L /

AAC5			𑌎	𑌏	𑌐		
			/s _L /	/s _L /	/s _L /		
AA8F	𑌎	𑌎				𑌎	𑌎
	/s _H /	/s _H /				/s _H /	/s _H /
AAC6			𑌑	𑌒	𑌓		
			/s _H /	/s _H /	/s _H /		
AA90	𑌔	𑌔				𑌔	𑌔
	/ɲ _L /	/ɲ _L /				/ɲ _L /	/ɲ _L /
AACC			𑌕	𑌖	𑌗		
			/ɲ _L /	/ɲ _L /	/ɲ _L /		
AA91	𑌔	𑌕		𑌕		𑌕	𑌕
	/ɲ _H /	/ɲ _H /		/k ^h _H /		/ɲ _H /	/ɲ _H /
AACD			𑌘	𑌙	𑌚		
			/ɲ _H /	/ɲ _H /	/ɲ _H /		
AA92	𑌛	𑌛				𑌛	𑌛
	/d _L /	/d _L /				/d _L /	/d _L /
AACB			𑌜	𑌝	𑌞		
			/d _L /	/d _L /	/d _L /		
AA93	𑌟	𑌟	𑌠	𑌡	𑌢	𑌣	𑌤
	/d _H /	/d _H /	/d _H /	/d _H /	/d _H /	/d _H /	/d _H /
AA94	𑌥	𑌥	𑌦	𑌧	𑌨	𑌩	𑌪
	/t _L /	/t _L /	/t _L /	/t _L /	/t _L /	/t _L /	/t _L /
AA95	𑌮	𑌮	𑌯	𑌰	𑌱	𑌲	𑌳
	/t _H /	/t _H /	/t _H /	/t _H /	/t _H /	/t _H /	/t _H /
AA96	𑌵	𑌶	𑌷	𑌸	𑌹	𑌺	𑌻
	/t ^h _L /	/t ^h _L /	/t ^h _L /	/t ^h _L /	/t ^h _L /	/t ^h _L /	/t ^h _L /
AA97	𑌵	𑌶	𑌷	𑌸	𑌹		𑌺
	/t ^h _H /	/t ^h _H /	/t ^h _H /	/t ^h _H /	/t ^h _H /		/t ^h _H /, /x _H /
AA98	𑌼	𑌼	𑌽	𑌾	𑌿	𑍀	𑍁
	/n _L /	/n _L /	/n _L /	/n _L /	/n _L /	/n _L /	/n _L /
AA99	𑍂	𑍂	𑍃	𑍄	𑍅	𑍆	𑍇
	/n _H /	/n _H /	/n _H /	/n _H /	/n _H /	/n _H /	/n _H /

AA9A	✓	✓	✓	✓	✓	✓	✓
	/b _L /	/b _L /	/b _L /	/b _L /	/b _L /	/b _L /	/b _L /
AA9B	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇
	/b _H /	/b _H /	/b _H /	/b _H /	/b _H /	/b _H /	/b _H /
AA9C	✓	✓	✓	✓	✓	✓	✓
	/p _L /	/p _L /	/p _L /	/p _L /	/p _L /	/p _L /	/p _L /
AA9D	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇
	/p _H /	/p _H /	/m _H /	/m _H /	/m _H /	/p _H /	/p _H /
AAC8			𑍇	𑍇	𑍇		
			/p _H /	/p _H /	/p _H /		
AA9E	𑍇		𑍇	𑍇	𑍇		
	/p ^h _L /		/f _L /	/f _L /	/f _L /		
AA9F	𑍇	𑍇		𑍇		𑍇	𑍇
	/p ^h _H /	/p ^h _H /, /m _L /		/p ^h _H /		/p ^h _H /	/p ^h _H /
AAC9			𑍇				
			/p ^h _H /				
AAA0	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇
	/f _L /	/f _L /, /p ^h _L /	/p ^h _L /	/p ^h _L /	/p ^h _L /	/f _L /, /p ^h _L /	/f _L /, /p ^h _L /
AAA1	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇	𑍇
	/f _H /	/f _H /	/f _H /	/f _H /	/f _H /	/f _H /	/f _H /
AAA2	𑍇	𑍇				𑍇	𑍇
	/m _L /	/m _L /				/m _L /	/m _L /
AACA			𑍇	𑍇	𑍇		
			/m _L /	/m _L /	/m _L /		
AAA3	𑍇	𑍇				𑍇	𑍇
	/m _H /	/m _H /				/m _H /	/m _H /
AAA4	𑍇	𑍇		𑍇		𑍇	𑍇
	/j _L /	/j _L /		/j _L /		/j _L /	/j _L /
AAC7			𑍇		𑍇		
			/j _L /		/j _L /		
AAA5	✓	✓	✓	✓	✓	✓	✓
	/j _H /	/j _H /	/j _H /	/j _H /	/j _H /	/j _H /	/j _H /

AAA8	𑖀	𑖁	𑖂	𑖃	𑖄	𑖅	𑖆
	/l _L /	/l _L /	/l _L /	/l _L /	/l _L /	/l _L /	/l _L /
AAA9	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌	𑖍
	/l _H /	/l _H /	/l _H /	/l _H /	/l _H /	/l _H /	/l _H /
AAAA	𑖎	𑖏	𑖐	𑖑	𑖒	𑖓	𑖔
	/v _L /	/v _L /	/v _L /	/v _L /	/v _L /	/ŋ _L /	/ŋ _L /
AAAB	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛
	/v _H /	/v _H /	/v _H /	/v _H /	/v _H /	/ŋ _H /	/ŋ _H /
AAAC	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢
	/h _L /	/h _L /	/h _L /	/h _L /	/h _L /	/h _L /	/h _L /
AAAD	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨	𑖩
	/h _H /	/h _H /	/h _H /	/h _H /	/h _H /	/h _H /	/h _H /
AAAE	𑖪	𑖫	𑖬	𑖭	𑖮	𑖯	𑖰
	/ʀ _L /	/ʀ _L /	/ʀ _L /	/ʀ _L /	/ʀ _L /	/ʀ _L /	/ʀ _L /
AAAF	𑖱	𑖲	𑖳	𑖴	𑖵	𑖶	𑖷
	/ʀ _H /	/ʀ _H /	/ʀ _H /	/ʀ _H /	/ʀ _H /	/ʀ _H /	/ʀ _H /

High Po (U+AA88) and High Pho (U+AA89). The U+AA9D form 𑖛 is used to represent /m_H/ in Mường Lay, Phong Thổ and Jinping, while another form 𑖛̣ is used to represent /p_H/ . Therefore, the form 𑖛̣ is a distinct form with contrasting usage and should be disunified to U+AA9D. The U+AA9F form 𑖛̣̣ is a hooked U+AA9D form 𑖛̣, while another form 𑖛̣̣̣ is a hooked 𑖛̣̣ form. Therefore, the form 𑖛̣̣̣ is a distinct form with different construction principles and should be disunified to U+AA9F [*].

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA9D	𑖛	𑖛	𑖛̣	𑖛	𑖛	𑖛	𑖛
	/p _H /	/p _H /	/m _H /	/m _H /	/m _H /	/p _H /	/p _H /
AA88			𑖛̣	𑖛	𑖛		
			/p _H /	/p _H /	/p _H /		
AA9F	𑖛̣̣	𑖛̣̣		𑖛̣̣		𑖛̣̣	𑖛̣̣
	/p ^h _H /	/p ^h _H /, /n _L /		/p ^h _H /		/p ^h _H /	/p ^h _H /
AA89			𑖛̣̣̣				
			/p ^h _H /				

Low Yo (U+AAA7). The U+AAA4 form 𑖛̣̣̣ is a hooked U+AAA5 form 𑖛̣̣̣, while another form 𑖛̣̣̣̣ is a U+AAA5 form 𑖛̣̣̣̣ with a prefix. Therefore, the form 𑖛̣̣̣̣ is a distinct form with different construction principles and should be disunified to U+AAA4.

[*] The form 𑖛̣̣̣̣ is analyzed as a regional difference in the same letter, thus unified to U+AA9F 𑖛̣̣̣̣ in BRASE, 2008. However, it is analyzed as a non-cognate form, thus disunified to U+AA9F 𑖛̣̣̣̣ in this proposal.

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AAA4	𐄀 /j _L /	𐄀 /j _L /		𐄀 /j _L /		𐄀 /j _L /	𐄀 /j _L /
AAC7			𐄁 /j _L /		𐄁 /j _L /		
AAA5	𐄁 /j _H /	𐄁 /j _H /	𐄁 /j _H /	𐄁 /j _H /	𐄁 /j _H /	𐄁 /j _H /	𐄁 /j _H /

Low So (U+AAC5) and High So (U+AAC6). The U+AA8E form \mathfrak{x} is derived from x form, and the U+AA8F form \mathfrak{a} is a hooked U+AA84 form \mathfrak{a} , while another two forms \mathfrak{r} and \mathfrak{r} are not derived from x form or and U+AA84 form \mathfrak{a} . Therefore, the two forms \mathfrak{r} and \mathfrak{r} are distinct forms with different construction principles and should be disunified to U+AA8E and U+AA8F.

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA8E	\mathfrak{x} /s _L /	\mathfrak{x} /s _L /				\mathfrak{x} /k _H /, /s _L /	\mathfrak{x} /s _L /
AAC5			\mathfrak{r} /s _L /	\mathfrak{r} /s _L /	\mathfrak{r} /s _L /		
AA8F	\mathfrak{a} /s _H /	\mathfrak{a} /s _H /				\mathfrak{a} /s _H /	\mathfrak{a} /s _H /
AAC6			\mathfrak{r} /s _H /	\mathfrak{r} /s _H /	\mathfrak{r} /s _H /		
AA84	\mathfrak{a} /x _L /	\mathfrak{a} /x _L /	\mathfrak{a} /x _L /	\mathfrak{a} /x _L /	\mathfrak{a} /x _L /	\mathfrak{a} /x _L /	\mathfrak{a} /x _L /

Low Mo (U+AACA). The U+AAA2 form \mathfrak{m} is a U+AAA3 form \mathfrak{m} with a prefix, while another form \mathfrak{w} is a U+AA9D form \mathfrak{w} with a prefix. Therefore, the form \mathfrak{w} is a distinct form with different construction principles and should be disunified to U+AAA2.

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA9D	\mathfrak{w} /p _H /	\mathfrak{w} /p _H /	\mathfrak{w} /m _H /	\mathfrak{w} /m _H /	\mathfrak{w} /m _H /	\mathfrak{w} /p _H /	\mathfrak{w} /p _H /
AAA2	\mathfrak{m} /m _L /	\mathfrak{m} /m _L /				\mathfrak{m} /m _L /	\mathfrak{m} /m _L /
AACA			\mathfrak{w} /m _L /	\mathfrak{w} /m _L /	\mathfrak{w} /m _L /		
AAA3	\mathfrak{m} /m _H /	\mathfrak{m} /m _H /				\mathfrak{m} /m _H /	\mathfrak{m} /m _H /

Low Ngo (U+AAC4) and Low Do (U+AACB). The form \mathfrak{v} has a significantly different shape from U+AA92 \mathfrak{v} (Lao letter Do U+0E94 \mathfrak{v}). The U+AA88 form \mathfrak{v} is derived from U+AA98 form \mathfrak{v} , while another form \mathfrak{w} is derived from the form \mathfrak{v} . Therefore, the form \mathfrak{w} is a distinct form with different construction principles and should be disunified to U+AA88. [*]

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA88	\mathfrak{v} /ŋ _L /	\mathfrak{v} /ŋ _L /					
AAC4			\mathfrak{w} /ŋ _L /	\mathfrak{w} /ŋ _L /	\mathfrak{w} /ŋ _L /	\mathfrak{w} /v _L /	\mathfrak{w} /v _L /
AA98	\mathfrak{v} /n _L /	\mathfrak{v} /n _L /	\mathfrak{v} /n _L /	\mathfrak{v} /n _L /	\mathfrak{v} /n _L /	\mathfrak{v} /n _L /	\mathfrak{v} /n _L /

[*] BRASE, 2008 also mentions the relationship between the form \mathfrak{v} and the form \mathfrak{v} , similar to the relationship between U+AA99 form \mathfrak{u} and U+AABD form \mathfrak{u} . This cognition relationship between the form \mathfrak{v} and the form \mathfrak{v} cannot be expressed if the form \mathfrak{v} is unified to U+AA92.

AA92	◌	◌				◌	◌
	/d _L /	/d _L /				/d _L /	/d _L /
AACB			◌	◌	◌		
			/d _L /	/d _L /	/d _L /		

High Ko (U+AAC3). The U+AA81 form 𐄁 is a U+AA92 form ◌ with a stroke, while another form 𐄂 is a U+AA80 form 𐄀 with a stroke. Therefore, the form 𐄂 is a distinct form with different construction principles and should be disunified to U+AA81 𐄁.

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA80	𐄀	𐄀	𐄀	𐄀	𐄀	𐄀	𐄀
	/k _L /	/k _L /	/k _L /	/k _L /	/k _L /	/k _L /	/k _L /
AA81	𐄁	𐄁		𐄁		𐄁	
	/k _H /	/k _H /		/x _H /		/x _H /	
AAC3			𐄂	𐄂	𐄂		𐄂
			/k _H /	/k _H /	/k _H /		/k _H /
AA92	◌	◌				◌	◌
	/d _L /	/d _L /				/d _L /	/d _L /

Low Nyo (U+AACC) and High Nyo (U+AACD). The U+AA83 form 𐄃 is used to represent /k^h_H/ in Jinping, while another form 𐄄 is used to represent /ɲ_H/ . Therefore, the form 𐄄 is a distinct form with contrasting usage and should be disunified to U+AA83. The U+AA91 form 𐄅 is derived from U+AA94 form 𐄆, while another form 𐄇 is a derived from the U+AA83 form 𐄃. Therefore, the form 𐄇 is a distinct form with different construction principles and should be disunified to U+AA91. The U+AA90 form 𐄈 is a U+AA97 form 𐄉 with a prefix, while another form 𐄊 is a 𐄃 form with a prefix. Therefore, the form 𐄊 is a distinct form with different construction principles and should be disunified to U+AA90 [*].

Codepoint	Tai Viet	Tai Dam	Jinping	Mường Lay	Phong Thổ	Phú Yên	Mộc Châu
AA83	𐄃		𐄃		𐄃		
	/k ^h _H /		/k ^h _H /		/k ^h _H /		
AA90	𐄈	𐄈				𐄈	𐄈
	/ɲ _L /	/ɲ _L /				/ɲ _L /	/ɲ _L /
AACC			𐄊	𐄊	𐄊		
			/ɲ _L /	/ɲ _L /	/ɲ _L /		
AA91	𐄅	𐄅		𐄅		𐄅	𐄅
	/ɲ _H /	/ɲ _H /		/k ^h _H /		/ɲ _H /	/ɲ _H /
AACD			𐄇	𐄇	𐄇		
			/ɲ _H /	/ɲ _H /	/ɲ _H /		
AA94	𐄆	𐄆	𐄆	𐄆	𐄆	𐄆	𐄆
	/t _L /	/t _L /	/t _L /	/t _L /	/t _L /	/t _L /	/t _L /
AA97	𐄉	𐄉	𐄉	𐄉	𐄉		𐄉
	/t ^h _H /	/t ^h _H /	/t ^h _H /	/t ^h _H /	/t ^h _H /		/t ^h _H /, /x _H /

2.4 Vowels

Table 2 shows a list of finals used in Tai Viet, Tai Dam and Tai Dón writing system. The letters used in Tai Viet, Tai Dam and Tai Dón in Phong Thổ (Lai Châu Province), Mộc Châu (Sơn La Province) and Yên Châu (Sơn La Province) are taken from *Bảng chữ Thái các vùng và chữ Thống nhất* quoted by CHAN, 2022. And the letters used in Jinping Dai are taken from DAO et al, 2019.

[*] BRASE, 2008 also mentions another form 𐄋 used in Jinping. However, in the standardization meeting of Jinping Dai writing system, the form recording the phoneme /k^h_H/ is specified as 𐄃, so the unification issue of the form 𐄋 can be omitted.

Table 2 Vowels used in Tai Don writing system

Codepoint	Tai Viet	Tai Dam	Tai Don			
			Jinping	Phong Thổ	Mộc Châu	Yên Châu
AA80 AAB0						
	/a/	/a/	/a/	/a/	/a/	/a/
AA80 AACF						
			/ɔ(43)/	/a/		
AA80 AAB1						
	/a:/	/a:/	/a:/	/a:/	/a:/	/a:/
AA80 ACE						
			/a(25)/	/a:/		
AA80 AAB2						
	/i/	/i/	/i/	/i/	/i/	/i/
AA80 AAB3						
	/i/	/i/	/u/	/i/	/i/	/i/
AA80 AAB4						
	/u/	/u/	/u/	/u/	/u/	/u/
AAB5 AA80						
	/ɛ/	/ɛ/	/ɛ/	/ɛ/	/ɛ/	/ɛ/
AAB6 AA80						
	/u/	/u/	/u/	/u/	/u/	/u/
AA80 AAD1						
			/u/			
AA80 AAB7						
	/ə/	/ə/	/ə/	/ə/	/ə/	/ə/
AA80 AAB8						
	/e/	/e/	/e/	/e/	/e/	/e/
AAB9 AA80 AAB1						
	/au/	/au/	/au/	/au/	/au/	/au/
AAB9 AA80 AAB7						
	/ə/	/ə/		/ə/	/ə/	/ə/
AA80 AABA						
	/o/	/o/	/o/	/o/	/o/	/o/

AABB AA80						
	/əu/	/əu/	/au/	/əu/	/əu/	/əu/
AABC AA80						
	/ai/	/ai/	/ai/	/ai/	/ai/	/ai/
AA80 AABD						
	/an/	/an/	/an/	/an/	/an/	/an/
AA80 AABE AA9D						
	/am/	/am/	/am/	/am/	/am/	/am/
AA80 AAD0						
			/atʰ/	/atʰ/		

Maai Tsam (U+AACF) and Maai Ka (U+AACE). The form is used to record /ɔ/ only in syllables with /⁴³/ tone and no stop consonant, and the form is used to record /a/ only in syllables with /²⁵/ tone and no stop consonant. The two forms and cannot be unified to any encoded characters, thus should be encoded separately. See [Appendix A.2, Figure 5, Figure 6, Figure 7, Figure 8, Figure 11, Figure 12, Figure 13, Figure 14](#) and [Figure 17](#) for evidence.

Maai Kung (U+AAB6) and Maai Kum (U+AAD1). The form is used to record /u/ only in syllables with stop consonant /ŋ/, and the form is used to record /u/ only in syllables with stop consonant /m/. Due to the difference in their combining behavior, the two cannot be unified to each other. See [Appendix A.2, Figure 6, Figure 10, Figure 11, Figure 12, Figure 13](#) and [Figure 15](#) for evidence.

Maai Kat (U+AAD0). The form is used to record /atʰ/. As there is no equivalent character in current Unified Tai repertoire, the form should be encoded separately. See [Appendix A.2, Figure 1](#) and [Figure 10](#) for evidence.

2.5 Tones

Maai Sak and Maai Hoi. After about the 1940s, the Jinping Dai writing system introduced two tone marks in order to express the pronunciation precisely, that is, the form (unified to U+AABF , read as /ma:i³³ sak⁴³/) and the form (unified to U+AACI , read as /ma:i³³ hoi²⁵/). For syllables with stop consonant /-m/, /-n/, /-ŋ/ or /-ʈ/, six non-checked tones can be distinguished using consonants in higher or lower group with or without tone mark. For syllables with stop consonant /-pʰ/, /-tʰ/ or /-kʰ/, two checked tones can be distinguished using consonants in higher or lower group.

Maai Qaq. In recent years, most of the stop consonant /-kʰ/ has disappeared in spoken dialect, creating syllables with checked tone but without stop consonant. To distinguish them from syllables without stop consonant in non-checked tone, the form (read as /ma:i³³ ʔa⁵⁵/) was introduced. See [Appendix A.3, Figure 1](#) and [Figure 16](#) for evidence. ^[*]

2.6 Symbols, Numerals and Punctuation

Symbols. The Jinping Dai writing system uses specific fixed forms or symbols to express some common words. The form used to indicate “person” is unified to U+AADB , the form used to indicate “one” is unified to U+AADC , according to the same function. The form used to indicate “moon” and the form used to indicate “horse” cannot be

[*] There is no literature that explicitly states which base form the tone mark should be written above in a syllable. Based on a preliminary analysis of the minutes of standardization meeting, the textbook and other running texts, it can be roughly summarized that most of the tone marks are written above the initial consonant in syllables.

unified to any encoded characters, thus should be encoded separately. See [Appendix A.4](#), [Figure 2](#), [Figure 9](#) and [Figure 12](#) for evidence.

Numerals and Punctuation. The Jinping Dai uses Hindu–Arabic numerals from “0” to “9”. According to the minutes of the standardization meeting, the Jinping Dai uses the punctuation system equivalent to that used for Chinese characters, including comma “, ” (U+FF0C), period dot “。 ” (U+3002), exclamation mark “! ” (U+FF01), question mark “? ” (U+FF1F), curly brackets “ { } ” (U+FF5B, U+FF5D), double angle brackets “ ‹ › ” (U+300A, U+300B) and lenticular brackets “ 【 】 ” (U+3010, U+3011). In ancient texts, the Jinping Dai also uses punctuation marks that indicate the beginning and end of paragraphs. See [Appendix A.4](#), [Figure 2](#), [Figure 3](#), [Figure 4](#), [Figure 5](#), [Figure 6](#), [Figure 7](#), [Figure 8](#), [Figure 10](#), [Figure 11](#), [Figure 12](#), [Figure 13](#), [Figure 14](#) and [Figure 15](#) for evidence.

2.7 Collation

According to [DAO et al, 2019](#), there is a traditional order of consonants in Jinping Dai, that is, in the phonemic order /ʔ/, /k/, /x/, /ŋ/, /ts/, /s/, /j/, /t/, /tʰ/, /n/, /p/, /pʰ/, /m/, /f/, /v/, /l/, /h/, /d/, /b/, /kʰ/, /tʰ/, /n/, with each phonemic containing a letter in lower group and a letter in higher group. The order of the consonants in the Jinping Dai writing system can be found in [Appendix A.1](#). The rest of the Jinping Dai writing system has no traditional order, and thus no potentially prescriptive character order.

3 Proposed Characters

3.1 Repertoire

Table 3 Proposed characters for Jinping Dai writing system

Codepoint	Glyph	Character Name	Value
AAC3		TAI VIET LETTER TAI DON HIGH KO	/k _H /
AAC4		TAI VIET LETTER TAI DON LOW NGO	/ŋ _L /
AAC5		TAI VIET LETTER TAI DON LOW SO	/s _L /
AAC6		TAI VIET LETTER TAI DON HIGH SO	/s _H /
AAC7		TAI VIET LETTER TAI DON LOW YO	/j _L /
AAC8		TAI VIET LETTER TAI DON HIGH PO	/p _H /
AAC9		TAI VIET LETTER TAI DON HIGH PHO	/p ^h _H /
AACA		TAI VIET LETTER TAI DON LOW MO	/m _L /
AACB		TAI VIET LETTER TAI DON LOW DO	/d _L /
AACC		TAI VIET LETTER TAI DON LOW NYO	/n _L /
AACD		TAI VIET LETTER TAI DON HIGH NYO	/n _H /
AACE		TAI VIET MAAI KA	/a ⁽²⁵⁾ /

AACF	◌̣	TAI VIET MAAI TSAM	/ɔ ⁽⁴³⁾ /
AAD0	ᵛ	TAI VIET MAAI KAT	/at ¹ /
AAD1	◌̣	TAI VIET MAAI KUM	/u/
AAD2	◌̣	TAI VIET MAAI QAQ	/ʔ ⁵⁵ /
AAD3	ᵛ	TAI VIET SYMBOL BON	/bɔn ³³ /
AAD4	ᵛ	TAI VIET SYMBOL MA	/ma ³¹ /
AAD7	⊗	TAI VIET SYMBOL MAAI MEHT	/mai ³³ met ¹⁵⁵ /
AAD8		TAI VIET SYMBOL MAAI SAM-1	/mai ³³ sam ³¹ /
AAD9		TAI VIET SYMBOL MAAI SAM-2	/mai ³³ sam ³¹ /
ADA		TAI VIET SYMBOL MAAI SAM-3	/mai ³³ sam ³¹ /

3.2 Suggestions on Character Properties

AAC3;TAI VIET LETTER TAI DON HIGH KO;Lo;0;L;;;;N;;;;;
AAC4;TAI VIET LETTER TAI DON LOW NGO;Lo;0;L;;;;N;;;;;
AAC5;TAI VIET LETTER TAI DON LOW SO;Lo;0;L;;;;N;;;;;
AAC6;TAI VIET LETTER TAI DON HIGH SO;Lo;0;L;;;;N;;;;;
AAC7;TAI VIET LETTER TAI DON LOW YO;Lo;0;L;;;;N;;;;;
AAC8;TAI VIET LETTER TAI DON HIGH PO;Lo;0;L;;;;N;;;;;
AAC9;TAI VIET LETTER TAI DON HIGH PHO;Lo;0;L;;;;N;;;;;
AACA;TAI VIET LETTER TAI DON LOW MO;Lo;0;L;;;;N;;;;;
AACB;TAI VIET LETTER TAI DON LOW DO;Lo;0;L;;;;N;;;;;
AAC;TAI VIET LETTER TAI DON LOW NYO;Lo;0;L;;;;N;;;;;
AACD;TAI VIET LETTER TAI DON HIGH NYO;Lo;0;L;;;;N;;;;;
AAE;TAI VIET MAAI KA;Mn;220;NSM;;;;N;;;;;
AACF;TAI VIET MAAI TSAM;Mn;230;NSM;;;;N;;;;;
AAD0;TAI VIET MAAI KAT;Lo;0;L;;;;N;;;;;
AAD1;TAI VIET MAAI KUM;Mn;230;NSM;;;;N;;;;;
AAD2;TAI VIET TONE MAAI QAQ;Mn;230;NSM;;;;N;;;;;
AAD3;TAI VIET SYMBOL BON;Lo;0;L;;;;N;;;;;
AAD4;TAI VIET SYMBOL MA;Lo;0;L;;;;N;;;;;
AAD7;TAI VIET SYMBOL MAAI MEHT;Po;0;L;;;;N;;;;;
AAD8;TAI VIET SYMBOL MAAI SAM-1;Po;0;L;;;;N;;;;;
AAD9;TAI VIET SYMBOL MAAI SAM-2;Po;0;L;;;;N;;;;;
ADA;TAI VIET SYMBOL MAAI SAM-3;Po;0;L;;;;N;;;;;

3.3 Suggestions on Annotations

@@ AA80 Tai Viet AADF
@+ The Tai Viet script contains used in Tai Dam writing system and Tai Don writing system.
It is used for the Tai Dam and Tai Don languages in Vietnam and China.

@ Consonants

AA80 TAI VIET LETTER LOW KO
AA81 TAI VIET LETTER HIGH KO
AA82 TAI VIET LETTER LOW KHO
AA83 TAI VIET LETTER HIGH KHO
AA84 TAI VIET LETTER LOW KHHO
AA85 TAI VIET LETTER HIGH KHHO
AA86 TAI VIET LETTER LOW GO
AA87 TAI VIET LETTER HIGH GO
AA88 TAI VIET LETTER LOW NGO
AA89 TAI VIET LETTER HIGH NGO
AA8A TAI VIET LETTER LOW CO
AA8B TAI VIET LETTER HIGH CO
AA8C TAI VIET LETTER LOW CHO
AA8D TAI VIET LETTER HIGH CHO
AA8E TAI VIET LETTER LOW SO
AA8F TAI VIET LETTER HIGH SO
AA90 TAI VIET LETTER LOW NYO
AA91 TAI VIET LETTER HIGH NYO
AA92 TAI VIET LETTER LOW DO
AA93 TAI VIET LETTER HIGH DO
AA94 TAI VIET LETTER LOW TO
AA95 TAI VIET LETTER HIGH TO
AA96 TAI VIET LETTER LOW THO
AA97 TAI VIET LETTER HIGH THO
AA98 TAI VIET LETTER LOW NO
AA99 TAI VIET LETTER HIGH NO
AA9A TAI VIET LETTER LOW BO
AA9B TAI VIET LETTER HIGH BO
AA9C TAI VIET LETTER LOW PO
AA9D TAI VIET LETTER HIGH PO
AA9E TAI VIET LETTER LOW PHO
AA9F TAI VIET LETTER HIGH PHO
AAA0 TAI VIET LETTER LOW FO
AAA1 TAI VIET LETTER HIGH FO
AAA2 TAI VIET LETTER LOW MO
AAA3 TAI VIET LETTER HIGH MO
AAA4 TAI VIET LETTER LOW YO
AAA5 TAI VIET LETTER HIGH YO
AAA6 TAI VIET LETTER LOW RO
AAA7 TAI VIET LETTER HIGH RO
AAA8 TAI VIET LETTER LOW LO
AAA9 TAI VIET LETTER HIGH LO
AAAA TAI VIET LETTER LOW VO
AAAB TAI VIET LETTER HIGH VO
AAAC TAI VIET LETTER LOW HO
AAAD TAI VIET LETTER HIGH HO

AAAE TAI VIET LETTER LOW O
 AAAF TAI VIET LETTER HIGH O
 @ Vowels and finals
 AAB0 TAI VIET MAI KANG
 AAB1 TAI VIET VOWEL AA
 AAB2 TAI VIET VOWEL I
 AAB3 TAI VIET VOWEL UE
 AAB4 TAI VIET VOWEL U
 AAB5 TAI VIET VOWEL E
 * precedes consonant in visual order
 AAB6 TAI VIET VOWEL O
 * precedes consonant in visual order
 AAB7 TAI VIET MAI KHIT
 AAB8 TAI VIET VOWEL IA
 AAB9 TAI VIET VOWEL UEA
 * precedes consonant in visual order
 AABA TAI VIET VOWEL UA
 AABB TAI VIET VOWEL AUE
 * precedes consonant in visual order
 AABC TAI VIET VOWEL AY
 * precedes consonant in visual order
 AABD TAI VIET VOWEL AN
 AABE TAI VIET VOWEL AM
 @ Tones
 AABF TAI VIET TONE MAI EK
 AAC0 TAI VIET TONE MAI NUENG
 AAC1 TAI VIET TONE MAI THO
 AAC2 TAI VIET TONE MAI SONG
 @ Consonants for Tai Don
 AAC3 TAI VIET LETTER TAI DON HIGH KO
 AAC4 TAI VIET LETTER TAI DON LOW NGO
 AAC5 TAI VIET LETTER TAI DON LOW SO
 AAC6 TAI VIET LETTER TAI DON HIGH SO
 AAC7 TAI VIET LETTER TAI DON LOW YO
 AAC8 TAI VIET LETTER TAI DON HIGH PO
 AAC9 TAI VIET LETTER TAI DON HIGH PHO
 AACA TAI VIET LETTER TAI DON LOW MO
 AACB TAI VIET LETTER TAI DON LOW DO
 AACC TAI VIET LETTER TAI DON LOW NYO
 AACD TAI VIET LETTER TAI DON HIGH NYO
 @ Vowels and finals for Tai Don
 AACE TAI VIET MAAI KA
 AACF TAI VIET MAAI TSAM
 AAD0 TAI VIET MAAI KAT
 AAD1 TAI VIET MAAI KUM
 @ Tones for Tai Don
 AAD2 TAI VIET TONE MAAI QAQ
 @ Word ligature symbols for Tai Don
 AAD3 TAI VIET SYMBOL BON
 = moon
 AAD4 TAI VIET SYMBOL MA

= horse

@ Punctuation for Tai Don

AAD7 TAI VIET SYMBOL MAAI MEHT

AAD8 TAI VIET SYMBOL MAAI SAM-1

AAD9 TAI VIET SYMBOL MAAI SAM-2

AADA TAI VIET SYMBOL MAAI SAM-3

@ Word ligature symbols

AADB TAI VIET SYMBOL KON

= person

AADC TAI VIET SYMBOL NUENG

= one

@ Repetition mark

AADD TAI VIET SYMBOL SAM

x (thai character maiyamok - 0E46)

@ Punctuation

AADE TAI VIET SYMBOL HO HOI

* marks start of text in songs and poems

AADF TAI VIET SYMBOL KOI KOI

* marks end of text in songs and poems

3.4 Suggestions on Indic Syllabic Category Data

AABE ; Vowel_Dependent # Mn TAI VIET VOWEL AM

AACE..AACF ; Vowel_Dependent # Mn [2] TAI VIET MAAI KA..TAI VIET MAAI TSAM

AAD0 ; Vowel_Dependent # Lo TAI VIET MAAI KAT

AAD1 ; Vowel_Dependent # Mn TAI VIET MAAI KUM

AAEB ; Vowel_Dependent # Mc MEETEI MAYEK VOWEL SIGN II

AA80..AAAF ; Consonant # Lo [48] TAI VIET LETTER LOW KO..TAI VIET LETTER HIGH O

AAC3..AACD ; Consonant # Lo [11] TAI VIET LETTER TAI DON HIGH KO..TAI VIET LETTER TAI DON HIGH NYO

AAE2..AAEA ; Consonant # Lo [9] MEETEI MAYEK LETTER CHA..MEETEI MAYEK LETTER SSA

AAC1 ; Tone_Mark # Mn TAI VIET TONE MAI THO

AAD2 ; Tone_Mark # Mn TAI VIET TONE MAAI QAQ

ABEC ; Tone_Mark # Mc MEETEI MAYEK LUM IYEK

3.5 Suggestions on Indic Position Category Data

AABD ; Right # Lo TAI VIET VOWEL AN

AAD0 ; Right # Lo TAI VIET MAAI KAT

AAEF ; Right # Mc MEETEI MAYEK VOWEL SIGN AAU

AAC1 ; Top # Mn TAI VIET TONE MAI THO

AACF ; Top # Mn TAI VIET MAAI TSAM

AAD1..AAD2 ; Top # Mn [2] TAI VIET MAAI KUM..TAI VIET TONE MAAI QAQ

AAED ; Top # Mn MEETEI MAYEK VOWEL SIGN AAI

AAB4 ; Bottom # Mn TAI VIET VOWEL U

AACE ; Bottom # Mn TAI VIET MAAI KA

AAEC ; Bottom # Mn MEETEI MAYEK VOWEL SIGN UU

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Appendix A Normalization of the Phonology of Jinping Dai writing system by DAO *et al.*

There are more than 1.26 million Dai people in China (2010) (HE, 2014), mainly gathered in the border areas of Xishuangbanna Dai Autonomous Prefecture and Dehong Dai Jingpo Autonomous Prefecture in southwestern Yunnan Province. The Dai minzu has its own languages and scripts, and is a multi-dialect and multi-script minzu. The Dai languages are in the Zhuang-Tai languages of the Zhuang-Dong languages of the Sino-Tibetan languages and are divided into four dialects: Xishuangbanna dialect, Dehong dialect, Jinping dialect and Hongjin dialect. And there are several kinds of writing systems used to record the Dai languages in China (HE & XIONG, 1999).

With the implementation of the Belt and Road strategy, especially the launch of Chinese Language Resources Protection Project by the Ministry of Education and the State Language Commission in 2015, a strong impetus is given to the rescue and protection of minzu languages. The Jinping dialect of the Dai languages was included in the 2015 language preservation project which was already completed, which is the first time that Jinping dialect has been approved as a special research project. In May 2019, with the support of the Jinping County Party Committee and the county government, the Jinping County Cultural Center hosted the first Jinping Dai writing system standardization seminar, discussing the normalization, standardization and informatization of the Jinping Dai writing system. Experts from the Office of the Steering Committee for Minzu Languages in Yunnan Province, Yunnan Minzu University and other Dai experts and scholars from Honghe Prefecture reached a consensus on how to solve the problems of irregularities in Jinping Dai writing system and inconsistencies between the written language and spoken language, and initial results were achieved in the standardization process.

A.1 Normalization of initials

There are 44 initials in Jinping Dai writing system, traditionally known as $\text{ᩉ᩠ᨦ ᩈ᩠ᨦ} / \text{to}^{33} \text{mɛ}^{52} /$ (“mother character”), divided into the high level group ($\text{ᩉ᩠ᨦ ᩈ᩠ᨦ} / \text{to}^{33} \text{bau}^{33} /$, “light character”) and the low level group ($\text{ᩉ᩠ᨦ ᩈ᩠ᨦ} / \text{to}^{33} \text{nak}^{55} /$, “heavy character”). There are 22 phonemes, traditionally arranged in the following order:

ᩉ	/ʔɔ ³³ /	ᩉ AAAE	ᩈ	/p ^h ɔ ³³ /	ᩈ AAA0
ᩊ	/ʔɔ ⁴³ /	ᩊ AAAF	ᩉ	/p ^h ɔ ⁴³ /	ᩉ AAC9
ᩋ	/kɔ ³³ /	ᩋ AA80	ᩊ	/mɔ ³³ /	ᩊ AACA
ᩌ	/kɔ ⁴³ /	ᩌ AAC3	ᩋ	/mɔ ⁴³ /	ᩋ AA9D
ᩍ	/xɔ ³³ /	ᩍ AA84	ᩌ	/fɔ ³³ /	ᩌ AA9E
ᩎ	/xɔ ⁴³ /	ᩎ AA85	ᩍ	/fɔ ⁴³ /	ᩍ AAA1
ᩏ	/ŋɔ ³³ /	ᩏ AAC4	ᩎ	/vɔ ³³ /	ᩎ AAAA
ᩐ	/ŋɔ ⁴³ /	ᩐ AA89	ᩏ	/vɔ ⁴³ /	ᩏ AAAB
ᩑ	/tɕɔ ³³ /	ᩑ AA8A	ᩐ	/lɔ ³³ /	ᩐ AAA8
ᩒ	/tɕɔ ⁴³ /	ᩒ AA8B	ᩑ	/lɔ ⁴³ /	ᩑ AAA9
ᩓ	/sɔ ³³ /	ᩓ AAC5	ᩒ	/hɔ ³³ /	ᩒ AAAC
ᩔ	/sɔ ⁴³ /	ᩔ AAC6	ᩓ	/hɔ ⁴³ /	ᩓ AAAD
ᩕ	/jɔ ³³ /	ᩕ AAC7	ᩔ	/dɔ ³³ /	ᩔ AACB
ᩖ	/jɔ ⁴³ /	ᩖ AAA5	ᩕ	/dɔ ⁴³ /	ᩕ AA93
ᩗ	/tɔ ³³ /	ᩗ AA94	ᩖ	/bɔ ³³ /	ᩖ AA9A
ᩘ	/tɔ ⁴³ /	ᩘ AA95	ᩗ	/bɔ ⁴³ /	ᩗ AA9B
ᩙ	/t ^h ɔ ³³ /	ᩙ AA96	ᩘ	/k ^h ɔ ³³ /	ᩘ AA82
ᩚ	/t ^h ɔ ⁴³ /	ᩚ AA97	ᩙ	/k ^h ɔ ⁴³ /	ᩙ AA83
ᩛ	/nɔ ³³ /	ᩛ AA98	ᩚ	/t ^h ɔ ³³ /	ᩚ AA8C
ᩜ	/nɔ ⁴³ /	ᩜ AA99	ᩛ	/t ^h ɔ ⁴³ /	ᩛ AA8D
ᩝ	/pɔ ³³ /	ᩝ AA9C	ᩜ	/nɔ ³³ /	ᩜ AACC
ᩞ	/pɔ ⁴³ /	ᩞ AAC8	ᩝ	/nɔ ⁴³ /	ᩝ AACD

ㄨㄣˇ	/εpʰ/	ㄨ AAB5	ㄣ AA80	ˇ AA9A	ㄣ	/um/	ㄣ AA80	◌ AAD1	ㄨ AAAB
ㄋㄅ	/ɔŋ/	ㄣ AA80	ㄅ AAAE	ㄅ AA89	ㄣ	/ukʰ/	ㄣ AA80	◌ AAB4	ㄣ AA80
ㄋㄅ	/ɔn/	ㄣ AA80	ㄅ AAAE	ㄣ AA99	ㄣ	/utʰ/	ㄣ AA80	◌ AAB4	ㄨ AACB
ㄋㄅ	/ɔm/	ㄣ AA80	ㄅ AAAE	ㄨ AAAB	ㄣ	/upʰ/	ㄣ AA80	◌ AAB4	ˇ AA9A
ㄋㄅ	/ɔkʰ/	ㄣ AA80	ㄅ AAAE	ㄣ AA80	ㄣ	/uŋ/	ㄣ AA80	◌ AAB3	ㄅ AA89
ㄋㄅ	/ɔtʰ/	ㄣ AA80	ㄅ AAAE	ㄨ AACB	ㄣ	/uŋ/	ㄣ AA80	◌ AAB3	ㄣ AA99
ㄋㄅ	/ɔpʰ/	ㄣ AA80	ㄅ AAAE	ˇ AA9A	ㄣ	/um/	ㄣ AA80	◌ AAB3	ㄨ AAAB
ㄣ	/oŋ/	ㄣ AA80	ㄨ AABA	ㄅ AA89	ㄣ	/ukʰ/	ㄣ AA80	◌ AAB3	ㄣ AA80
ㄣ	/on/	ㄣ AA80	ㄨ AABA	ㄣ AA99	ㄣ	/utʰ/	ㄣ AA80	◌ AAB3	ㄨ AACB
ㄣ	/om/	ㄣ AA80	ㄨ AABA	ㄨ AAAB	ㄣ	/upʰ/	ㄣ AA80	◌ AAB3	ˇ AA9A
ㄣ	/okʰ/	ㄣ AA80	ㄨ AABA	ㄣ AA80	ㄣ	/əŋ/	ㄣ AA80	◌ AAB7	ㄅ AA89
ㄣ	/otʰ/	ㄣ AA80	ㄨ AABA	ㄨ AACB	ㄣ	/əŋ/	ㄣ AA80	◌ AAB7	ㄣ AA99
ㄣ	/opʰ/	ㄣ AA80	ㄨ AABA	ˇ AA9A	ㄣ	/əm/	ㄣ AA80	◌ AAB7	ㄨ AAAB
ㄣ	/uŋ/	ㄣ AA80	◌ AAB4	ㄅ AA89	ㄣ	/əkʰ/	ㄣ AA80	◌ AAB7	ㄣ AA80
ㄣ	/uŋ/	ㄣ AAB6	ㄣ AA80	ㄅ AA89	ㄣ	/ətʰ/	ㄣ AA80	◌ AAB7	ㄨ AACB
ㄣ	/un/	ㄣ AA80	◌ AAB4	ㄣ AA99	ㄣ	/əpʰ/	ㄣ AA80	◌ AAB7	ˇ AA9A
ㄣ	/um/	ㄣ AA80	◌ AAB4	ㄨ AAAB					

A.3 Normalization of tones

For a considerable period of time after its creation, there was no symbol for the tones in Jinping Dai writing system. According to the sources, it was only after the 1940s that tonal symbols were introduced for precise pronunciation, and they were derived from the Kinh language. There are eight tones in Jinping Dai writing system, divided into six relaxed tones and two abrupt tones, borrowing two tone symbols of the Kinh language (in Latin script), /ma:i³¹ sak¹⁵⁵/ and /ma:i³¹ hɔi²⁵/. The final /-kʰ/ variant have a change in pronunciation, but the tone value remains the same. This situation cannot be represented in writing, so a symbol should be introduced to indicate a syllable with a variation in the final consonant, which is read as /ma:i³³ ʔaʔ⁵⁵/. The tones are:

ㄣ	/ka ³³ /	ㄣ AA80	ㄅ AAB1	ㄣ	/ka ³¹ /	ㄣ AAC3	◌ AAC1	ㄅ AAB1	
ㄣ	/ka ⁵⁵ /	ㄣ AA80	◌ AABF	ㄅ AAB1	ㄣ	/lak ⁵⁵ /	ㄅ AAA8	◌ AAB0	ㄣ AA80
ㄣ	/ka ²⁵ /	ㄣ AA80	◌ AAC1	ㄅ AAB1	ㄣ	/laʔ ⁵⁵ /	ㄅ AAA8	◌ AAD2	ㄅ AAB1
ㄣ	/ka ⁴³ /	ㄣ AAC3	ㄅ AAB1		ㄣ	/lak ⁴³ /	ㄅ AAA9	◌ AAB0	ㄣ AA80
ㄣ	/ka ⁵² /	ㄣ AAC3	◌ AABF	ㄅ AAB1					

A.4 Special symbols

There are 12 special symbols, neither initials nor finals. 6 fixed characters and 6 end-of-sentence symbols are included.

A fixed character is a specific symbol used to represent a particular word of a fixed written form that constitutes a monogram for independent use. Such fixed characters are few and far between, appearing in traditional texts only in the words “one”, “person”, “moon” and “horse”. The computer font adds two similar monograms, “child” and “late”, as required [1]. These monograms can also be written in a non-independent way. The fixed characters are:

[*] The type designer joining in DAO *et al*, 2019 failed to handle GPOS, so these two monograms will not be proposed.

 /nuŋ⁵²/  AADC
 /kun⁴³/  AADB
 /bɔŋ³³/  AAD3

 /ma³¹/  AAD4
 /lu⁴³/  AAA9  AAB4
 /la²⁵/  AAA8  ACE

Jinping Dai writing system does not generally use punctuation, but ends each sentence with an end-of-sentence symbol. There is no fixed character to be used, and most of them vary from person to person. There are six end-of-sentence symbols. The first five of these are collectively known as /ma:i³³ sam³¹/, meaning “ending symbols”, and are often used in long stories or poems. The last one is called /ma:i³³ met¹⁵⁵/, which means “completion sign” and is used after a sentence to indicate that a sentence has been completed. The end-of-sentence symbols are:

	/ma:i ³³ sam ³¹ /		AAD8		/ma:i ³³ sam ³¹ /		AAD6
	/ma:i ³³ sam ³¹ /		AAD9		/ma:i ³³ sam ³¹ /		AADA
	/ma:i ³³ sam ³¹ /		AADD		/ma:i ³³ met ¹⁵⁵ /		AAD7

Appendix B Multi-column Tai Dam–Tai Don character set

A reference forms table for two columns is given in this part. The first column shows the reference forms for Vietnamese use, in which *Tai Heritage Pro* was chosen as the typeface. The second column is the reference forms for Chinese use, which contains characters from the Jinping Dai writing system.

The codepoints marked in brown are those for which the assignment of characters is requested in the proposal, and the codepoints marked in grey are reserved.

Table 4 Multi-column Tai Dam–Tai Don character set

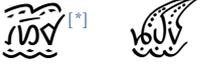
AA80	LETTER LOW KO			AA91	LETTER HIGH NYO		
AA81	LETTER HIGH KO			AA92	LETTER LOW DO		
AA82	LETTER LOW KHO			AA93	LETTER HIGH DO		
AA83	LETTER HIGH KHO			AA94	LETTER LOW TO		
AA84	LETTER LOW KHHO			AA95	LETTER HIGH TO		
AA85	LETTER HIGH KHHO			AA96	LETTER LOW THO		
AA86	LETTER LOW GO			AA97	LETTER HIGH THO		
AA87	LETTER HIGH GO			AA98	LETTER LOW NO		
AA88	LETTER LOW NGO			AA99	LETTER HIGH NO		
AA89	LETTER HIGH NGO			AA9A	LETTER LOW BO		
AA8A	LETTER LOW CO			AA9B	LETTER HIGH BO		
AA8B	LETTER HIGH CO			AA9C	LETTER LOW PO		
AA8C	LETTER LOW CHO			AA9D	LETTER HIGH PO		
AA8D	LETTER HIGH CHO			AA9E	LETTER LOW PHO		
AA8E	LETTER LOW SO			AA9F	LETTER HIGH PHO		
AA8F	LETTER HIGH SO			AAA0	LETTER LOW FO		
AA90	LETTER LOW NYO			AAA1	LETTER HIGH FO		

[*] The glyph named “lowco-tavt.Rotated” is connected to the glyph named “lowco-tavt” in *Tai Heritage Pro*.

[†] The glyph named “highpho-tavt.ClsTail” is connected to the glyph named “highpho-tavt” in *Tai Heritage Pro*.

AAA2	LETTER LOW MO	𑜀		AAB9	VOWEL UEA	𑜁	𑜁
AAA3	LETTER HIGH MO	𑜁		AABA	VOWEL UA	𑜂	𑜂
AAA4	LETTER LOW YO	𑜂		AABB	VOWEL AUE	𑜃 ^[*]	𑜃
AAA5	LETTER HIGH YO	𑜃	𑜃	AABC	VOWEL AY	𑜄	𑜄
AAA6	LETTER LOW RO	𑜄		AABD	VOWEL AN	𑜅	𑜅
AAA7	LETTER HIGH RO	𑜅		AABE	VOWEL AM	𑜆	𑜆
AAA8	LETTER LOW LO	𑜆	𑜆	AABF	TONE MAI EK	𑜇	𑜇
AAA9	LETTER HIGH LO	𑜇	𑜇	AAC0	TONE MAI NUENG	e	
AAAA	LETTER LOW VO	𑜈	𑜈	AAC1	TONE MAI THO	𑜈	𑜈
AAAB	LETTER HIGH VO	𑜉	𑜉	AAC2	TONE MAI SONG	𑜉	
AAAC	LETTER LOW HO	𑜊	𑜊	AAC3	LETTER TAI DON HIGH KO		𑜊
AAAD	LETTER HIGH HO	𑜋	𑜋	AAC4	LETTER TAI DON LOW NGO		𑜋
AAAE	LETTER LOW O	𑜌	𑜌	AAC5	LETTER TAI DON LOW SO		𑜌
AAAF	LETTER HIGH O	𑜍	𑜍	AAC6	LETTER TAI DON HIGH SO		𑜍
AAB0	MAI KANG	𑜎	𑜎	AAC7	LETTER TAI DON LOW YO		𑜎
AAB1	VOWEL AA	𑜏	𑜏	AAC8	LETTER TAI DON HIGH PO		𑜏
AAB2	VOWEL I	𑜐	𑜐	AAC9	LETTER TAI DON HIGH PHO		𑜐
AAB3	VOWEL UE	𑜑	𑜑	AACA	LETTER TAI DON LOW MO		𑜑
AAB4	VOWEL U	𑜒	𑜒	AACB	LETTER TAI DON LOW DO		𑜒
AAB5	VOWEL E	𑜓	𑜓	AACC	LETTER TAI DON LOW NYO		𑜓
AAB6	VOWEL O	𑜔	𑜔	AACD	LETTER TAI DON HIGH NYO		𑜔
AAB7	MAI KHIT	𑜕	𑜕	AACE	MAAI KA		𑜕
AAB8	VOWEL IA	𑜖	𑜖	AACF	MAAI TSAM		𑜖

[*] The glyph 𑜃 named “vowelaue-tavt.Fancy” is connected to the glyph 𑜃 named “vowelaue-tavt” in *Tai Heritage Pro*.

AAD0	MAAI KAT		AAD8	SYMBOL MAAI SAM-1	
AAD1	MAAI KUM		AAD9	SYMBOL MAAI SAM-2	
AAD2	TONE MAAI QAQ		AADA	SYMBOL MAAI SAM-3	
AAD3	SYMBOL BON		AADB	SYMBOL KON	
AAD4	SYMBOL MA		AADC	SYMBOL NUENG	
AAD5			AADD	SYMBOL SAM	
AAD6			AADE	SYMBOL HO HOI	
AAD7	SYMBOL MAAI MEHT		AADF	SYMBOL KOI KOI	

[*] The glyph  named “symbolhohoi-tavt.Abbrev” is connected to the glyph  named “symbolhohoi-tavt” in *Tai Heritage Pro*.

表 8 规范声母

高音组			低音组		
o			o		
n	ɲ	ʂ	n	ɲ	ʂ
ɕ	ɲ	ʂ	ɲ	ɲ	ʂ
m	ɲ	ʂ	m	ɲ	ʂ
ʂ	ɲ	ʂ	ɲ	ɲ	ʂ
ɲ	ʂ	ɲ	ɲ	ʂ	ɲ
ʂ	ɲ	ʂ	ɲ	ɲ	ʂ
ɲ	ʂ	ɲ	ɲ	ʂ	ɲ

4. 金平傣文规范韵母

以 83 个韵母作为金平傣文的规范韵母。包含 9 个单元音、14 个双元音、60 个带辅音韵尾的韵母（简称“辅音尾韵母”）。列表 9。

表 9 规范韵母

单元音		o	ô	õ	u	o	oɲ	o	o	o
双元音	ɔ									
	o	oɲ				oɲ	oɲ	oɲ	o	o
	o	o	ô	õ	u	o				o
辅音尾韵母	o	o	ô	õ	u	o	o	o	o	o
	oɲ	oɲ	ôɲ	õɲ	uɲ	oɲ	oɲ	oɲ	o	o
	o	o	ô	õ	u	o	o	o	o	o
	o	o	ô	õ	u	o	o	o	o	o
	o	o	ô	õ	u	o	o	o	o	o
	o	o	ô	õ	u	o	o	o	o	o

5. 金平傣文规范声调

符号作为规范调符。列表 10。

以六个调位作为金平傣文的 6 个声调，3 个声调

表 10 规范声调

调位	一/33/	二/55/	三/25/	四/43/	五/52/	六/31/
调值	33	55	25	43	52	31
调符		ˊ	ˊ		ˊ	ˊ
例词	o	oˊ, oˊ	oˊ	o	oˊ	oˊ

Figure 1 Jinping Dai orthography shown in DAO et al, 2019.

/55/、/25/、/43/、/52/、/31/。其中调位/55/包含了舒声调第2调的调值[55]和入声调第7调的调值[55]；调位/43/包含了舒声调第4调的调值[43]和入声调第8调的调值[43]。

四、特殊符号

金平傣文有一些符号较为特殊，既不是声母，也不是韵母，而是一种固定的特殊符号，专门用来书写某个词或表示句末停顿的符号。这样的符号不多，可分两类：一种是固定字符；另一种是句末符号。

(一) 固定字符

固定字符是指用一个特定的符号来表示某一个词的固定书写形式，构成独立使用的独体字。这种固定字符不多，传统文字中只出现在“一、人、月亮、马”4个词中。即

𐄀 [nuŋ³²] 一 𐄁 [kun⁴³] 人
 𐄂 [bən³³] 月亮 𐄃 [ma³¹] 马

计算机字体根据需要增加了2个类似的独体字。即

𐄄 [lu⁴³] 孩子 𐄅 [la²⁵] 迟

上述的独体字也可以用声韵调拼合的方式书写，如：𐄆(一)、𐄇(人)、𐄈(月亮)、𐄉(马)、𐄊(孩子)、𐄋(迟)。使用时可根据需要选择使用独特字或声韵调拼合的字。

(二) 句末符号

金平傣文一般不使用标点符号，每一句话结束时就在后面标注一个句末符号。但并没有固定用哪一个字符，大多因人而异。有的字符与其说是字，不如说是图画，有的字形类似象形文字。句末符号有如下6个。即

𐄌 𐄍 𐄎 𐄏 𐄐 。

其中，前5个均统称为[ma: i³³ sam³¹]，有“结束符号”之意，通常用在长篇的故事或诗歌里。最后1个称为[ma: i³³ mɛt⁵⁵]，有“完成符号”之意，用在句子之后，表示一句话的完成。

五、结语

综上所述，金平傣文是一种源于印度梵文字母系统的拼音文字，也是跨境自称“傣端”或“傣皓”的傣族白傣支系使用的民族文字。该文字由于创制的年代久远，与现行口语在声母、韵母、声调等方面都出现了一定的差异。加之长期以来均通过手抄方式流传于民间，字体形式因人而异，既没有规范的字体，也没有计算机字体，这对跨境傣族语言文化的传承和发展带来了不利的影响。文字是一个民族进步的标志性特征之一，它对推动民族文化的发展起到积极的作用。尤其是当今数字化、信息化的时代，文字所发挥的作用更加具有不可替代性。为了能更好保护与传承优秀的民族文化，本文通过对金平傣文的实地调查，并根据现行口语的语音特征，对其语音的规范化问题进行了探讨，并提出金平傣文语音规范化的基本原则和标准。具体归纳总结表8。

1. 金平傣文规范字体

以金平县融媒体中心罗文斌同志所设计的金平傣文计算机字体小篆体作为金平傣文数字化、信息化的规范字体。该字体包含了在传统文字符号基础上所设计的字体和为完整记录现行语言而新增的文字符号字体。

2. 金平傣文标准音

以金平县勐拉镇旧勐村的白傣语语音作为金平傣文的标准音。该村的历史文化、地理位置、语音特点，符合标准选择的一般原则。

3. 金平傣文规范声母

以22个辅音音位44个傣文字母作为金平傣文的规范声母。列表8。

Figure 2 Jinping Dai orthography shown in DAO et al, 2019.

心造丙吳心凝心斛心卒心竈心捕心兵心吳心凝
 心斤心水心看心欽心宝心思心班心泥心班心僚心嫩
 心秘心許心堅心灘心班心素心竈心些心許心堅心蠻
 心敲心啐心班心素心符心發心許心克心令心油心許
 心堅心蠻。心通心鐘心懸心騰心胸。心通
 心通心鐘心懸心騰心尊心豹心趨心任心跨心隘心報
 心戶心趨心踰心憤心貧心眉心係心戶心眉心包心敲

Figure 3 Tai Don text in Thanh Hóa Quan Phong | 清化觀風, showing the form 𠄎.

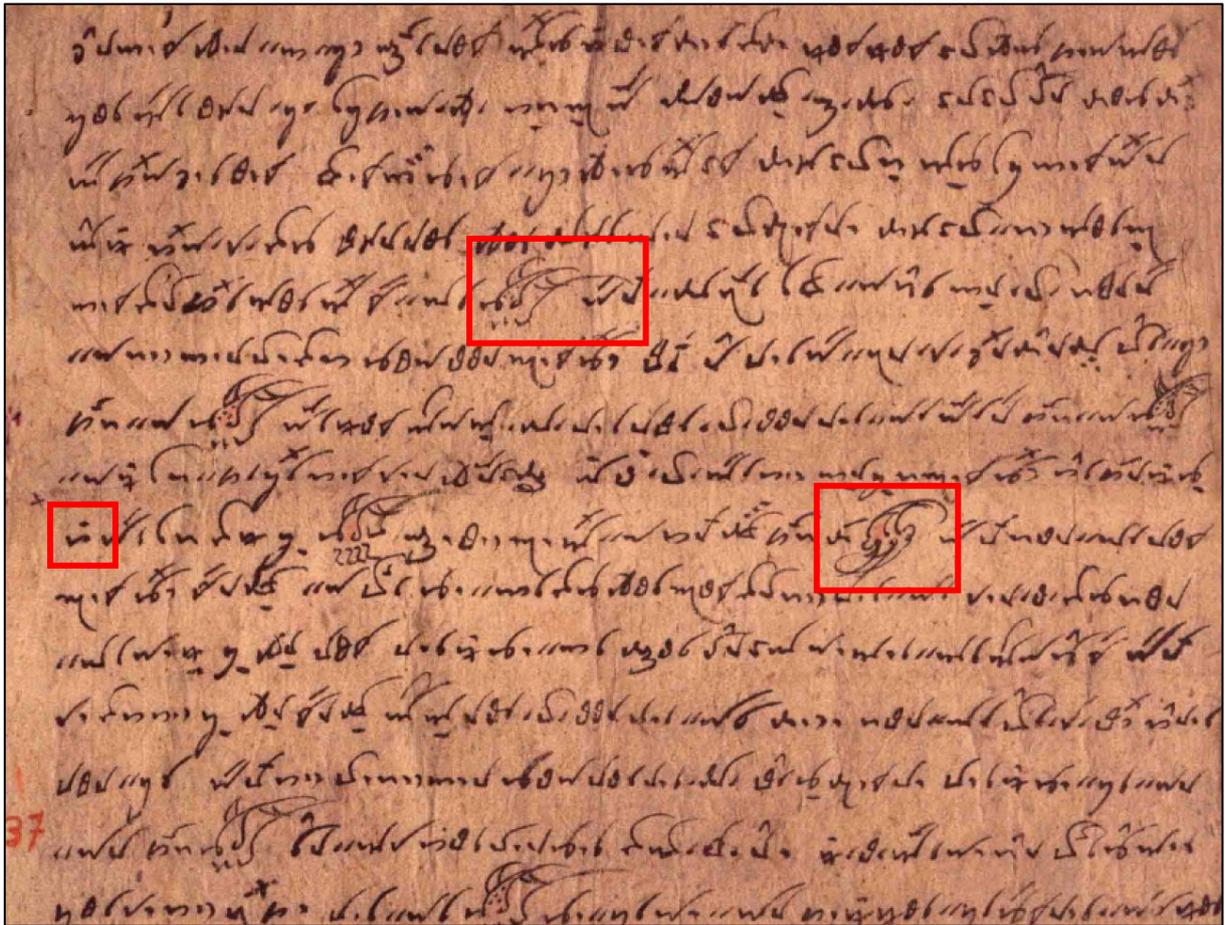


Figure 5 Tai Don text in 东登故事, showing the forms 〇, 〇 and 〇. (Collection, p. 40)

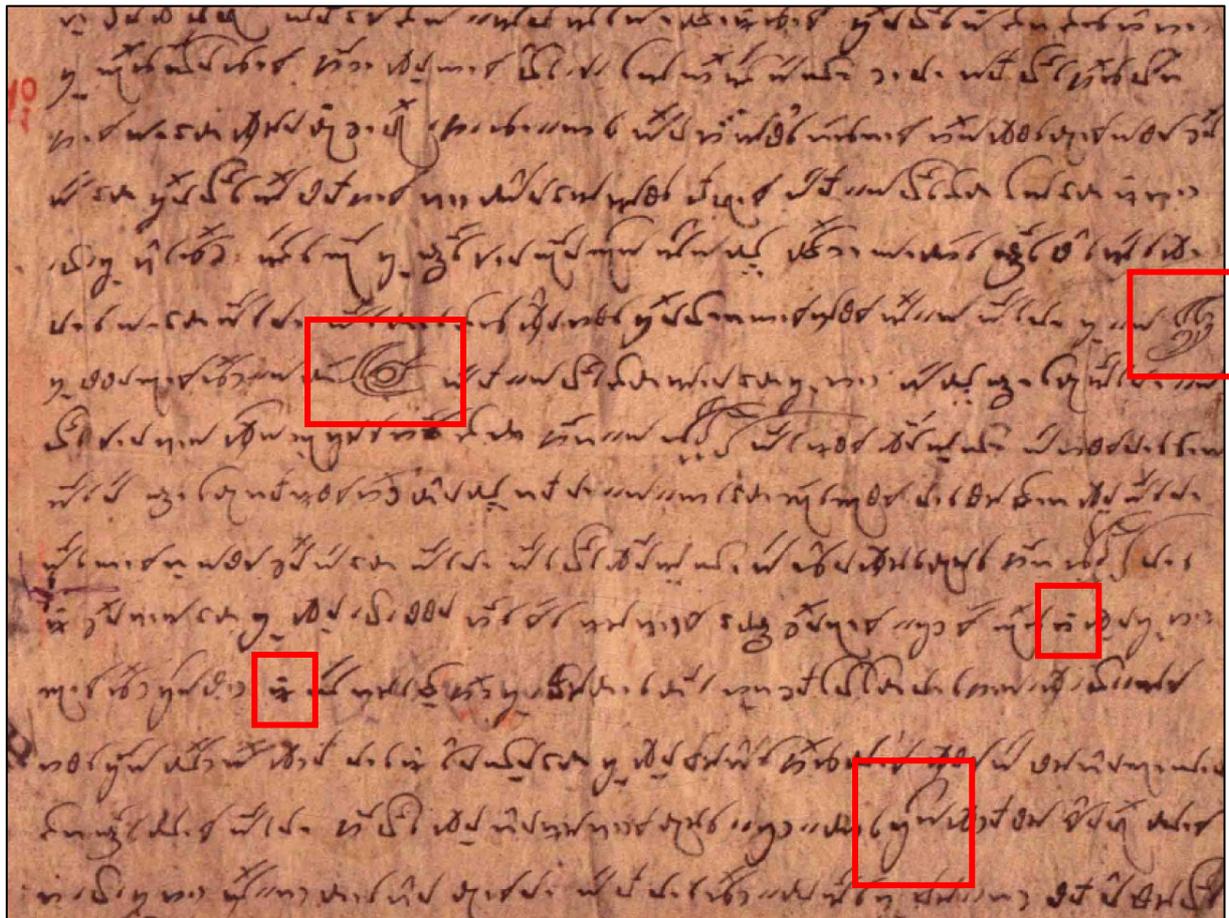


Figure 6 Tai Don text in 东登故事, showing the forms ̣, ̣, and ḥw. (*Collection*, p. 43)

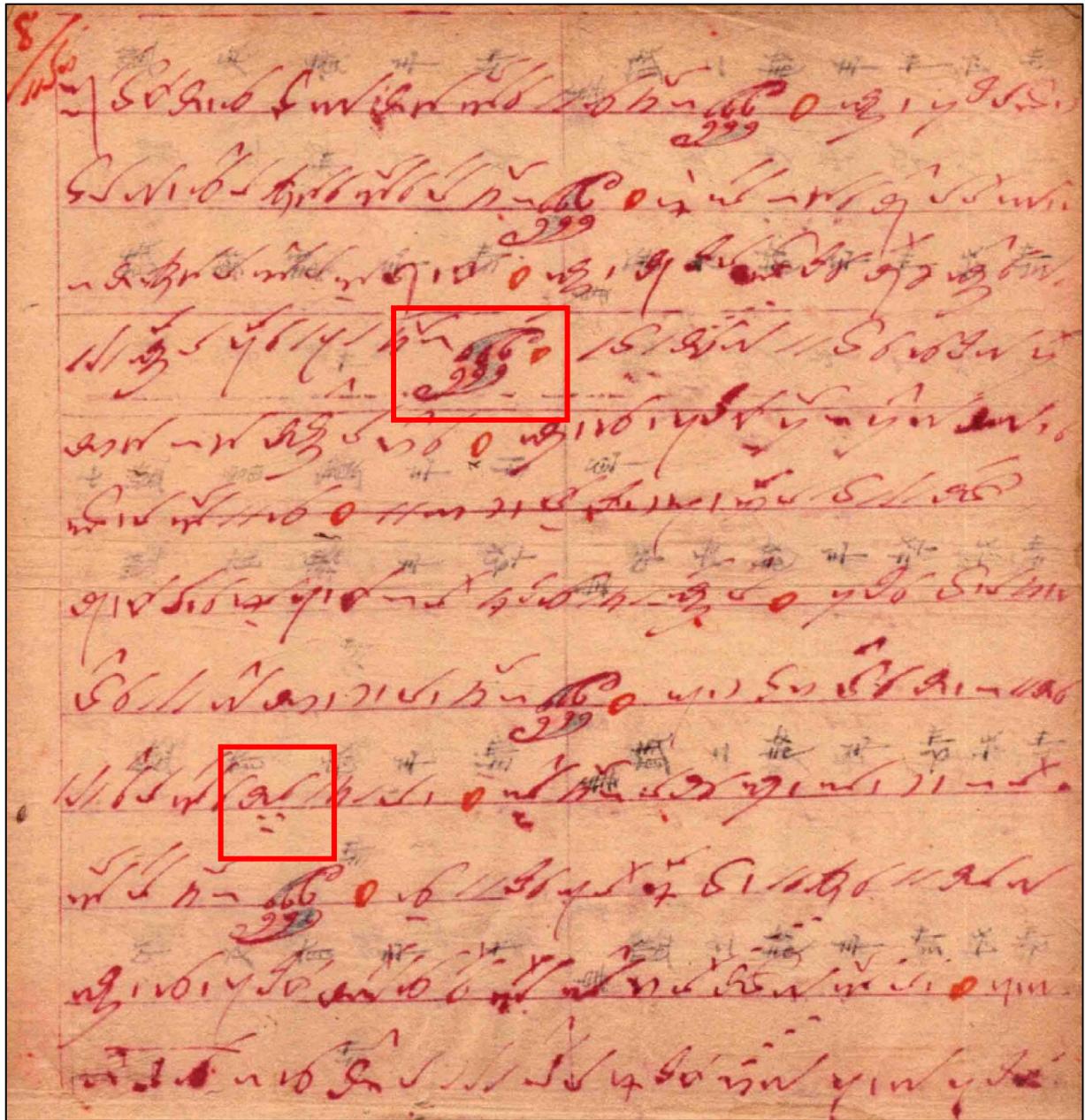


Figure 7 Tai Don text in 婚罗与喃窝, showing the forms  and . (Collection, p. 57)

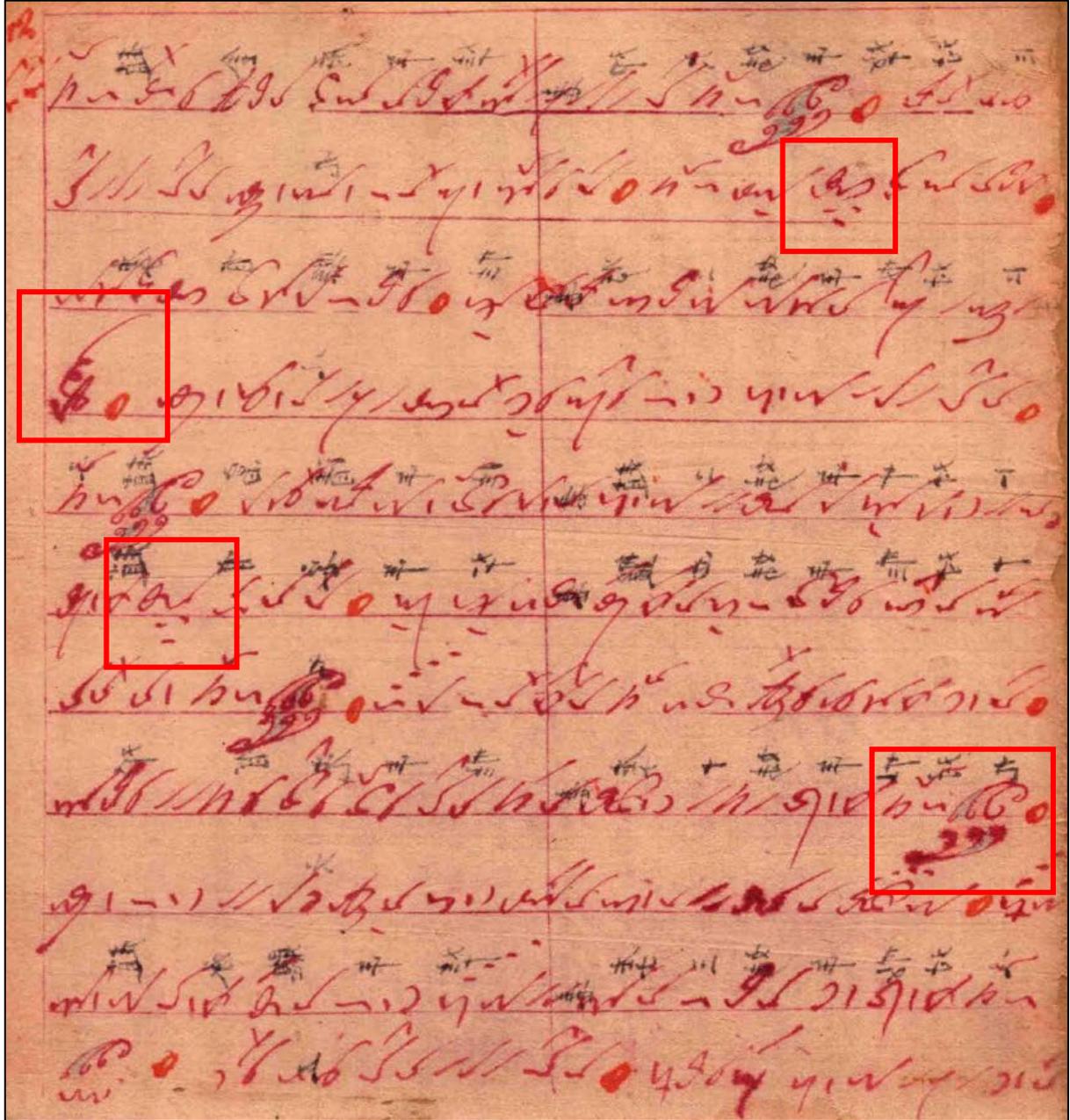


Figure 8 Tai Don text in 婚罗与喃窝, showing the forms w , s and o . (Collection, p. 61)

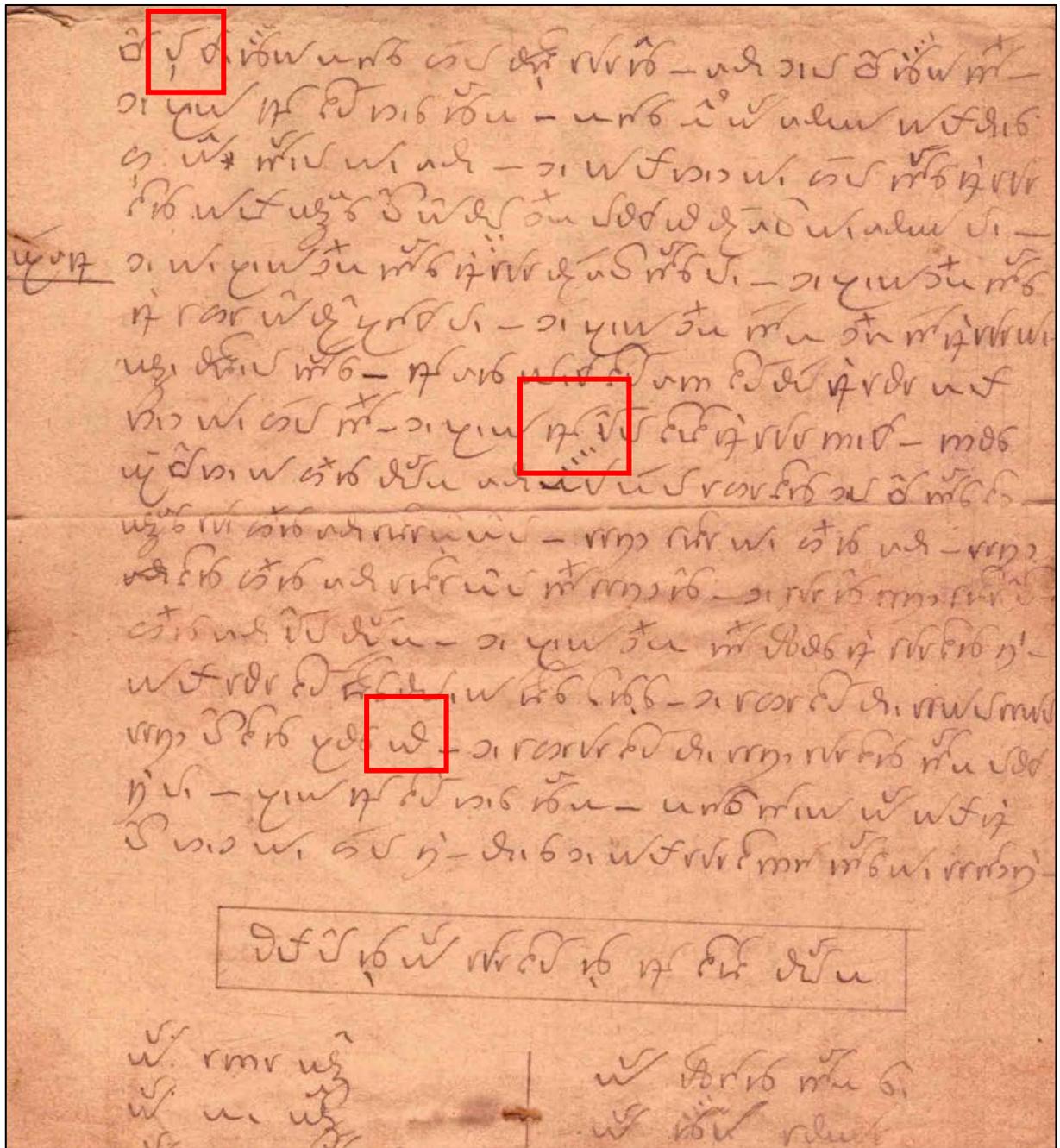


Figure 9 Tai Don text in 采药谱记, showing the forms \mathfrak{W} , \mathfrak{W} and \mathfrak{y} . (Collection, p. 148)

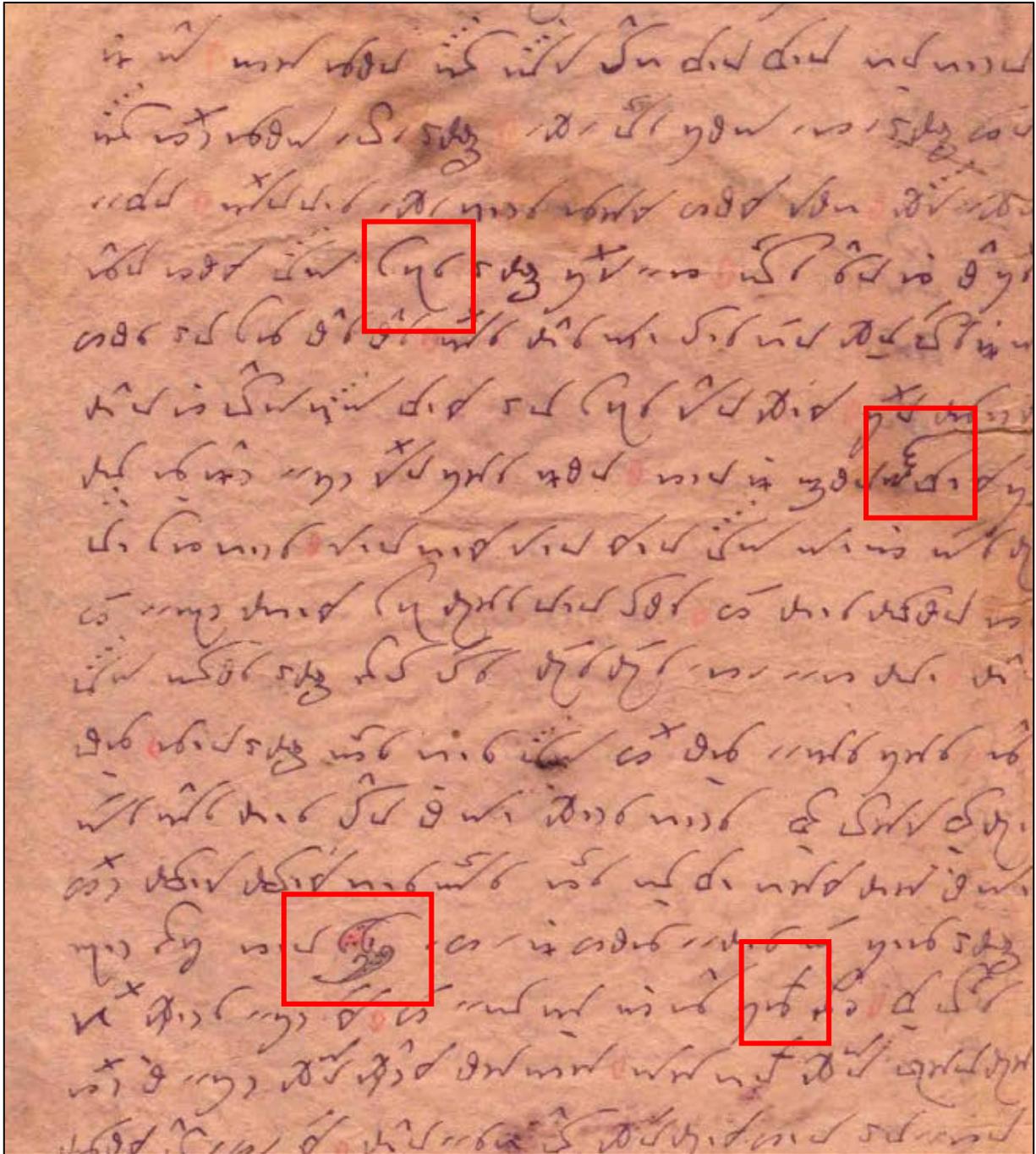


Figure 10 Tai Don text in 竹楼实务, showing the forms ໓໒, ໓໒, ໓໒ and ໓໒. (Collection, p. 188)

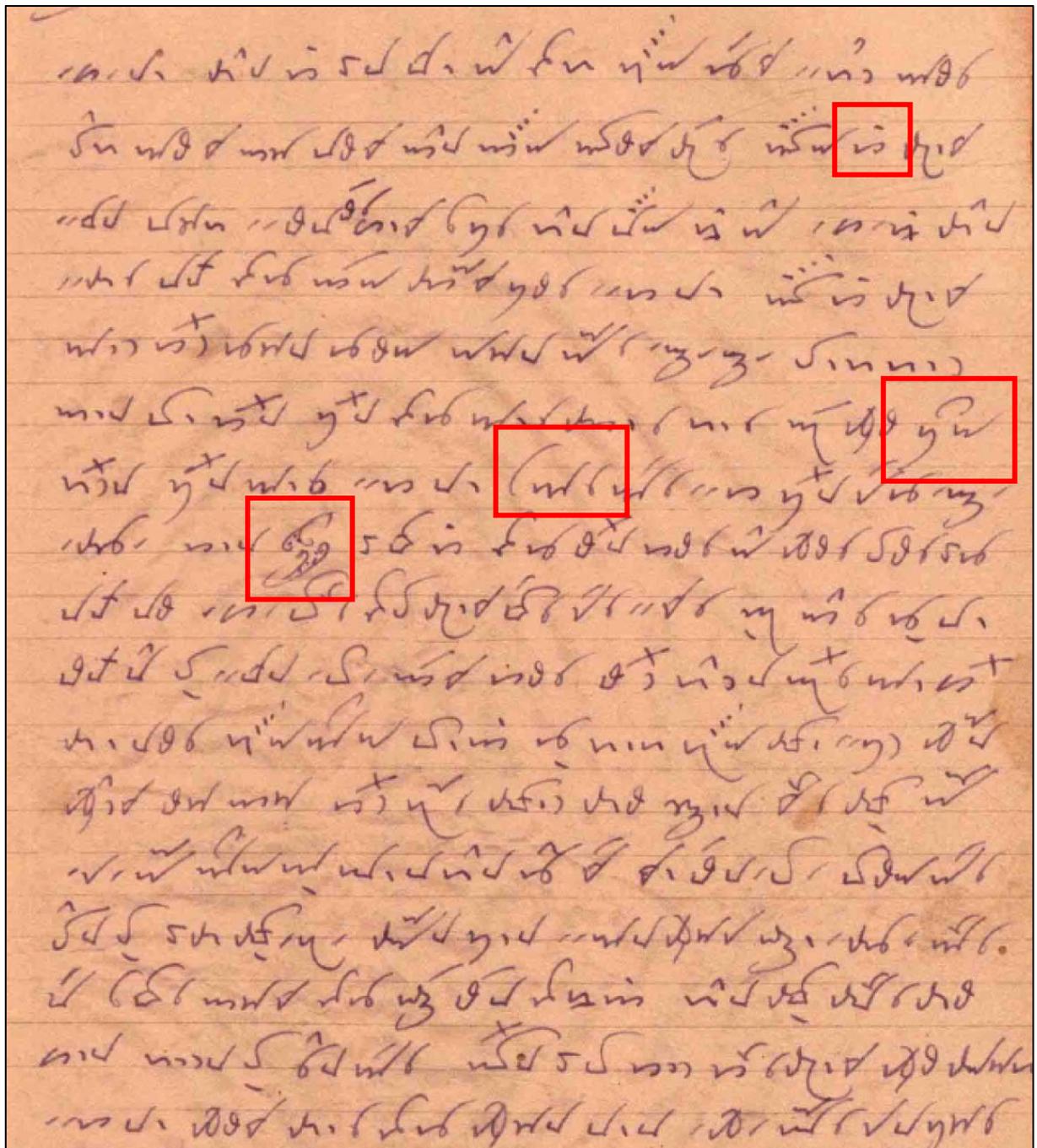


Figure 11 Tai Don text in 竹楼实务, showing the forms ̣, ̣w, ̣w6 and ̣ẉ. (Collection, p. 203)

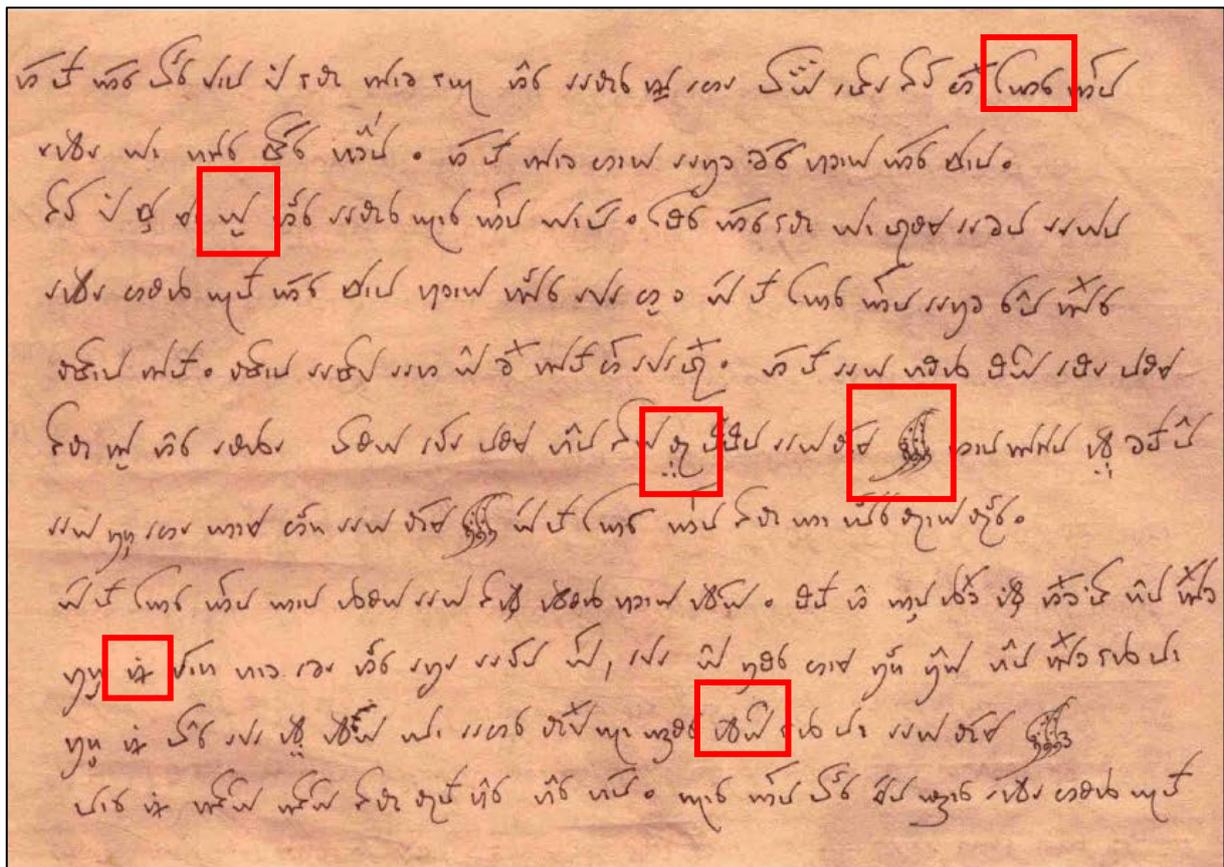


Figure 12 Tai Don text in 艾相伦, showing the forms w , w , w , w , w and w . (Collection, p. 249)

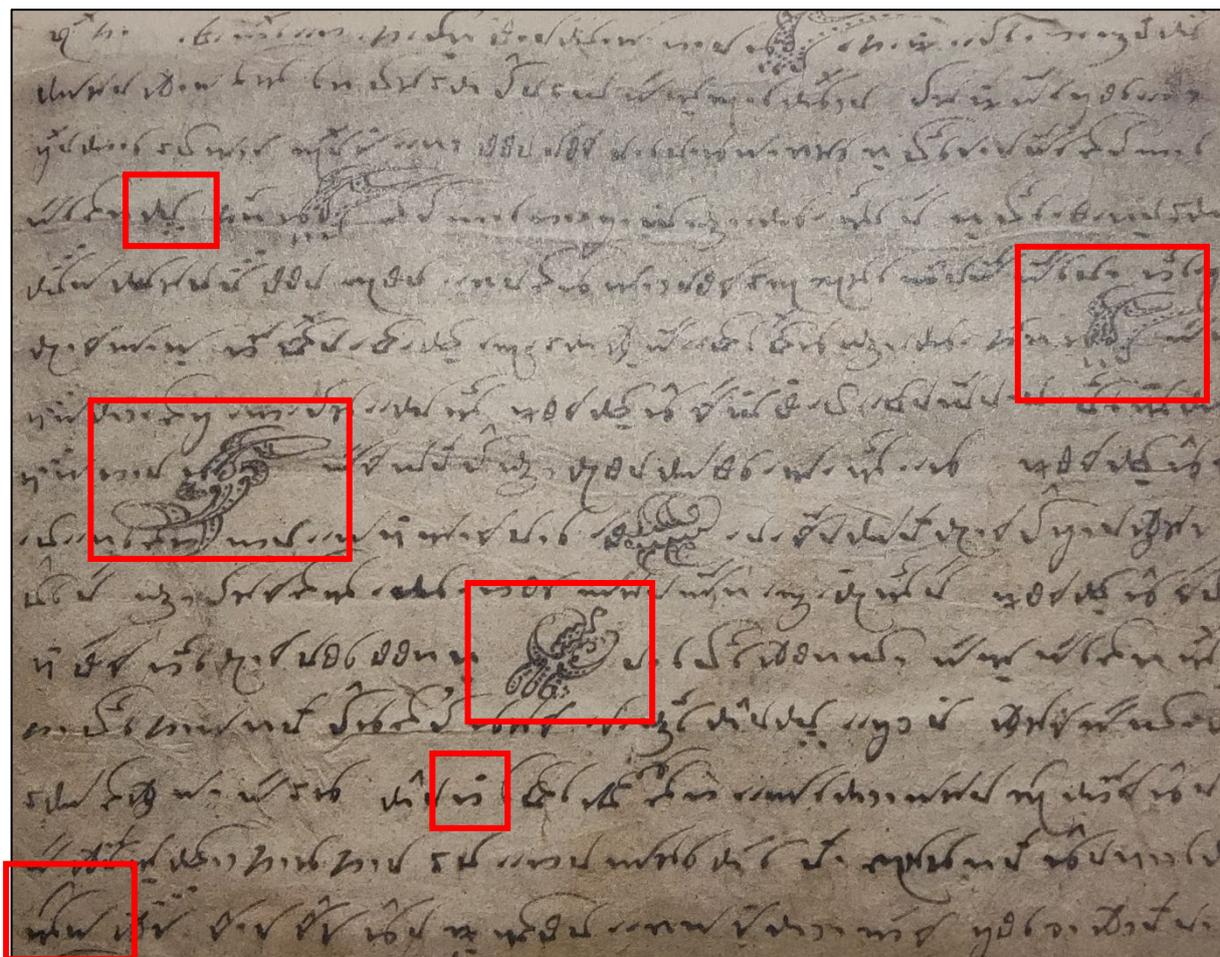


Figure 13 Tai Don text in 艾相伦, showing the forms , , , ,  and . (Collection, p. 329)

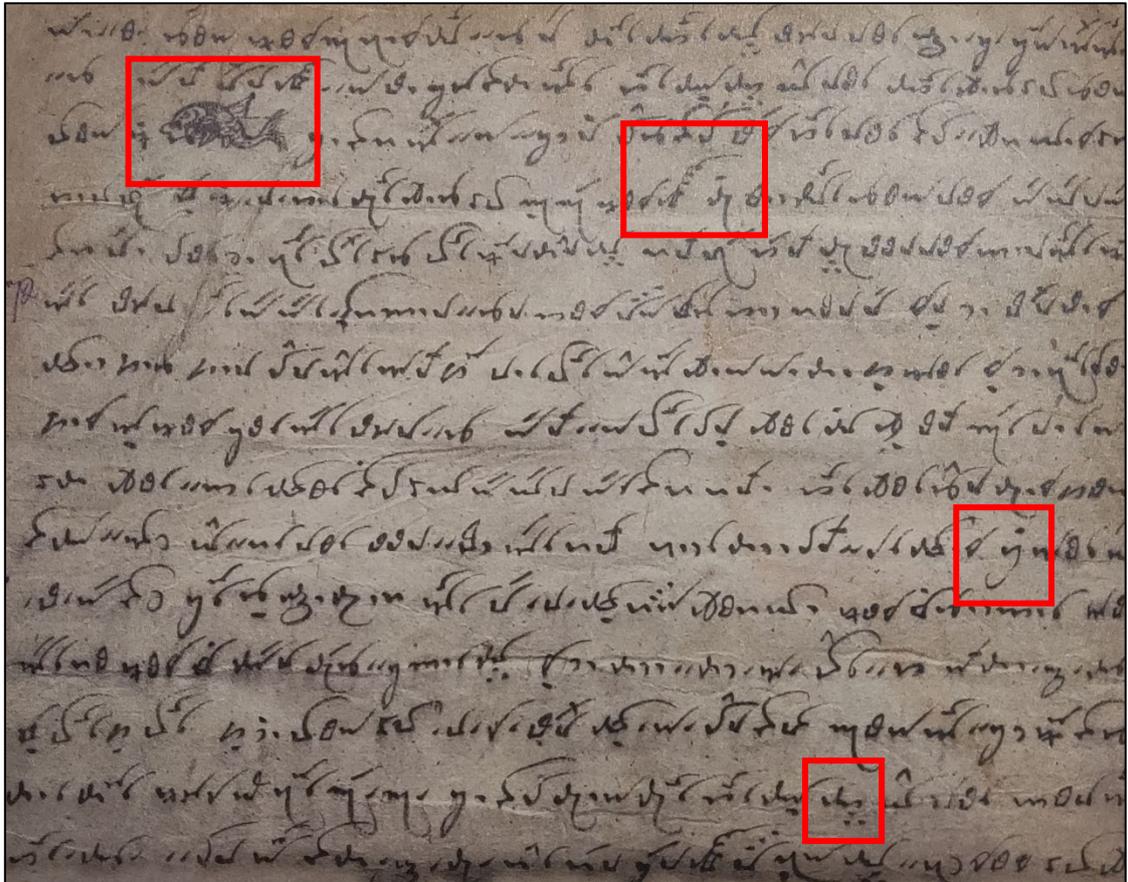


Figure 14 Tai Don text in 艾相伦, showing the forms ˙, ˚, and ʘ. (Collection, p. 330)

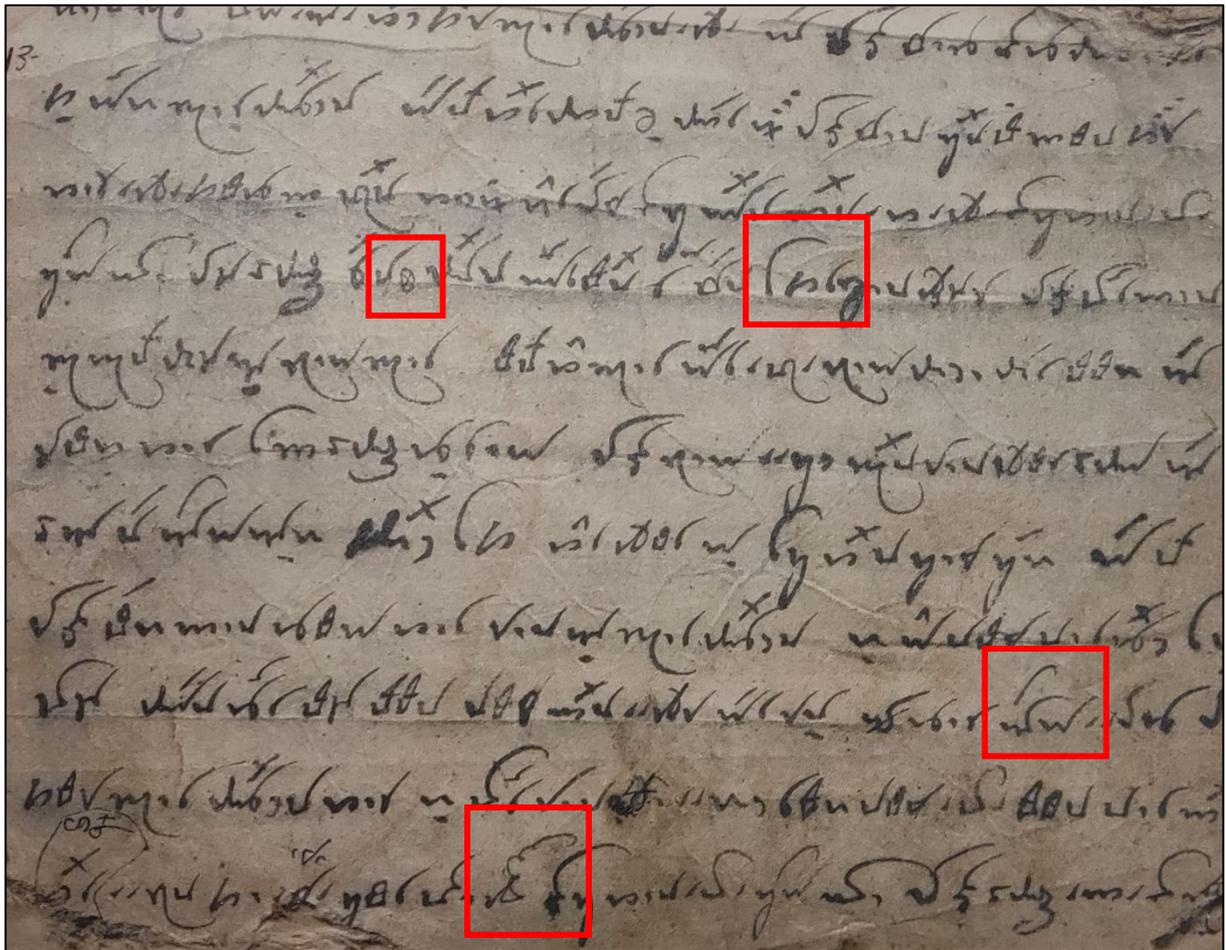


Figure 15 Tai Don text in 艾相伦, showing the forms \odot , 𑄎 , 𑄎𑄎 and 𑄎𑄎 . (Collection, p. 271)

第十课 蔬菜

ໄວ້ ຫຸ່ມ 10 ປັດ



ປັດ ແຂ້ວ
/phak xɛw/
青菜



ໂພ
/hno/
竹笋



ປັດ ອາ
/phak ho/
包菜



ໂພ ກຸ່ມ ແຂ້ວ
/no 'khaɔ xɛw/
青笋



ປັດ ອາ
/phak nam/
香菜



ຫຸ່ມ ປັດ
/tho fo/
豆腐



ອາ ຫຸ່ມ
/hmak tho/
豆子



ປັດ ຈັດ
/phak vbo/
花菜



ຫຸ່ມ ອາ
/tho 'ɲo/
豆芽



ປັດ ແຈ້
/phak ye/
野菜



ອາ ຫຸ່ມ ຈັດ
/hom vbo/
葱



ອາ ຫຸ່ມ ແຈ້ປ
/hom pɛɪ/
韭菜



ອາ ຫຸ່ມ ອາ
/hom ho/
大蒜



ຊັດ ຈັດ
/'tʃin tʃai/
芹菜



ຊັດ
/xiŋ/
姜



ປັດ ອີ ຈັດ
/phak oi rɾɾt/
假筴叶

Figure 16 Jinping Dai writing system textbook (LUO, 2017), showing the form ື.

第六课 对话

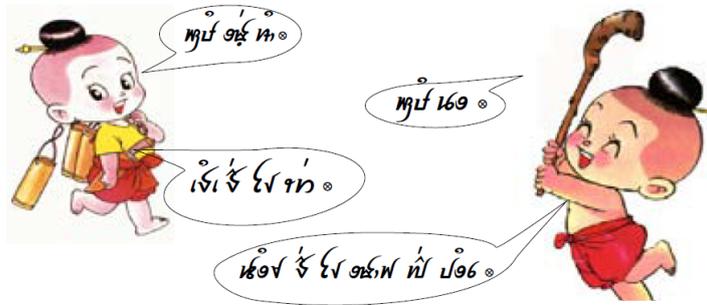
ໄຊ ມຸພ ໒

ຊຸ່ນ ອຸ້ ທໍ ເື
A: /'khant yu 'ka/
您好吗？

ຊຸ່ນ ລ໐໑ ເື
B: /'khant 'lo/
我很好！

ເຈ້ ຈໍ ໄຊ ທໍ ເື
A: /təao 'təi pai dəe /
您要去哪里？

ເຈ້ ຈໍ ໄຊ ອຸ່ນ ທໍ ປ໐໒ ເື
B: /xoy təi pai yam pi 'noŋ /
我要去亲戚家！



ເຈ້ ຈໍ ກໍ ເື
A: /təao 'tein khao rra /
您吃饭了吗？

ຈໍ ຈໍ ເື
B: /tein lo /
吃了，

ເຈ້ ຈໍ ອ໐໒ ຈໍ ຕ໐ ຈໍ ເື
B: /xoy naŋ tein kai biŋ /
我还吃了烤鸡。

ຈໍ ອ໐໒ ເື
B: /tein ŋon rri /
非常好吃。

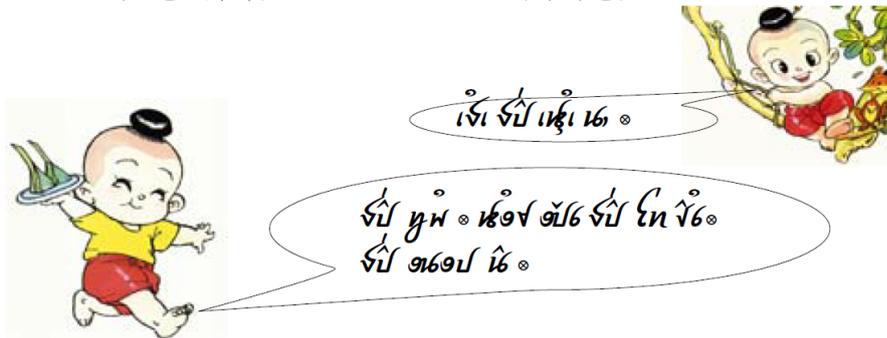


Figure 17 Jinping Dai writing system textbook (LUO, 2017), showing the forms ◌◌ and ◌◌.

**ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646 ***

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P&P) from

<http://std.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://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	Final proposal to add 22 characters for Tai Don writing system	
2. Requester's name:	Kushim JIANG	
3. Requester type (Member body/Liaison/Individual contribution):	Individual contribution	
4. Submission date:	November 8, 2022	
5. Requester's reference (if applicable):		
6. Choose one of the following:		
This is a complete proposal:	yes	
(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):		
Proposed name of script:		
b. The proposal is for addition of character(s) to an existing block:	yes	
Name of the existing block:	Tai Viet	
2. Number of characters in proposal:	22	
3. Proposed category (select one from below - see section 2.2 of P&P document):		
A-Contemporary <input checked="" type="checkbox"/>	B.1-Specialized (small collection) <input type="checkbox"/>	B.2-Specialized (large collection) <input type="checkbox"/>
C-Major extinct <input type="checkbox"/>	D-Attested extinct <input type="checkbox"/>	E-Minor extinct <input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/>	G-Obscure or questionable usage symbols <input type="checkbox"/>	
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. Fonts related:		
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	Kushim JIANG	
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	Kushim JIANG, kushim_jiang@outlook.com	
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)?	yes	
	A sorting order for the consonants in Tai Don writing system is provided.	

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 behavior information such as line breaks, widths etc., Combining behavior, Spacing behavior, Directional behavior, Default Collation behavior, 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/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

* Form number: N4502-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, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain: _____	<i>no</i>
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.)? If YES, with whom? _____ If YES, available relevant documents: _____	<i>yes</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference: _____	<i>yes</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference: _____	<i>common</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference: _____	<i>yes</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference: _____	<i>yes</i> <i>yes</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	<i>yes</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference: _____	<i>no</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference: _____	<i>no</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? If YES, is a rationale for its inclusion provided? If YES, reference: _____	<i>no</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: _____ Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference: _____	<i>yes</i> <i>yes</i> <i>Combining characters are an inherent part of the writing system.</i> <i>Yes</i> <i>Table 3 of this proposal.</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary): _____ _____	<i>no</i>
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference: _____	<i>no</i>