







Universal Multiple-Octet Coded Character Set
International Organization for Standardization
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1. Introduction

Document WG2 N4588 identified many Tangut characters with incorrectly written glyphs in modern sources. This document identifies a further three Tangut characters that are incorrectly written in Li Fanwen's 2008 *Tangut-Chinese Dictionary*. As the font for the Unicode and ISO/IEC 10646 code charts is based on the font used in this dictionary, the characters in the code charts are also incorrectly written, and need to be corrected, as shown in Table 1.

Table 1. Summary of Glyph Corrections

| Character | Current Glyph | Proposed New Glyph | Old Stroke Count | New Stroke Count |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------|------------------|
| U+17013 |  |  | 9 | 10 |
| U+17712 |  |  | 13 | 14 |
| U+17D9F |  |  | 12 | 12 |



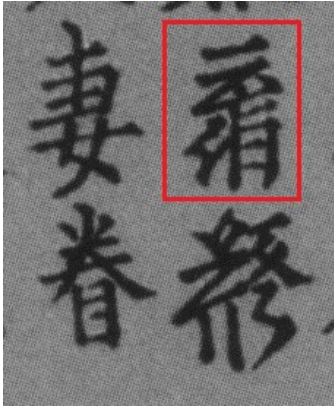
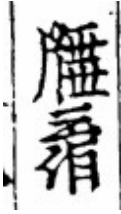

2. Glyph Corrections

2.1 U+17013

In modern sources it is not always clear exactly how U+17013 𐰚 ‘to request’ is written. In the font used for Li Fanwen’s 2008 *Tangut-Chinese Dictionary* (and for the ISO/IEC 10646 and Unicode code charts), this character is written with a single dot on the right of the Z-shaped stroke, and the central vertical stroke extends up into the Z-shaped stroke.

| Nishida 1966 | Sofronov 1968 | Li Fanwen 1986 | Han Xiaomang 2004 | Kychanov 2006 | Li Fanwen 2008 | Proposed New Glyph |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|
|  |  |  |  |  |  | |
| 35-061 | 1124 | 2273 | 1992/2070 | 1514 | 0147 | |

However, original printed Tangut sources show that this character written with an extra dot in the centre of the Z-shaped stroke, and with the central vertical stroke not extending into the Z-shaped stroke. Only the example from the *Odes* shows a form that possibly matches the current code chart glyph (it is not clear).



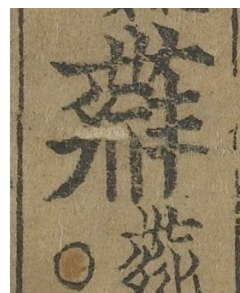
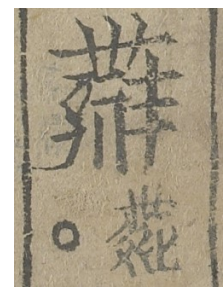
| Tongyin A 40B58 | Tongyin B2 41A34 | Zhangzhongzhu A 343B | Zazi 15B | Odes No. 4 folio 8b |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |

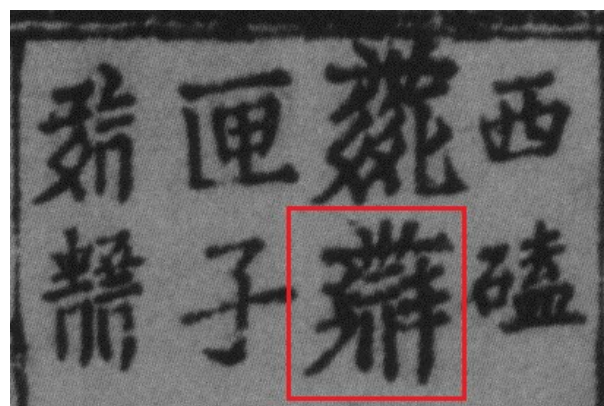
2.2 U+17712

In most modern sources U+17712 𪛗 ‘casket’ *kha* is written as 𪛗 𪛗 𪛗 𪛗 𪛗 𪛗, as shown below. This is also the form used in the Unicode and ISO/IEC 10646 code charts.

| Nishida 1966 | Sofronov 1968 | Li Fanwen 1986 | Han Xiaomang 2004 | Kychanov 2006 | Li Fanwen 2008 | Proposed New Glyph |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|
|  |  |  |  |  |  | |
| 17-09e | 0908 | 2409 | 1614/1711 | 0454 | 4201 | |

U+17712 is a rare character, and we only know of two attestations in original Tangut texts, once in *Tongyin* (‘Homophones’) and once in *Zhangzhongzhu* (‘Pearl in the Palm’). In these texts the character is written as 𪛗 𪛗 𪛗 𪛗 𪛗 𪛗, with a different lower middle component. The only source which shows the 𪛗 component is the A edition of *Tongyin*.

| <i>Tongyin</i> A 27A14 | <i>Tongyin</i> B1 27B36 | <i>Tongyin</i> B2 27B36 | <i>Tongyin</i> D 27B36 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |

| <i>Zhangzhongzhu</i> A 242A |
|-------------------------------------------------------------------------------------|
|  |







U+17712 is evidently constructed using the left and middle components of U+1765D 𪛗 ‘sound’ *kha* as a phonetic. Both characters are read *kha*, and U+1765D is the character immediately preceding U+17712 in *Tongyin* (‘Homophones’). In the A edition both U+1765D and U+17712 are written with the 𪛗 component, whereas in the B edition both characters are written with the 𪛗 component, indicating that the same component occurs in both characters.

| Tongyin A 27A13-14 | Tongyin B1 27B35-36 | Tongyin B2 27B35-36 | Tongyin D27B35-36 |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |  |





U+1765D 𪛗 ‘sound’ *kha* is constructed using the left side of U+1764F 𪛗 ‘sound’ as a semantic, and the middle and right components of U+186CB 𪛗 ‘bitter lettuce’ *kha* as a phonetic, which indicates that the left side component of U+1765D must be 𪛗, as shown in the B and D editions of *Tongyin*. As U+17712 uses the left and middle components of U+1765D 𪛗 as its phonetic, this clearly demonstrates that the lower middle component of U+17712 𪛗 must also be 𪛗 rather than 𪛗.


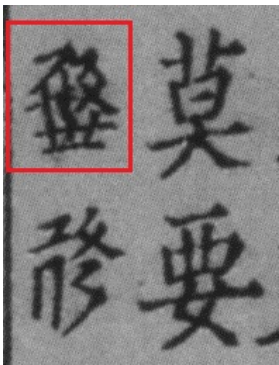

2.3 U+17D9F

In modern sources U+17D9F 𪚩 ‘ceremony’ is written either as 𪚩 𪚩 or 𪚩 𪚩, as shown below. The former form is used in the Unicode and ISO/IEC 10646 code charts.

| Nishida 1966 | Sofronov 1968 | Li Fanwen 1986 | Han Xiaomang 2004 | Kychanov 2006 | Li Fanwen 2008 | Proposed New Glyph |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------|
|  143-081 |  4826 |  4221 |  3286/3406 |  0049 |  0906 | |

However, original Tangut sources all use the 𪚩 component. Compare U+180A8 𪚪 which has U+17D9F as its right hand component, but is correctly written with 𪚩 in the code charts.

| Tongyin A 7B47 | Tongyin B1 10A37 | Tongyin B2 10A37 | Tongyin D 10A37 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |

| Wenhai 1.11.121 | Zhangzhongzhu A 291B | Odes No. 5 folio 2A |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |

3. Tangut Data

The following entries in TangutSrc.txt (ISO/IEC 10646) and TangutSources.txt (Unicode) need to be modified as shown to account for changes in stroke count for two of the three characters:

| | | |
|---------|----------------|------------|
| U+17013 | kTGT_MergedSrc | L2008-0147 |
| U+17013 | kRSTUnicode | 1.10 |
| U+17712 | kTGT_MergedSrc | L2008-4201 |
| U+17712 | kRSTUnicode | 106.14 |