

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

Doc Type:	Working Group Document
Title:	Tangut glyph corrections
Source:	Andrew West, Michael Everson, Viacheslav Zaytsev
Status:	Individual Contribution
Action:	For consideration by JTC1/SC2/WG2 and UTC
Date:	2014-09-21

1. Introduction

With the help of Chinese experts we have carried out a review of the set of Tangut characters included in ISO/IEC 10646:2014 PDAM2 (see N4585), focussing particularly on whether the glyph forms in the font used for the code chart are correct, and in accord with the glyph shape in original Tangut texts. We have manually checked the glyph shape of all characters that have different stroke counts in Li Fanwen 2008 compared with Han Xiaomang 2004 and 2013, as this may be indicative of an incorrect glyph used in the source font.

We have identified sixty characters which have a glyph shape that is significantly different from the glyph normally found in primary Tangut sources, and which should be corrected before encoding. The proposed glyph corrections are of three types:

- Radical or component glyph is incorrect in all instances, and all characters with this radical or component need to be modified (see Table 1 below);
- Inconsistent use of glyph forms for the same component, and characters need to be harmonized to use the same component glyph (see Table 2 below);
- Corrections to glyphs for individual characters (see Table 3 below).

In most cases the required glyph change means that the affected character also needs to be reordered. In addition to reordering due to glyph change, sixteen characters need to be reordered because they were misidentified with the wrong radical/component in N4522. A total of 45 characters need reordering. The corrected glyph and radical/stroke data, as well as the required reordering for each character, are listed in Table 4.

Section 2 of this document provides glyph images for each affected character, taken from a variety of printed, manuscript and epigraphic texts, as evidence for the correct glyph form of the character.

Table 1 : Radical/Component Glyph Corrections

N4522 Radical	L2008 Radical/Component Glyph	Corrected Radical/Component Glyph	Characters Affected	Old Glyph	New Glyph	Details
R171	半 (5 strokes)	ヰ (4 strokes)	U+173D0 (L3340)	𦵃	𦵃	2.1
			U+173E3 (L2220)	𦵄	𦵄	2.2
			U+1743B (L4921)	𦵅	𦵅	2.3
			U+1807E (L5933)	𦵆	𦵆	2.4
R255	ヰ (6 strokes)	ヰ (5 strokes)	U+174D6 (L4968)	𦵇	𦵇	2.5
			U+1791C (L3784)	𦵈	𦵈	2.6
			U+182F3 (L5870)	𦵉	𦵉	2.7
			U+182F4 (L5937)	𦵊	𦵊	2.8
			U+182F5 (L5909)	𦵋	𦵋	2.9
			U+182F6 (L5934)	𦵌	𦵌	2.10
			U+182F7 (L5938)	𦵍	𦵍	2.11
			U+182F8 (L5975)	𦵎	𦵎	2.12
			U+182F9 (L5832)	𦵏	𦵏	2.13
			U+186C2 (L4011)	𦵐	𦵐	2.14
R306	ゑ (7 strokes)	ゑ (6 strokes)	U+17E93 (L2352)	𦵑	𦵑	2.15
			U+18522 (L1763)	𦵒	𦵒	2.16

Table 2 : Radical/Component Glyph Harmonization

N4522 Radical	Glyph Forms for the Same Component	Preferred Glyph	Characters Affected	Old Glyph	New Glyph	Details
N/A	扌 (5 strokes) 扌 (5 strokes)	扌	U+177BE (L4340)	𢃠	𢃠	2.17
			U+17A43 (L3302)	𢃡	𢃡	
			U+17A8C (L2647)	𢃢	𢃢	
			U+17A8D (L3674)	𢃣	𢃣	
			U+17AE5 (L2245)	𢃤	𢃤	
N/A	扌 (3 strokes) 扌 (3 strokes)	扌	U+17384 (L4459)	𢃥	𢃥	2.18
			U+17497 (L4836)	𢃦	𢃦	
			U+179E7 (L3708)	𢃧	𢃧	
			U+180B8 (L5207)	𢃨	𢃨	
			U+182D3 (L5201)	𢃩	𢃩	
			U+183C5 (L5304)	𢃪	𢃪	
			U+1879C (L1583)	𢃫	𢃫	
N/A	丨 (2 strokes) 丨 (2 strokes)	丨	U+178E0 (L2746)	𢃬	𢃬	2.19
			U+179B5 (L3580)	𢃮	𢃮	
			U+17A55 (L2093)	𢃯	𢃯	
			U+17AD6 (L2883)	𢃰	𢃰	
			U+17EC4 (L2445)	𢃱	𢃱	
			U+17F15 (L2545)	𢃲	𢃲	

Table 3 : Individual character corrections

Character	Note	Old Glyph	New Glyph	Details
U+18221 (L1266)	Radical 220 彳 (6 strokes) changed to 彴 (7 strokes).	𠂇	𠂇	2.20
U+18562 (L5542)	Move to a new radical 彌 (8 strokes).	彌	彌	2.21
U+18702 (L0470)	Move to radical R453 彔 (9 strokes), and delete R420 彔 (8 strokes).	彔	彔	2.22
U+17FF4 (L3589)		彔	彔	2.23
U+173C3 (L2463)	Middle component changed from 丶 (3 strokes) to 丨 (3 strokes).	𡇉	𡇉	2.24
U+18024 (L3933)	Right component changed from 丶 (3 strokes) to 丨 (3 strokes).	𠁕	𠁕	2.25
U+1835F (L5533)	Right component changed from 丶 (4 strokes) to 丨 (4 strokes).	𦵈	𦵈	2.26
U+17F18 (L3753)	Right component changed from 彂 (6 strokes) to 彂 (7 strokes).	𠂇	𠂇	2.27
U+1791F (L3804)	Right component changed from 彂 (6 strokes) to 彂 (5 strokes).	𠂇	𠂇	2.28
U+179C6 (L2754)	Middle component changed from 彂 (6 strokes) to 彂 (6 strokes).	彂	彂	2.29
U+17A4E (L3597)	Left or bottom left component changed from 彂 (4 strokes) to 彂 (4 strokes).	𠂇	𠂇	2.30
U+177AD (L4251)		𠂇	𠂇	
U+17514 (L4904)		𠂇	𠂇	
U+17BCF (L5836)	Component 彂 (4 strokes) changed to 彂 (3 strokes).	𠁕	𠁕	2.31
U+17BD0 (L5950)		𠁕	𠁕	
U+17BD8 (L5839)		𠁕	𠁕	
U+17DB7 (L4498)		𠁕	𠁕	
U+185E7 (L1851)		𠁕	𠁕	

Character	Note	Old Glyph	New Glyph	Details
U+1725D (L0896)	Component  (4 strokes) changed to  (2 strokes).			2.31
U+1759F (L1536)				
U+17763 (L4393)				
U+177A4 (L4402)				
U+17BD5 (L5837)				
U+17BD2 (L5948)				
U+17BD3 (L5951)				
U+17BDB (L5956)				

In N4522 there are twenty-three characters with the  component, but this component is inconsistently treated as either 2 strokes or three strokes. Seven characters (U+1764A [L1010], U+17C62 [L1452], U+178C1 [L2797], U+17404 [L3392], U+17975 [L3654], U+17DC0 [L4497], U+17805 [L4585]) are ordered as  = 2 strokes, but the following sixteen characters are ordered as  = 3 strokes, and the first fourteen of them are incorrectly intermixed with the  radical:

- U+175D3 (L5955) 
- U+175D4 (L5981) 
- U+175D5 (L5835) 
- U+175D6 (L5846) 
- U+175D8 (L5982) 
- U+175D9 (L5913) 
- U+175DA (L5911) 
- U+175DB (L5958) 
- U+175DC (L5992) 
- U+175DD (L5838) 
- U+175E0 (L5918) 
- U+175E3 (L5896) 
- U+175E6 (L5985) 
- U+175E7 (L5952) 
- U+17896 (L3778) 
- U+17ACE (L3351) 

For consistency these sixteen characters should be reordered to reflect their correct stroke count, and fourteen of them moved to a new  radical.

The following reordering of the 505 radicals used in N4522 are required in response to the changes given in Tables 1-3:

- R001–R014 ⇒ R001–R014
- Insert R015 ⸵ (new radical)
- R015–R021 ⇒ R016–R022
- R022–R026 ⇒ R024–R028
- R027 ⸶ ⇒ R023 ⸶
- R028–R108 ⇒ R029–R109
- R109–R170 ⇒ R111–R172
- R171 ⸷ ⇒ R110 ⸷
- R172–R195 ⇒ R173–R196
- R196–R219 ⇒ R198–R221
- R220 ⸻ ⇒ R304 ⸻
- R221–R254 ⇒ R222–R255
- R255 ⸹ ⇒ R197 ⸹
- R256–R289 ⇒ R256–R289
- R290–R302 ⇒ R291–R303
- R303–R305 ⇒ R305–R307
- R306 ⸻ ⇒ R290 ⸻
- R307–R399 ⇒ R308–R400
- Insert R401 ⸺ (new radical)
- R400–R419 ⇒ R402–R421
- Delete R420 ⸻
- R421–R505 ⇒ R422–R506

Table 4 : Character Corrections

Character	Old Glyph	New Glyph	New Radical, Stroke Count and Sort Key	Reordering
U+1725D (L0896)	𦵯	𦵯	R017 10 JCABBBBGCB	after U+17256
U+17384 (L4459)	𢃠	𢃠	R023 9 ABDGCGCCQ	after U+17350
U+173C3 (L2463)	𢃥	𢃥	R036 10 CCQDDBCCCQ	(unchanged)
U+173D0 (L3340)	𢃦	𢃦	R036 10 CCQGBAACCQ	after U+173C6
U+173E3 (L2220)	𢃧	𢃧	R036 12 CCQGBAAEABE	after U+173E0
U+1743B (L4921)	𢃨	𢃨	R041 9 DCAGBAAJC	after U+1742B
U+17497 (L4836)	𢃩	𢃩	R041 13 DCABAABDCGCCQ	after U+17494

Character	Old Glyph	New Glyph	New Radical, Stroke Count and Sort Key	Reordering
U+174D6 (L4968)	𦵃	𦵃	R041 13 DCAGBAAACCQCQ	after U+174B4
U+17514 (L4904)	𦵄	𦵄	R041 17 DCACCCQCCCQDCAMCD	(unchanged)
U+1759F (L1536)	𦵅	𦵅	R045 11 EANGCBCCQCQ	after U+1759A
U+175D3 (L5955)	𦵆	𦵆	R015 6 HBGAAB	after U+17227
U+175D4 (L5981)	𦵇	𦵇	R015 7 HBDCJCC	after U+17227
U+175D5 (L5835)	𦵈	𦵈	R015 8 HBABFAAC	after U+17227
U+175D6 (L5846)	𦵉	𦵉	R015 8 HBAEABEA	after U+17227
U+175D8 (L5982)	𦵊	𦵊	R015 8 HBDCGCCQ	after U+17227
U+175D9 (L5913)	𦵋	𦵋	R015 8 HBGAABMC	after U+17227
U+175DA (L5911)	𦵌	𦵌	R015 9 HBCCQCQMC	after U+17227
U+175DB (L5958)	𦵍	𦵍	R015 9 HBKDBOEAA	after U+17227
U+175DC (L5992)	𦵎	𦵎	R015 9 HBOGDCBBE	after U+17227
U+175DD (L5838)	𦵏	𦵏	R015 10 HBADACCQMC	after U+17227
U+175E0 (L5918)	𦵐	𦵐	R015 10 HBDABEAMCD	after U+17227
U+175E3 (L5896)	𦵑	𦵑	R015 12 HBCCCQDDAABE	after U+17227
U+175E6 (L5985)	𦵒	𦵒	R015 14 HBCCQCQDCABEAA	after U+17227
U+175E7 (L5952)	𦵓	𦵓	R015 15 HBGABBAABEEACCQ	after U+17227
U+17763 (L4393)	𦵔	𦵔	R060 14 ABBBGCBOGDCBBE	after U+17741
U+177A4 (L4402)	𦵕	𦵕	R060 16 ABBBGCBCCCQEAAAB	after U+17792

Character	Old Glyph	New Glyph	New Radical, Stroke Count and Sort Key	Reordering
U+177AD (L4251)	𠂇	𠂇	R060 18 ABBBCCCQCCCQDCAMCD	(unchanged)
U+177BE (L4340)	𠂈	𠂈	R060 19 ABBBCCCQABAAADACCCQ	(unchanged)
U+17896 (L3778)	𢃥	𢃥	R074 11 CCBBCBAAAHB	after U+17891
U+178E0 (L2746)	𢃦	𢃦	R076 9 CCCQABBMC	after U+178C8
U+1791C (L3784)	𢃧	𢃧	R076 9 CCCQGBAAA	after U+178EA
U+1791F (L3804)	𢃨	𢃨	R076 9 CCCQGBCCQ	after U+178EB
U+179B5 (L3580)	𢃩	𢃩	R076 12 CCCQABDCGBFA	after U+17991
U+179C6 (L2754)	𢃪	𢃪	R076 12 CCCQEABABEMC	after U+179C8
U+179E7 (L3708)	𢃫	𢃫	R076 13 CCCQAABDCGCCQ	after U+179DC
U+17A43 (L3302)	𢃬	𢃬	R076 14 CCCQABAAACCQCQ	after U+17A37
U+17A4E (L3597)	𢃮	𢃮	R079 14 CCCQCCCQDCAMCD	after U+17B0F
U+17A55 (L2093)	𢃯	𢃯	R076 14 CCCQABAAAABEMC	after U+17A37
U+17A8C (L2647)	𢃰	𢃰	R076 15 CCCQABAAADACCCQ	after U+17A84
U+17A8D (L3674)	𢃱	𢃱	R076 15 CCCQABAAADCGCCQ	
U+17ACE (L3351)	𢃲	𢃲	R076 15 CCCQGABBHBCCQCQ	after U+17AAB
U+17AD6 (L2883)	𢃳	𢃳	R076 17 CCCQABBABBEBEABEEA	after U+17AD0
U+17AE5 (L2245)	𢃴	𢃴	R076 18 CCCQABAAAABFAACCCQ	(unchanged)
U+17BCF (L5836)	𢃵	𢃵	R048 7 GCBABFA	after U+175D2
U+17BD0 (L5950)	𢃶	𢃶	R048 7 GCBGCCQ	after U+175D3

Character	Old Glyph	New Glyph	New Radical, Stroke Count and Sort Key	Reordering
U+17BD2 (L5948)	𦵃	𦵃	R015 7 HBEAABE	after U+17227
U+17BD3 (L5951)	𦵄	𦵄	R015 7 HBEACCQ	after U+17227
U+17BD5 (L5837)	𦵅	𦵅	R015 8 HBAEABFA	after U+175D6
U+17BD8 (L5839)	𦵆	𦵆	R048 11 GCBAABBFBFA	after U+175DC
U+17BDB (L5956)	𦵇	𦵇	R015 11 HBCCCQEAAAB	after U+17227
U+17DB7 (L4498)	𦵈	𦵈	R131 12 ABBBBGCBCCQ	(unchanged)
U+17E93 (L2352)	𦵉	𦵉	R153 11 CCBBBGCQGCQ	(unchanged)
U+17EC4 (L2445)	𦵊	𦵊	R154 12 CCBEACCCQABB	after U+17EC2
U+17F15 (L2545)	𦵋	𦵋	R156 11 CCCQBCCCQAE	(unchanged)
U+17F18 (L3753)	𦵌	𦵌	R156 12 CCCQBDCACCCQ	after U+17F1D
U+17FF4 (L3589)	𦵍	𦵍	R159 16 CCQCQBDCAKDBBBMC	after U+17FF1
U+18024 (L3933)	𦵎	𦵎	R164 8 DABEABAA	(unchanged)
U+1807E (L5933)	𦵏	𦵏	R110 6 GBAAJC	after U+17CBD
U+180B8 (L5207)	𦵐	𦵐	R177 12 DCCCQAABABFC	(unchanged)
U+18221 (L1266)	𦵑	𦵑	R304 16 ACCCCQBEAKDBBB	after U+18508
U+182D3 (L5201)	𦵒	𦵒	R253 13 DCABEAAABABFC	(unchanged)
U+182F3 (L5870)	𦵔	𦵔	R197 9 GBAAACCCQ	after U+18194
U+182F4 (L5937)	𦵕	𦵕	R197 10 GBAAACCQCQ	
U+182F5 (L5909)	𦵖	𦵖	R197 11 GBAAACCCQMC	

Character	Old Glyph	New Glyph	New Radical, Stroke Count and Sort Key	Reordering
U+182F6 (L5934)	𦨇	𦨇	R197 11 GBAAAEABEAA	
U+182F7 (L5938)	𦨈	𦨈	R197 11 GBAAAKDDCCQ	
U+182F8 (L5975)	𦨉	𦨉	R197 13 GBAAADCACCCQB	
U+182F9 (L5832)	𦨊	𦨊	R197 14 GBAAAAABBDCBCE	
U+1835F (L5533)	𦨌	𦨌	R264 10 DCBECCBEAA	(unchanged)
U+183C5 (L5304)	𦨌	𦨌	R270 11 DCGCCQAABB	after U+183BF
U+18522 (L1763)	𦨍	𦨍	R290 13 GCQGCQBDCGCCQ	after U+184B8
U+18562 (L5542)	𦨎	𦨎	R401 17 DCABCCQBEAAKDBBBB	after U+186D5
U+185E7 (L1851)	𦨏	𦨏	R349 10 EAABBAEGCGB	(unchanged)
U+186C2 (L4011)	𦨐	𦨐	R392 13 DABAAABEGBAAA	(unchanged)
U+18702 (L0470)	𦨑	𦨑	R454 16 EAAKDBBBABCCCCQB	after U+18777
U+1879C (L1583)	𦨒	𦨒	R469 19 ABEAAABBAAABDCGCCQ	(unchanged)

2. Evidence for Correct Glyphs

This section provides images of each character as it appears in the following manuscript, printed or epigraphic texts:

- *Sea of Characters (Wenhai 文海)* [printed edition, comprising vol.1 (level tone characters) and vol.3 (miscellaneous characters)]
- *Precious Rhymes of the Sea of Characters (Wenhai Baoyun 文海寶韻)* [manuscript edition]
- *Homophones (Tongyin 同音)*:
 - A: Tang. 18/1 [Inv. no. 207] (甲種本)
 - B1: Tang. 18/2 [Inv. no. 208] (乙種本)
 - B2: Tang. 18/3 [Inv. no. 209] (乙種本)
 - B3: Tang. 18/7 [Inv. no. 4775] (乙種本)
 - C: Tang. 18/4 [Inv. no. 2619] (丙種本)
 - D: Tang. 18/15 [Inv. no. 8365] (丁種本)
- *Dissected Rhymes of the Five Sounds (Wuyin Qieyun 五音切韻)* [Edition D]
- *Pearl in the Palm (Fan-Han Heshi Zhangzhongzhu 番漢合時掌中珠)*
- *Analects (Lunyu 論語)*
- *Miscellaneous Characters (Zazi 雜字)*
- *Great Ode (Dashi 大詩)*
- *Ode on Reason (Daolishi 道理詩)*
- *Ode on Monthly Pleasures (Yueyueleshi 月月樂詩)*
- *Newly Collected Grains of Gold (Xinji Suijin Zhangzhiwen 新集碎金掌置文)*
- *Dharani-sutra of the Victorious Buddha-Crown (Foding Zunsheng Tuoluoni 佛頂尊勝陀羅尼經)* engraved on the east wall of the Cloud Platform at Juyongguan
- *Dharani-Sutra of the Tathagata Heart (Rulaixin Tuoluoni Jing 如來心陀羅尼經)* engraved on the west wall of the Cloud Platform at Juyongguan

2.1 L3340

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
嫩	嫩	嫩	嫩	嫩	嫩	嫩

Tongyin A 34A17	Tongyin B2 34B21	Wenhai 1-30.211	Wenhai 3-5.211
			

2.2 L2220

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
帰	帰	帰	帰	帰	帰	帰

Tongyin A 28A77	Tongyin B1 28A16	Tongyin B2 28A16	Tongyin C 28A16	Tongyin D 28A16

Wenhai 1-12.152

2.3 L4921

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
務	務	務	務	務	務	務

Tongyin A 31B36	Tongyin B2 32A65	Tongyin D 32A65

Wenhai 1-20.271	Zhangzhongzhu 10a	Zazi 14A8	Suijin A 49B

2.4 L5933

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𢃔	𢃔	𢃔	𢃔	𢃔	𢃔	𢃔

Tongyin A 31B37	Tongyin B2 32A65	Tongyin D 32A65	Zazi 10A5

Wenhai 1-20.262	Wenhai 1-20.261	Wenhai Baoyun 1.09b	Wuyin Qieyun D 23

2.5 L4968

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𦵯	𦵯	𦵯	𦵯	𦵯	𦵯

Tongyin A 24B15	Tongyin B1 23A67	Tongyin B2 23A67	Tongyin D 23A67

Wenhai Baoyun 2.8a	Zazi 16B7

2.6 L3784

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𠂇	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇

Tongyin A 7A23	Tongyin B1 10A23	Tongyin B2 10A23	Tongyin D 10A23	Wenhai 1-57.162

Wenhai 1-42.222	Zhangzhongzhu 31b	Suijin A 3B	Lunyu 6-2A6
	 達 青 蘭		

2.7 L5870

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
教	教	教	教	教	教	教

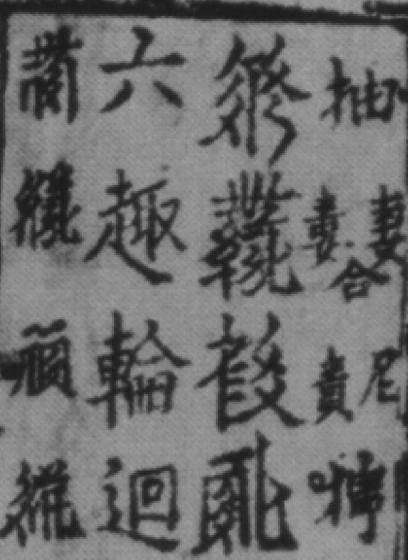
Tongyin A 33A78	Tongyin B2 34A11	Zhangzhongzhu 21a	Wenhai 1-42.222

Wenhai 1-56.162	Wenhai 1-57.162	Wenhai 1-57.162	Dashi 2b	Lunyu 6-4A5

2.8 L5937

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
教	教	教	教	教	教	教

Tongyin A 34A37	Tongyin B2 42A24	Wenhai 1-32.242	Yueyueleshi 1A
			

Zhangzhongzhu 37a


2.9 L5909

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𢃤	𢃤	𢃤	𢃤	𢃤	𢃤	𢃤

Tongyin A 32B42	Tongyin B2 33A54	Tongyin D 33A54	Wenhai 1-39.113

Wenhai 1-10.242	Wenhai 1-65.233

2.10 L5934

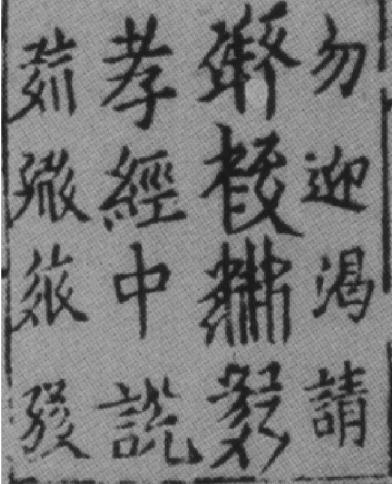
Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𦨇	𦨇	𦨇	𦨇	𦨇	𦨇

Tongyin A 23B36	Tongyin B1 24B23	Tongyin B2 24B23	Tongyin D 24B23
A vertical column of two characters from a bronze inscription.	A vertical column of two characters from a bronze inscription.	A vertical column of two characters from a bronze inscription.	A vertical column of two characters from a bronze inscription.

2.11 L5938

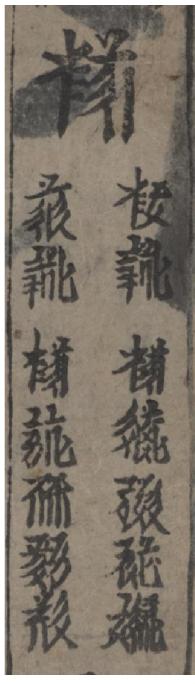
Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𠂇	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇

Tongyin A 23B37	Tongyin B1 24B16	Tongyin B2 24B16	Tongyin D 24B16
			

Zhangzhongzhu 31a	Lunyu 6-9A5
	

2.12 L5975

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𦵯	𦵯	𦵯	𦵯	𦵯	𦵯

Tongyin A 17B13	Tongyin B2 18A46	Tongyin D 18A46	Wenhai 1-71.111
			

2.13 L5832

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𦨇	𦨇	𦨇	𦨇	𦨇	𦨇	𦨇

Tongyin A 33B11	Tongyin B2 34A12	Zhangzhongzhu 9a

2.14 L4011

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𦵃	𦵃	𦵃	𦵃	𦵃	𦵃

<i>Tongyin A 6A26</i>	<i>Tongyin B3 7A11</i>	<i>Tongyin D 7A11</i>
		

2.15 L2352

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇

Tongyin A 33A68	Tongyin B2 35B18
	

2.16 L1763

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇

Tongyin A 52B71	Tongyin B1 53A41	Wenhai 1-39.173	Wenhai 1-49.251	Wenhai 1-54.242

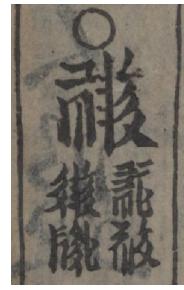
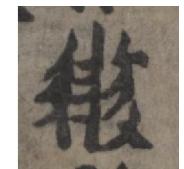
Zhangzhongzhu 11a	Dashi 6b	Suijin A 63A

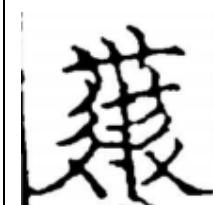
2.17 L2245, L2647, L3302, L3674, L4340

L2008	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L0662							
L2245							
L2647							
L3302							
L3674							
L4340							

L0662, L2245, L2647, L3302, L3674 and L4340 all share the same middle component, but the glyph shape for this component in Han Xiaomang 2004, Kychanov 2006, and Li Fanwen 2008 is slightly different for L0662 compared with the other five characters. That the middle component of L0662 is the same as for the other five characters is evident from the structural composition for L0662 given in *Wenhai* (1-41.172), where the character is described as being constructed from "bottom of 'tooth', right of 'rank' [L2647]" 託彌𦥑𦥑. Examination of the original Tangut sources does not show any obvious difference in glyph shape of the middle component for L0662 compared with the other five characters. Therefore, the glyphs for L0662, L2245, L2647, L3302, L3674 and L4340 should be modified to use the same middle component glyph.

From the examples shown below we believe that the glyph shape for the middle component of L0662 is the most common form for all six characters, and we therefore recommend changing the glyphs for L2245, L2647, L3302, L3674 and L4340 to match L0662.

	Tongyin A	Tongyin B1	Tongyin B2	Tongyin D	Wenhai	Other
L0662 𦵹	23B22 	29A58 	29A58 	29A58 	1-41.172 	
L2245 𦵹	43A54 		43B73 		1-57.162 	
L2647 𦵹	23B18 	24A72 	24A72 	24A72 	1-42.222  1-57.162 	Dashi 5a 
L3302 𦵹	23B27 	24A78 	24A78 	24A78 	1-92.151 	Zazi 9B7 

	<i>Tongyin A</i>	<i>Tongyin B1</i>	<i>Tongyin B2</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other
L3674 𦵯	23B26 	24A77 	24A77 	24A77 	1-92.142 	
L4340 𦵯	22A65 	23A44 	23A44 	23A44 		Zazi 6B6 

2.18 L1583, L3708, L4459, L4836, L5201, L5207, L5304

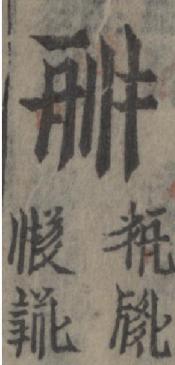
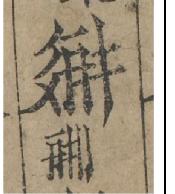
L2008	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L0528		𦨇	𦨇	𦨇	𦨇	𦨇	
L0861		𦨈	𦨈	𦨈	𦨈	𦨈	
L1583	𦨉	𦨉	𦨉	𦨉	𦨉	𦨉	𦨉
L2853	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌	
L3505	𦨊	𦨊	𦨊	𦨊	𦨊	𦨊	
L3511		𦨋	𦨋	𦨋	𦨋	𦨋	
L3708	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌
L4376		𦨌	𦨌	𦨌	𦨌	𦨌	
L4459	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌
L4836	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌	𦨌

L4999	𢃠	𢃡	𢃢	𢃣	𢃤	𢃥	
L5201		𢃦	𢃧	𢃨	𢃩	𢃪	𢃫
L5207	𢃦	𢃧	𢃧		𢃧	𢃧	𢃧
L5304	𢃧	𢃧	𢃧	𢃧	𢃧	𢃧	𢃧
L5734	𢃧	𢃧	𢃧	𢃧	𢃧	𢃧	
L5769		𢃧	𢃧	𢃧	𢃧	𢃧	𢃧

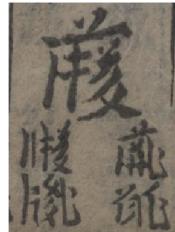
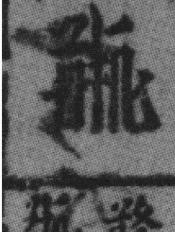
The characters in the above table have a mixture of † and ‡ glyph forms as left hand or middle components, but the original Tangut sources do not indicate any such distinction. The character constructions in *Sea of Characters* also indicate that no distinction should be made:

- L3505 槌 : "left of 'not', all of 'to break' [L4459]" 𢃧𢃧𢃧𢃧.
- L4836 賴 : "outside of 'joint', right of 'to chop' [L3505]" 𢃧𢃧𢃧𢃧.

Therefore, we suggesting harmonizing the glyphs of the characters in the above table so that the seven characters with a ‡ component are modified to use † instead.

	Tongyin A	Tongyin B2	Tongyin C	Tongyin D	Wenhai	Other
L0528 𦨇	33A35 	33B44 		33B44 	3-4.242 	
L0861 𦨇	34B14 	35A13 			1-89.141 	
L1583 𧈧	18B42 	19A62 		19A62 		
L2853 𦨇	29A56 	30A22 	30A22 	30A22 	1-60.152 	

	Tongyin A	Tongyin B2	Tongyin C	Tongyin D	Wenhai	Other
L3505 𦥑	22B28 	23B13 		23B13 	1-90.112 	
L3511 𦥑	28B45 	29A48 	29A48 	29A48 		
L3708 𦥑	5B14 			6A74 	1-27.262 	Juyongguan West 6
L4376 𦥑	15A45 	16A27 		16A27 	1-69.171 	Lunyu 6-9A8

	Tongyin A	Tongyin B2	Tongyin C	Tongyin D	Wenhai	Other
L4459 𢂔	5A56 			6A48 		Juyongguan East 27 
L4836 𧈧	42B65 	43B21 			1-69.252 	
L4999 𧈧	21B21 	22A68 		22A68 	1-67.271 	
L5201 瓶	32B18 	33A37 		33A37 	3-15.243 	

	Tongyin A	Tongyin B2	Tongyin C	Tongyin D	Wenhai	Other
L5207 𦥑	16A31 	17A12 		17A12 		Zhangzhongzhu B 5B
L5304 𦥑	13B77 	14B57 		14B57 	1-67.221 	
L5734 𦥑	16A32 	17A13 		17A13 		
L5769 𦥑	22A56 	23A35 		23A35 	1-17.142 	

2.19 L2093, L2445, L2545, L2746, L2883, L3580

L2008	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L2093	𢚔	𢚔	𢚔	𢚔	𢚔	𢚔	𢚔
L2445		𢚕	𢚕	𢚕	𢚕	𢚕	𢚕
L2342	𢚖	𢚖	𢚖	𢚖	𢚖	𢚖	
L2545			𢚖		𢚖	𢚖	𢚖
L2746	𢚗	𢚗	𢚗	𢚗	𢚗	𢚗	𢚗
L2883		𢚘	𢚘	𢚘	𢚘	𢚘	𢚘
L3580		𢚙	𢚙	𢚙	𢚙	𢚙	𢚙

Li Fanwen 2008 uses the glyphs 𢚔 and 𢚕 inconsistently for the same component. The primary Tangut sources indicate that 𢚕 is the correct glyph form, so we propose changing five of the characters in the above table to use 𢚕 instead of 𢚔. In the case of L2545 𢚖, as the corresponding form with 𢚕 has a separate entry in Li Fanwen's dictionary as L2342 𢚖, we propose changing its glyph to use the form given in Han Xiaomang 2004.

	Tongyin A	Tongyin B2	Tongyin C	Tongyin D	Wenhai	Other
L2093 彌	48A58 	48B52 			1-75.232 	
L2445 絮	25B22 	26A64 		26A64 	1-21.231 	
L2342 絮	53B52 				1-57.271 	
L2545 絮						Zazi 16A3
						Zhangzhongzhu 9B

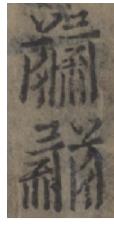
	Tongyin A	Tongyin B2	Tongyin C	Tongyin D	Wenhai	Other
L2746 妣	16B41 	17B14 		17B14 	1-76.171 	
L2883 妣	25B68 	26B38 	26B38 	26B38 		
L3580 妣	29B73 	35A51 			1-73.251 	Zazi 16A6 

2.20 L1266

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
羈	羈	羈	羈	羈	羈	羈

2.21 L5542

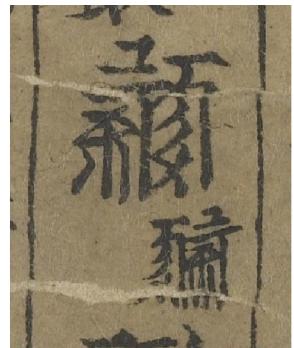
Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𠂔	𠂔	𠂔	𠂔	𠂔	𠂔

Tongyin A 39A41	Tongyin B2 42A12	Wenhai 1-25.261	Wenhai 1-26.132	Wenhai 1-26.132
				

The correct structure of L5542 can also be seen from its *Homophones* annotation character , L1835 𩚖, where the two components are swapped horizontally.

2.22 L0470

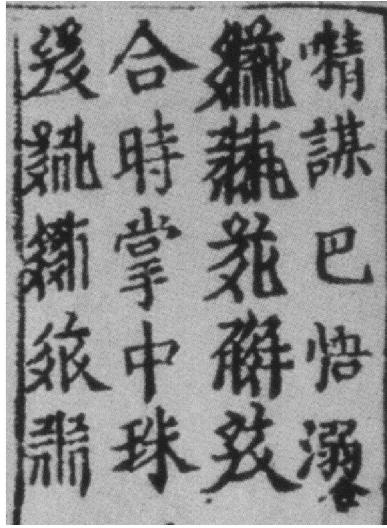
Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𦨇	𦨇	𦨇	𦨇	𦨇	𦨇

Tongyin A 52A13	Tongyin B1 52A66	Tongyin B2 52A66	Wenhai 1-26.132	Wenhai 1-90.172
				

2.23 L3589

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𦵯	𦵯	𦵯	𦵯	𦵯	𦵯	𦵯

Tongyin A 32A44	Tongyin B2 32B61	Tongyin D 32B61	Wenhai 3-4.232
			

Suijin A 3A	Zhangzhongzhu 3A	Lunyu 6-1B5
	 精謀巴悟 𦵯 合時掌中珠 幾 𦵯 𦵯 𦵯 𦵯 𦵯 𦵯 𦵯 𦵯	

2.24 L2463

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
娘	娘	娘	娘	娘	娘	娘

Tongyin A 14A24	Tongyin B1 15A15	Tongyin B2 15A15	Tongyin D 15A15
A photograph of a Tangut manuscript page showing the character '娘' written in dark ink on aged paper.	A photograph of a Tangut manuscript page showing the character '娘' written in dark ink on aged paper.	A photograph of a Tangut manuscript page showing the character '娘' written in dark ink on aged paper.	A photograph of a Tangut manuscript page showing the character '娘' written in dark ink on aged paper.

Zazi 13B8	Suijin A 37B	Juyongguan East 27
A square seal impression containing the character '娘'.	A photograph of the character '娘' from a Suijin manuscript.	A photograph of the character '娘' from a Juyongguan manuscript.

L2463 is the only character with this medial component. The glyph in Li Fanwen 2008 shows an upward slanting second stroke, but examination of original Tangut sources indicates that the first two strokes are both dots.

2.25 L3933

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𠁻	𠁻	𠁻		𠁻	𠁻	𠁻

Tongyin A 3B73	Tongyin D 4B66	Zazi D 18A5
		

L3933 is the only character with this right hand component, which is written slightly differently in Li Fanwen 2008 and Han Xiaomang 2004. Examination of original Tangut sources indicates the glyph shape given in Han Xiaomang 2004 is correct, and that it is the same as the left hand component 𠁻.

2.26 L5533

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L5533	𦨇	𦨇	𦨇	𦨇	𦨇	𦨇	𦨇
L3167		𦨇	𦨇	𦨇	𦨇	𦨇	

	Tongyin A 31B46	Tongyin B2 32A72	Tongyin D 32A72	Wenhai 1-38.251
L5533 𦨇	(Image of the character 𦨇 from Tongyin A 31B46)	(Image of the character 𦨇 from Tongyin B2 32A72)	(Image of the character 𦨇 from Tongyin D 32A72)	(Image of the character 𦨇 from Wenhai 1-38.251)
L3167 𦨇	42A17 (Image of the character 𦨇 from 42A17)	42B38 (Image of the character 𦨇 from 42B38)		1-39.141 (Image of the character 𦨇 from 1-39.141)

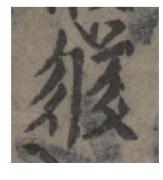
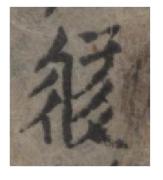
L5533 is the only character with this right hand component, which is written slightly differently in Han Xiaomang 2004 and Li Fanwen 2008 compared with other modern sources. According to the character construction of L5533 given in *Wenhai* (1-38.251), the character is constructed from "left of 'round', right of 'to salute' [L3167]" 𠂔𦨇𦨇𦨇, and so the glyphs for L5533 and L3167 should have the same right hand side component except for the bottom right hook. From the examples above it seems that the glyph for L5533 should be modified to accord with that of L3167.

2.27 L3753

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
𠂇	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇

In Li Fanwen 2008 and Han Xiaomang 2004 the right hand component of L3753 is written as 𠂇 (6 strokes), whereas in Sofronov 1968 and Kychanov 2006 the right hand component is written as 𠂇 (7 strokes). Examination of the primary sources shown below indicates that the 7-stroke form is the preferred form for this particular character. 𠂇 is not in this case a simple glyph variant of 𠂇, but is a rare component only found in one other character, L1632 𠂇. That this component is not the same as the common 𠂇 component is indicated by the character construction description for L1632 in *Wenhai* (1-53.133), which states that it is constructed from "left of 'sound', right of 'to listen' [L5026]" 𠂇𦥑𦥑𦥑𦥑, i.e. 𠂇 above 𠂇.

Tongyin A 22A15	Tongyin B1 22B67	Tongyin B2 22B67	Tongyin D 22B67
			

Wenhai 1-8.252	Wenhai 1-16.231	Wenhai 1-19.262	Wenhai 1-24.241	Wenhai 1-26.243
				

<i>Wenhai</i> 1-52.262	<i>Wenhai</i> 1-55.262	<i>Wenhai</i> 1-77.161	<i>Wenhai</i> 3-19.251	<i>Wenhai Baoyun</i> 2-12B2



2.28 L3804

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𠁧	𠁧	𠁧	𠁧	𠁧	𠁧

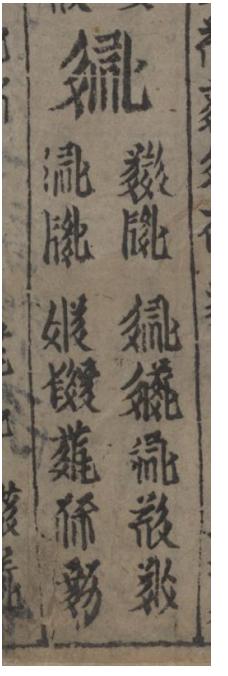
Tongyin A 11A12	Tongyin B1 12A13	Tongyin B2 12A13	Tongyin D 12A13

Wenhai 1-20.242	Zazi 14B4

L3804 is the only character with this right hand component. All examples in original Tangut texts have a glyph form with one less stroke than given in Han Xiaomang 2004, Kychanov 2006 and Li Fanwen 2008.

2.29 L2754

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇

Tongyin A 36A34	Tongyin B2 36B61	Wenhai 1-57.262
		

The structure of L2754 is confirmed from the structural composition for L2754 given in *Wenhai* (1-57.262), where the character is described as being constructed from "right of 'to prohibit', right of 'to have' [L2724]" 爾臤𠂇𠂇. L2724 𠂇 is also given as the annotation character for L2754 in the *Homophones*, and the two characters clearly should share the same right hand component.

2.30 L3597, L4251, L4904

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L3597	𦵯	𦵯	𦵯	𦵯	𦵯	𦵯	𦵯
L4251		𦵯	𦵯	𦵯	𦵯	𦵯	𦵯
L4904		𦵯	𦵯	𦵯	𦵯	𦵯	𦵯

These three characters are not very common, but in all sources other than the *Tongyin A* edition the bottom left component is 𦵯 rather than 𦵯 as given in L2008.

	Tongyin A	Tongyin B1	Tongyin D	Wenhai	Zazi
L3597 𦵯	2B11 	3A78 	3A78 		5A3 
L4251 𦵯	2B13 	3B12 	3B12 		6B6 

	<i>Tongyin A</i>	<i>Tongyin B1</i>	<i>Tongyin D</i>	<i>Wenhai</i>	<i>Zazi</i>
L4904 巍	2B12 	3B11 	3B11 	1-28.221 	12B7

2.31 L0141 ... L6073

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L0141	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	
L0896		𦥑	𦥑	𦥑	𦥑	𦥑	𦥑
L1010	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	
L1452	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	
L1536	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑
L1850	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	
L1851		𦥑	𦥑	𦥑	𦥑	𦥑	𦥑
L1875	𦥑		𦥑	𦥑	𦥑	𦥑	
L2797		𦥑	𦥑	𦥑	𦥑	𦥑	
L3351	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L3392	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇	𠂇
L3654	𠂆	𠂆	𠂆	𠂆	𠂆	𠂆	𠂆
L3709		𠂈	𠂈	𠂈	𠂈	𠂈	𠂈
L3778		𠂉	𠂉	𠂉	𠂉	𠂉	𠂉
L3945	𠂊	𠂊	𠂊	𠂊	𠂊	𠂊	𠂊
L4383		茅	茅	茅	茅	茅	茅
L4384	茆		茆	茆	茆	茆	茆
L4392		蘴	蘴	蘴	蘴	蘴	蘴
L4393		蘴	蘴	蘴	蘴	蘴	蘴
L4402		蘴	蘴	蘴	蘴	蘴	蘴
L4497	蘴	蘴	蘴	蘴	蘴	蘴	蘴

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L4498	𦵃	𦵃	𦵃	𦵃	𦵃	𦵃	𦵃
L4585	𧈧	𧈧	𧈧	𧈧	𧈧	𧈧	
L5001		𠂇	𠂇		𠂇	𠂇	
L5002				𠂇	𠂇	𠂇	
L5019	𦵃	𦵃	𦵃	𦵃	𦵃	𦵃	
L5206		𩶻	𩶻	𩶻	𩶻	𩶻	
L5802		𩶻	𩶻	𩶻	𩶻	𩶻	
L5834	𩶻	𩶻	𩶻		𩶻	𩶻	
L5835		𩶻		𩶻	𩶻	𩶻	
L5836				𩶻	𩶻	𩶻	𩶻
L5837			𩶻	𩶻	𩶻	𩶻	𩶻

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L5838		𢚔	糴	糴	糴	糴	糴
L5839		糴	糴	糴	糴	糴	糴
L5840		糴	糴	糴	糴	糴	糴
L5841	糴	糴	糴	糴	糴	糴	糴
L5842	糴		糴	糴	糴	糴	糴
L5845	糴	糴	糴	糴	糴	糴	糴
L5846	糴	糴	糴	糴	糴	糴	糴
L5847	糴	糴	糴	糴	糴	糴	糴
L5874		糴	糴	糴	糴	糴	糴
L5875	糴	糴	糴	糴	糴	糴	糴
L5893		糴		糴	糴	糴	糴

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L5895		糇	糇	糇	糇	糇	
L5896	糇	糇	糇	糇	糇	糇	
L5910	糇	糇	糇	糇	糇	糇	
L5911	糇	糇	糇	糇	糇	糇	
L5912			糇	糇	糇	糇	
L5913	糇	糇	糇	糇	糇	糇	
L5918	糇	糇	糇	糇	糇	糇	
L5946		糇	糇	糇	糇	糇	
L5948		精	精	精	精	精	精
L5949	糈	糈	糈	糈	糈	糈	
L5950	穀	穀	穀	穀	穀	穀	穀

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L5951		穀	穀	穀	穀	穀	穀
L5952	穢	穢	穢	穢	穢	穢	穢
L5953	穢	穢	穢	穢	穢	穢	穢
L5955	粹	粹	粹	粹	粹	粹	粹
L5956		粧	粧	粧	粧	粧	粧
L5957	粧	粧	粧	粧	粧	粧	粧
L5958	粧	粧	粧	粧	粧	粧	粧
L5980			粧	粧	粧	粧	粧
L5981	粧	粧	粧	粧	粧	粧	粧
L5982	穀	穀	穀	穀	穀	穀	穀
L5984		穢	穢	穢	穢	穢	穢

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L5985							
L5992							
L6073							

The 68 characters in the table above have a mixture of three similar components: , and . In some modern sources (e.g. Nishida 1966, Sofronov 1968) these three components are listed as separate radicals, whereas in some other modern sources (e.g. Li Fanwen 2008, Han Xiaomang 2013) these three components are grouped together under a single radical. Although N4522 distinguishes as a radical, and are incorrectly mixed together. Examination of original Tangut materials indicates that Nishida and Sofronov were correct in distinguishing the three components.

That these three components should not be mixed together is indicated by the character constructions given in *Sea of Characters* (see images under *Wenhai* column in the table below) where characters with one of these three components are always derived from another character that shares the same one of these three components:

- L0141 穢 is constructed from L5875 样 (both)
- L0896 穢 is constructed from L4497 穢 (both)
- L1452 穢 is constructed from L5911 拙 (both)
- L1851 穢 is constructed from L5875 样 (both)
- L3351 穢 is constructed from L1452 穢 (both)
- L3392 穢 is constructed from L5911 拙 (both)
- L3654 穢 is constructed from L5981 拙 (both)
- L3709 穢 is constructed from L6073 穢 (both)
- L4384 穢 is constructed from L5946 拙 (both)
- L4497 穢 is constructed from L5911 拙 (both)
- L4585 穢 is constructed from L2797 拙 (both)
- L5206 穢 is constructed from L5841 拙 (both)
- L5838 拙 is constructed from L5896 拙 (both)
- L5840 拙 is constructed from L5875 样 (both)
- L5842 拙 is constructed from L5834 拙 (both)
- L5846 拙 is constructed from L5918 拙 (both)
- L5847 拙 is constructed from L5845 拙 (both)
- L5896 拙 is constructed from L5838 拙 (both)

- L5910 拙 is constructed from L5875 敗 (both 卩)
- L5911 拙 is constructed from L5913 拙 (both 卩)
- L5913 拙 is constructed from L5911 拙 (both 卩)
- L5918 拙 is constructed from L5846 捭 (both 卩)
- L5949 撙 is constructed from L5953 撂 (both 卩)
- L5950 犧 is constructed from L5845 犧 (both 卩)
- L5951 犧 is constructed from L5981 犧 (both 卩)
- L5953 撂 is constructed from L5875 敗 (both 卩)
- L5955 犧 is constructed from L5981 犧 (both 卩)
- L5957 撂 is constructed from L5950 犧 (both 卩)
- L5958 撂 is constructed from L5955 犧 (both 卩)
- L5981 犧 is constructed from L5951 犧 (both 卩)
- L5985 撂 is constructed from L5911 拙 (both 卩)

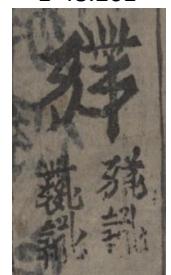
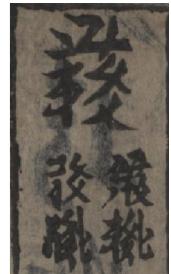
After reviewing original Tangut sources for the 68 characters with one of these three components we have determined that the following changes are required to 29 characters:

- 16 characters which correctly have the 卩 component in the PDAM font are ordered in N4522 as if they had the 卩 component (one stroke more), and should be reordered to reflect the correct component (L3351, L3778, L5835, L5838, L5846, L5896, L5911, L5913, L5918, L5952, L5955, L5958, L5981, L5982, L5985, L5992);
- 8 characters with the 卩 component in N4522 and Li Fanwen 2008 should be changed to use the 卩 component (L0896, L1536, L4393, L4402, L5837, L5948, L5951, L5956);
- 5 characters with the 卩 component in N4522 and Li Fanwen 2008 should be changed to use the 卩 component (L1851, L4498, L5836, L5839, L5950).

These changes result in the following changes in radical:

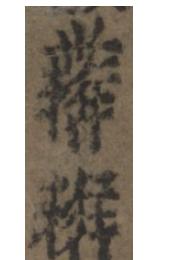
- 14 characters under the 卩 radical are moved to a new 卩 radical;
- 4 characters under the 卩 radical are moved to the 卩 radical;
- 3 characters under the 卩 radical are moved to the 卩 radical.

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L0141	11A45 	12A45 	12A45 	1-19.171 		
糸 (correct)						

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
丰 L0896 𦵯 (wrong)	23A41 	24A24 	24A24 	1-48.261 		
丰 L1010 𦵯 (correct)	43B51 	44A55 				
丰 L1452 𦵯 (correct)	16B74 	20B36 	20B36 	1-28.231 	Zazi 15A2  Dashi 1A8 	Zhangzhongzhu A 7B 
丰 L1536 𦵯 (wrong)	40B13 	40B61 		Wenhai 1- 62.213 		
丰 L1850 𦵯 (correct)	47B41 	48A31 			Daolishi 8A4  Dashi 6A2 	

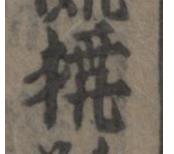
	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
衤 L1851 𦥑 (wrong)	53B71 			1-74.141 	Zazi 15A3 	Suijin 6B32
衤 L1875 𦥑 (correct)				1-82.131 		Wenhai Baoyun 61.53
衤 L2797 𦥑 (correct)				1-12.151 	Lunyu 6-9A7 	Suijin 7B310
衤 L3351 𦥑 (correct)	45A77 	45B73 		1-54.261 	Daolishi 2B2 	Suijin 1B1

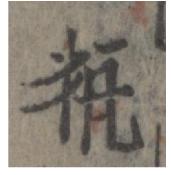
	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L3392 糴 (correct)	35A78 	36A34 		1-15.151 		
半 L3654 繖 (correct)	44A26 	44B31 		3-09.121 	Zazi 14B6 	Suijin 5A54
半 L3709 繖 (correct)	25B25 			1-39.251 		
半 L3778 𦵯 (correct)	16B66 	17B42 	17B42 			
半 L3945 𦵯 (correct)	50A66 	50B52 		1-73.212 	Zazi 18B4 	

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L4383 莘 (correct)	51A47 					
半 L4384 蕘 (correct)	50A61 			1-43.141 		
半 L4392 蘡 (correct)	50A62 	50B56 				
半 L4393 蘡 (wrong)	50B34 	51A17 		1-42.121 		
半 L4402 蘡 (wrong)	23B31 	24B12 	24B12 	1-84.272  1-33.121 		

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L4497 翫 (correct)	33B54 	34A15 		3-05.152 		Lunyu 6-5B8
半 L4498 翫 (wrong)	55B38 			1-19.171 		1-59.141
半 L4585 翫 (correct)	11B32 	12B28 	12B28 	1-26.222 		
半 L5001 翫 (correct)	46B38 	47A35 		1-59.141 		
半 L5002 翫 (correct)	54A37 					Daishi 3A1

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L5019 糴 (correct)	24A78 	25A63 	25A63 		Zazi 17B5 	
半 L5206 糴 (correct)	54A24 			3-20.171 		
半 L5802 糴 (correct)	16B36 	17A78 	17A78 	1-79.121 		
半 L5834 糴 (correct)	50A64 	50B51 		1-71.272 	Zazi 8B6 	Suijin 3A12 
半 L5835 糴 (correct)	24B51 	25B27 	25B27 			

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
𣇵 L5836 粧 (wrong) [variant of L5845]						
𣇵 L5837 粧 (wrong) [variant of L5846]					Zhangzhongzhu A 6B	
𣇵 L5838 粧 (correct)		38A58 		3-18.151 		
𣇵 L5839 粧 (wrong)	53B53 			1-18.113 	Zazi 15A8 	
𣇵 L5840 粧 (correct)	25B43 	26B14 	26B14 	1-20.113 		Daolishi 4A7 

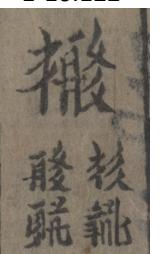
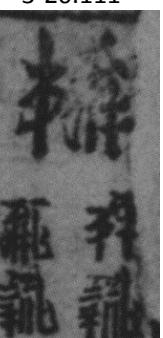
	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L5841 粧 (correct)	24A77 	25A62 	25A62 	1-89.141 		Suijin 3A11 
半 L5842 粧 (correct) (L5198)	55A68 			3-22.151 	Lunyu 6-7B6 	Zhangzhongzhu A 9B 
半 L5845 粧 (correct)	54B32 			1-33.142  1-82.131 	Suijin 8B65 	Zhangzhongzhu B 26B 
半 L5846 粧 (correct)	45B55 	46A46 		1-82.261 	Lyunyu 6-4B5 	Daolishi 4A8  Dashi 2A1 

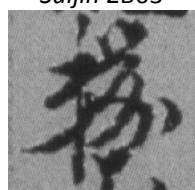
	<i>Tongyin A</i>	<i>Tongyin B2</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other	Other
半 L5847 糸 (correct)	05B15 		06A75 	1-27.271 		
半 L5874 糸 (correct)	50A65 	50B53 				
半 L5875 糸 (correct)	53B54 			1-33.142 	Daolishi 4A8 	Suijin 3B68
半 L5893 糸 (uncertain) [error for L5842?]					Dashi 3A2 	

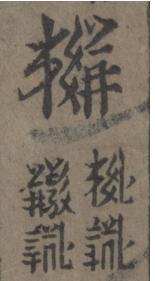
	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L5895 獮 (correct)	47B63 	48A47 		1-73.212 		
半 L5896 彘 (correct)	37A78 	38A26 		1-62.111 		
半 L5910 彘 (correct)	21A23 	21B72 	21B72 	1-25.221 	Zazi 12B3 	Suijin 6A23
半 L5911 彘 (correct)	24B48 	25B26 	25B26 	1-24.231 	Zazi 12B4 	Zhangzhongzhu A 9B
					Zazi 5A7 	Daolishi 1A4
					Lunyu 8-11A7 	Dashi 3A1

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
半 L5912 糲 (correct)	25B23 					
半 L5913 糲 (correct)	50B57 	51A53 		1-85.251 	Zazi 13B7 	Suijin 9B19
半 L5918 糲 (correct)	30A62 	31A23 	31A23 	1-39.131 	Daolishi 4B1 	Suijin 9B39
半 L5946 糲 (correct)	50A63 	50B48 		1-89.141 		

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
丰 L5948 糴 (wrong)	51A51 	51B46 		3-21.142 	Zazi 14B7 	
丰 L5949 糴 (correct)	49B56 	50A48 		1-10.131 		
丰 L5950 糴 (wrong)	04A63 		05A57 	1-33.142 	Zazi 15A3 	Suijin 10A56 
丰 L5951 糴 (wrong)	44A27 	44B32 		3-09.131 		
丰 L5952 糴 (correct)	14B33 	15B21 	15B21 	1-62.131 	Dashi 4B2 	Daolishi 1B7 

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
夊 L5953 攤 (correct)	49B55 	50A47 		1-10.122 		
夊 L5955 舛 (correct)	46A13 	46A73 		3-09.222 		
夊 L5956 舛 (wrong)	22B36 	23B18 	23B18 	1-84.272 		
夊 L5957 舛 (correct)	31A38 	31B67 	31B67 	1-82.131 		
夊 L5958 舛 (correct)	46A14 	46A74 		3-20.111 		

	Tongyin A	Tongyin B2	Tongyin D	Wenhai	Other	Other
犮 L5980 犧 (correct)	25A36 	26A12  (L6070)	26A12  (L6070)			
犮 ^牛 L5981 犧 (correct)	44A28 	44B28 		3-09.113 	Daolishi 1A1  Dashi 1A5  Lunyu 6-6B3 	Suijin 2B63  Zhangzhongzhu A 10B 
犮 L5982 犧 (correct)	16B68 	17B43 	17B43 			Daolishi 5B8 
犮 L5984 犧 (correct)	37A47 	37B67 		1-54.241  1-66.211 		

	<i>Tongyin A</i>	<i>Tongyin B2</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other	Other
半 L5985 搣 (correct)	31B43 	32A71 	32A71 	1-20.142 		
半 L5992 撊 (correct)	50B33 	51A25 		1-36.142 		
半 L6073 穀 (correct)	25B72 					

3. Previous Changes to Glyph Forms

This section lists glyph changes that have been made to characters prior to N4522, and which are already incorporated into the PDAM charts for Tangut. These are changes to obvious mistakes in Li Fanwen 2008, and in both cases the correct glyph is given in Li Fanwen 1997 and most other modern sources. Evidence for the correct glyph form is provided here retrospectively for reference, and no further action on these characters is required.

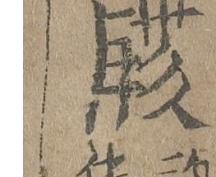
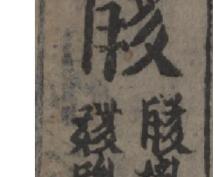
3.1 L0949

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 1997	Li Fanwen 2008	PDAM Glyph
	𢚔	𢚔	𢚔	𢚔	𢚔	𢚔

Tongyin A 47A55	Tongyin B2 47B46	Wenhai 1-64.121
A vertical column of two Tangut characters from Tongyin A 47A55, showing a single character on each line.	A vertical column of two Tangut characters from Tongyin B2 47B46, showing a single character on each line.	A vertical column of three Tangut characters from Wenhai 1-64.121. The first character is large and prominent, while the second and third are smaller and less distinct.

3.2 L2834

Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 1997	Li Fanwen 2008	PDAM Glyph
𦵃	𦵃	𦵃	𦵃	𦵃	𦵃	𦵃

Tongyin A 19B62	Tongyin B2 20A67	Tongyin D 20A67	Wenhai 1-42.272
			

4. Uncertain Glyph Forms

This section lists some characters where the correct glyph form cannot be determined with certainty. These are provided for possible discussion by experts, but unless further evidence can be adduced it is probably best to leave the glyph forms as they are in the PDAM charts.

4.1 L2245, L2647, L3302, L3674, L4340

L2008	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L4448	𠁧	𠁨	𠁧	𠁧	𠁧	𠁧	
L4443		𠁩	𠁩	𠁩	𠁩	𠁩	
L2800	𠁩	𠁩	𠁩	𠁩	𠁩	𠁩	
L5467		𠁩	𠁩	𠁩	𠁩	𠁩	

All characters with the 𠁩 component are written as 6 strokes without a dot terminator on the first stroke, but three out of the four characters with the 𠁩 component are written as 5 strokes with a dot terminator on the first stroke in some primary Tangut sources.

	<i>Tongyin A</i>	<i>Tongyin B2</i>	<i>Tongyin C</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other
L4448 𦨇 (dot)	27B28 	28A46 	28A46 	28A46 	1-32.231 	
L4443 𦨇 (no dot)	50A28 	50B22 				
L2800 𦨇 (dot?)	46A24 	46B13 				
L5467 𦨇 (dot)	46A28 	46B15 				

4.2 L0150 ... L5461

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L0150	𠁧	𠁧	𠁧	𠁧	𠁧	𠁧	
L0462		𣔁	𣔁	𣔁	𣔁	𣔁	
L0638		𦥑	𦥑 𦥑	𦥑	𦥑	𦥑	
L0982		𦥑	𦥑 𦥑	𦥑	𦥑	𦥑	
L1445		𦥑	𦥑	𦥑	𦥑	𦥑	
L1986	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	
L2296		𦥑	𦥑	𦥑	𦥑	𦥑	
L3884	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	
L4382		𦥑	𦥑	𦥑	𦥑	𦥑	
L5012	𦥑	𦥑	𦥑	𦥑	𦥑	𦥑	

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L5054	𢃤	𢃤	𢃤	𢃤	𢃤	𢃤	
L5155	𢃥	𢃥	𢃥	𢃥	𢃥	𢃥	
L5461		𢃦	𢃦	𢃦	𢃦	𢃦	

The 13 characters with the 𢃤 component (Radical R309) may be written with an extra dot as 𢃤, but original Tangut sources are inconsistent, and so it is not clear whether the dot is correct or a mistake. A possible solution to this issue would be to define variations sequences for dotted and dotless forms.

	Tongyin A	Tongyin B1	Tongyin B2	Tongyin D	Wenhai	Other
L0150 𢃤	23B74 	29A61 	29A61 	29A61 	1-64.251 	
L0462 𢃥	16A22 		16B73 	16B73 	1-70.242  1-36.163 	

	<i>Tongyin A</i>	<i>Tongyin B1</i>	<i>Tongyin B2</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other
L0638 𦵯	13B56 	14B32 	14B32 	14B32 	1-44.231  1-57.163  1-65.112 	
L0982 𦵯	17A46 	20B42 	20B42 	20B42 		<i>Wenhai</i> <i>Baoyun 103</i> <i>shang</i> 
L1445 𦵯	50A72 		50B57 			

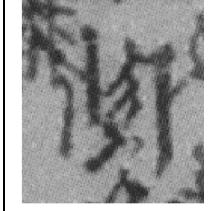
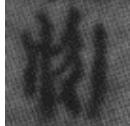
	Tongyin A	Tongyin B1	Tongyin B2	Tongyin D	Wenhai	Other
L1986 𦨇	16B51 		17B23 	17B23 	1-83.211 1-89.172 	
L2296 𦨇	23B73 	24B54 	24B54 	24B54 		
L3884 𦨇	27B14 	28A34 	28A34 	28A34 		Zazi 17A2
L4382 𦨇	23B75 	24B55 	24B55 	24B55 		

	<i>Tongyin A</i>	<i>Tongyin B1</i>	<i>Tongyin B2</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other
L5012 糸	36A63 		37A18 		1-7.212 	Zazi 13A2
L5054 糸	36A62 		37A21 		1-7.213 	
L5155 絲	21B31 	22A78 	22A78 	22A78 	1-69.212 	1-80.271

	<i>Tongyin A</i>	<i>Tongyin B1</i>	<i>Tongyin B2</i>	<i>Tongyin D</i>	<i>Wenhai</i>	Other
L5461 𦨇	48A45 	48B37 	48B37 		1-77.262 1-65.112 	

4.3 L1947 and L2354

	Nishida 1966	Sofronov 1968	Han Xiaomang 2004	Kychanov 2006	Li Fanwen 2008	PDAM Glyph	New Glyph
L1947		𢚣	𢚣𢚤	𢚣	𢚣	𢚣	
L2354		𢚣	𢚣	𢚣	𢚣	𢚣	

Tongyin A 4B48	Tongyin D 5B44	Wenhai Baoyun 29.69	Yueyueleshi 3B	Wenhai 1- 27.251	Wenhai 1- 45.161
					
L2354?	L1947	L2354?	L1947	L2354	L2354

L1947 and L2354 represent variant glyph forms of the same character, but the Tangut sources show three distinct glyph forms.