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Proposal to Encode the Multani Script in ISO/IEC 10646

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Proposal to Encode the Multani Script in ISO/IEC 10646

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1 Introduction

This is a proposal to encode the Multani script in the Universal Character Set (UCS). The script has been discussed previously in the following documents:

- N3766 L2/10-011 “A Roadmap for Scripts of the Landa Family”
- N3768 L2/10-013R “Preliminary Proposal to Encode the Landa Script in ISO/IEC 10646”
- N4027 L2/11-124 “Preliminary Proposal to Encode the Multani Script in ISO/IEC 10646”

In N3768, it was suggested that Multani be unified with Landa, which is not yet encoded. Additional research has indicated that Multani is sufficiently distinct from basic Landa and other related scripts and should be encoded independently in the UCS. Furthermore, Multani is one of four Landa scripts whose usage was extended beyond the mercantile domain and formalized for literary activity and printing; the others being Gurmukhi, Khojki, and Khudawadi. Although Multani is now obsolete, it is a historical script in which written and printed records exist.

2 Background

The Multani script was used for writing Seraiki (ISO 639-3: skr), an Indo-Aryan language of the Lahnda macrofamily that is spoken in the Multan region of Punjab and in northern Sindh. Seraiki is also known as Lahnda, Multani, Ochiki Punjabi, Southern Lahnda, and Wuch. The script is based upon the Landa model, but possesses additional letters for implosive consonants that are not used in the Landa scripts of Punjab, but which exist in those of Sindh, such as Khudawadi and Khojki (see comparison in tables 3 and 4). The Multani script is also referred to as Karikki and Sarai.

The script was used for routine writing and commercial activities. In the early 19th century it was adapted for literary usage when the Baptist Missionary Press produced metal fonts for the script in order to print Christian literature (see figures 4 and 6). The first book printed in the Multani script was the *New Testament* (1819). In the latter half of the 19th century, the British administration introduced the Arabic script as the standard for the languages of Sindh, which led to the demise of the Landa script of the region. The Multani script is no longer used and Seraiki is now written using an extension of the Arabic script.

Two different script styles of Multani are attested over the period 1819–1916. Table 1 shows four specimens of Multani, two of which are derived from printed works and the remaining are hand-written forms. It is evident that the printed works were produced using two different fonts, which are quite similar. The first font was produced by the Baptist Mission Press in Serampore, Bengal (column A in table 1). The second font appears in an English containing specimens of Christian texts printed in various languages and in Austrian books on typography. It appears to be based upon the Serampore font, although its provenance is unknown (likely developed in Europe). Specimens of the two hand-written forms were published in the *Journal of the Asiatic Society of Bengal (JASB)* and in the *Linguistic Survey of India (LSI)*; the scribes are anonymous. The hand-written forms are quite different. The specimen from *JASB* aligns with the Serampore font in terms of character repertoire and glyph shapes. The *LSI* specimen is different from the other three. Information on the source of the specimen is unavailable.

3 Principles of the Encoding

There is no standard form of the Multani script. For this reason, the proposed character repertoire provides an idealized form of the script, which contains a superset of characters that are distinctly attested in different styles of the script. The proposed encoding for Multani is intended to serve as a unifying block for all styles varieties of the script. Variant forms are to be managed through fonts.

The script was affected by various orthographic changes by the first quarter of the 20th century. As is illustrated by a comparison of a specimen from 1837 (figure 2) and 1919 (figure 3), the greatest change was the modification of the character repertoire, such that a single letter was used for writing more than one sound. This practice is most apparent in the representation of aspirated forms of consonants using the letter for the unaspirated counterparts and the writing of implosive forms using letters for unaspirated stop consonants (see section 4.3.1). Space is reserved in the code chart for some nasal, aspirated, and implosive letters.

The proposed glyph shapes are based upon printed forms from the Christian *New Testament* published at Serampore in 1819, with additions from hand-written documents for characters unattested in print.

4 Script Details

4.1 Structure

Although Multani is based upon the Brahmi model, it is closer in structure to an abjad than an alphasyllabary. There is no VIRAMA. There are four independent vowel letters and no dependent vowel signs. Vowels are generally not written unless they occur in isolation, in word-initial position, or in the final position of monosyllabic words. Consonants theoretically possess the inherent vowel /a/, but as vowels are not explicitly marked, the actual syllabic value of a consonant in running text is ambiguous and must be inferred from context. Consonant clusters are written using independent letters; there are no conjuncts.

4.2 Vowels

There are 4 vowel letters:

ਅ A

ੳ I

ੲ U

ੴ E

4.2.1 Notes on Vowels

1. **𑂀** A This letter is used for representing both /a/ and /a:/ and in some sources for /e/ and /æ/.
2. **𑂁** I This letter is used for representing /i/ and /i:/. It is also commonly used for writing the semi-vowel /j/ in place of the consonant letter **𑂃** YA.
3. **𑂂** U This letter is used for representing /u/ and /u:/, as well as /o/.
4. **𑂄** E This letter is used for representing /e/ and /æ/ in some sources, as well as /o/.

4.3 Consonants

There are 33 consonant letters:

𑂀	KA	𑂁	TTA	𑂂	DHA	𑂃	LA
𑂄	KHA	𑂅	TTHA	𑂆	NA	𑂇	VA
𑂈	GA	𑂉	DDA	𑂊	PA	𑂋	SA
𑂌	GHA	𑂍	DDHA	𑂎	PHA	𑂏	HA
𑂐	CA	𑂑	NNA	𑂒	BA	𑂓	RRA
𑂔	CHA	𑂕	TA	𑂖	BHA	𑂗	RHA
𑂘	JA	𑂙	THA	𑂚	MA		
𑂛	JJA	𑂜	DA	𑂝	YA		
𑂞	NYA	𑂟	DDDA	𑂠	RA		

4.3.1 Notes on Consonants

1. **𑂐** CA Shown in figure 3 as used for writing both /tʃ/ and /tʃʰ/, while in figure 7, the two are distinguished. The glyphic variant **𑂔** is attested.
2. **𑂔** CHA This letter has the glyphic variant **𑂘**.
3. **𑂘** JA This letter generally represents /dʒ/, but some sources show it for also writing /dʒʰ/.
4. **𑂞** NYA This letter appears in written sources (figures 2 and 3), but is unattested in print. It has the variant shape **𑂛**.
5. **𑂁** TTA This letter represents /t/, but in some cases it is also used for writing /tʰ/.
6. **𑂟** DDDA This letter is historically used for writing the alveolar implosive /ɖ/, but it is also shown in some sources as being used for representing the cluster /tra/. It has the glyphic variant **𑂡**.
7. **𑂍** DDHA This letter historically represents /dʱ/. However, the glyphic variant **𑂆** is shown in figures 7 and 8 as being used for writing /dʱ/, which has the distinct letter **𑂂**. The glyph **𑂍** is normative for DDHA as it corresponds to characters in related scripts, eg. **𑂆** U+112CB KHUDAWADI LETTER DDHA, **𑂍** U+11217 KHOJKI LETTER DDHA, **𑂍** U+0A22 GURMUKHI LETTER DDHA, etc.

8. **ਠ** THA This letter has two distinct glyphic representations: **ਠ** and **ਠ**. The former is found in written (figure 2) and printed sources (figure 4). The shape **ਠ** occurs in a chart from the *Linguistic Survey of India* (figure 3) and corresponds to **ਠ** U+0A25 GURMUKHI LETTER THA. The form **ਠ** is taken as the representation form because it is the most commonly occurring form of the letter. It is evident that the metal type for THA is based upon this form.
9. **ਢ** DHA This letter is shown in figure 3 as representing /d/ and /d^h/. However, other sources show **ੜ** DA as being used for /d^h/ and /d/. As shown in the glyph comparison in table 1, it is clear that the most commonly used letter for /d/ is **ੜ**, as is proposed here. Although the distinction between /d/ and /d^h/ may not be retained in writing in some sources, it is evident that the letter **ਢ** is historically assigned to /d^h/, which corresponds to characters in related scripts, eg. **ਢ** U+0A27 GURMUKHI LETTER DHA and **᳚** U+111A3 SHARADA LETTER DHA.
10. **ਯ** YA This letter is unattested in written sources, but it is found in printed sources. Generally, the vowel letter **ੳ** I is used in place of YA.
11. **ਲ** LA This letter has the variant glyph **ਲ**, which is a simplification of the more ‘ornate’ **ਲ**.
12. **ੜ** RHA This letter represents /ɽ^h/. In figure 3, the sound is written as **ੜ**. This is not an atomic letter, but a sequence of **ੜ** HA and **ੜ** RA that represents the metathesis of /ɽ^h/ as /hr/.
13. **ੜ** SA This letter is used for writing both /s/ and /ʃ/. Presumably, it would also be used for representing the retroflex /ʂ/.

4.3.2 Characters Not Proposed

1. ***GGA, *BBA** The velar implosive /g/ and the bilabial implosive /b/ are phonemic in Seraiki, however the available sources in the Multani script indicate that these sound are represented using the letters for the unaspirated stops of the same class, ie. **ੜ** GA and **ਠ**, respective. This may be the result of simplification of the character repertoire. However, distinct letters for the palatal implosive /j/ and alveolar implosive /d/ do exist: **ੜ** JJA and **ੜ** DDDA, respectively. Although letters for implosive consonants are not found in Punjabi Landa scripts besides Multani, they are found in those of Sindh. Given the attestation of two implosive letters, it is possible that historical records may show a complete set of the letters. For this reason, space is reserved for the potential inclusion of ***GGA** and ***BBA**.
2. ***NGA** Although distinct letters exist for the class nasals **ੜ** NYA (/ɲ/), **ੜ** NNA (/ŋ/), **ੜ** NA (/n/), and **ੜ** MA (/m/), there is no attested letter for /ŋ/. Space has been reserved for ***NGA** in case the letter is attested.
3. ***JHA** Figure 11 shows the letter **ੜ** used for writing *ja* and *jha*. This form of JA differs slightly from those attested in other sources, eg. **ੜ**, **ੜ**, **ੜ** (see table 1. However, the same figure shows the use of a single letter for writing pairs of aspirated and unaspirated sounds, eg. **ੜ** for both *ca* and *cha*. The use of **ੜ** JA for writing both *ja* and *jha* arises from this practice. Nevertheless, it is possible that a distinct letter for *jha* exists in a style of Multani. For this reason, space has been reserved for ***JHA** in the block.

4.4 Digits

There is a full set of decimal digits: **੦, ੧, ੨, ੩, ੪, ੫, ੬, ੭, ੮, ੯** (see figure 4). These are nearly identical to Gurmukhi digits (੦, ੧, ੨, ੩, ੪, ੫, ੬, ੭, ੮, ੯). The primary difference between the two sets is that the Multani digits 6 and 7 more closely resemble Devanagari **੬** SIX and **੭** SEVEN than the corresponding

Gurmukhi digits. Therefore, instead of encoding Multani digits separately it is appropriate to unify them with those of Gurmukhi (see Section 5.4).

4.5 Punctuation

The ੜ SECTION MARK is used for indicating the end of a sentence. It occurs in figure 3 as the form ੜ, which is a glyphic variant.

4.6 Collation

The collating order for Multani is as follows:

A < I < U < E < SA < HA < KA < KHA < GA <
 GH A < CA < CH A < JA < JJA < NYA < TTA < TTHA <
 DDA < DDHA < NNA < TA < THA < DA < DDDA < DHA <
 NA < PA < PHA < BA < BHA < MA < YA < RA < LA <
 VA < RRA < RHA

5 Character Data

5.1 Character Properties

```

11280;MULTANI LETTER A;Lo;0;L;;;;N;;;;;
11281;MULTANI LETTER I;Lo;0;L;;;;N;;;;;
11282;MULTANI LETTER U;Lo;0;L;;;;N;;;;;
11283;MULTANI LETTER E;Lo;0;L;;;;N;;;;;
11284;MULTANI LETTER KA;Lo;0;L;;;;N;;;;;
11285;MULTANI LETTER KHA;Lo;0;L;;;;N;;;;;
11286;MULTANI LETTER GA;Lo;0;L;;;;N;;;;;
11287;<reserved>
11288;MULTANI LETTER GH A;Lo;0;L;;;;N;;;;;
11289;<reserved>
1128A;MULTANI LETTER CA;Lo;0;L;;;;N;;;;;
1128B;MULTANI LETTER CH A;Lo;0;L;;;;N;;;;;
1128C;MULTANI LETTER JA;Lo;0;L;;;;N;;;;;
1128D;MULTANI LETTER JJA;Lo;0;L;;;;N;;;;;
1128E;<reserved>
1128F;MULTANI LETTER NYA;Lo;0;L;;;;N;;;;;
11290;MULTANI LETTER TTA;Lo;0;L;;;;N;;;;;
11291;MULTANI LETTER TTHA;Lo;0;L;;;;N;;;;;
11292;MULTANI LETTER DDA;Lo;0;L;;;;N;;;;;
11293;MULTANI LETTER DDDA;Lo;0;L;;;;N;;;;;
11294;MULTANI LETTER DDHA;Lo;0;L;;;;N;;;;;
11295;MULTANI LETTER NNA;Lo;0;L;;;;N;;;;;
11296;MULTANI LETTER TA;Lo;0;L;;;;N;;;;;
11297;MULTANI LETTER THA;Lo;0;L;;;;N;;;;;
11298;MULTANI LETTER DA;Lo;0;L;;;;N;;;;;
11299;MULTANI LETTER DHA;Lo;0;L;;;;N;;;;;
1129A;MULTANI LETTER NA;Lo;0;L;;;;N;;;;;
1129B;MULTANI LETTER PA;Lo;0;L;;;;N;;;;;
1129C;MULTANI LETTER PHA;Lo;0;L;;;;N;;;;;
1129D;MULTANI LETTER BA;Lo;0;L;;;;N;;;;;

```

```

1129E;<reserved>
1129F;MULTANI LETTER BHA;Lo;0;L;;;;N;;;;;
112A0;MULTANI LETTER MA;Lo;0;L;;;;N;;;;;
112A1;MULTANI LETTER YA;Lo;0;L;;;;N;;;;;
112A2;MULTANI LETTER RA;Lo;0;L;;;;N;;;;;
112A3;MULTANI LETTER LA;Lo;0;L;;;;N;;;;;
112A4;MULTANI LETTER VA;Lo;0;L;;;;N;;;;;
112A5;MULTANI LETTER SA;Lo;0;L;;;;N;;;;;
112A6;MULTANI LETTER HA;Lo;0;L;;;;N;;;;;
112A7;MULTANI LETTER RRA;Lo;0;L;;;;N;;;;;
112A8;MULTANI LETTER RHA;Lo;0;L;;;;N;;;;;
112A9;MULTANI SECTION MARK;Po;0;L;;;;N;;;;;

```

5.2 Linebreaking

Linebreaking properties given in the data format of LineBreak.txt:

```

11280..112A8; AL # LETTER A .. LETTER RHA
112A9; BA # SECTION MARK

```

5.3 Syllabic Categories

Syllabic categories given in the data format of IndicSyllabicCategory.txt:

```

# Indic_Syllabic_Category=Vowel_Independent
11280..11283 ; Vowel_Independent # Lo [4] LETTER A .. LETTER E

# Indic_Syllabic_Category=Consonant
11284..112A8 ; Consonant # Lo [32] LETTER KA .. LETTER RHA

```

5.4 Script Extensions

Multani digits are nearly the same as Gurmukhi digits and should be unified with them. This information is to be added to ScriptExtensions.txt. The data below uses 'Mult' as the code for Multani.

```

# Script_Extensions=Guru Mult
0A66..0A6F ; Guru Mult # Nd [10] GURMUKHI DIGIT ZERO..GURMUKHI DIGIT NINE

# Total code points: 10

```

5.5 'Confusable' Characters

```

11293 MULTANI LETTER DDDA ; 11216 KHUDAWADI LETTER DDA
112A9 MULTANI SECTION MARK ; 002C COMMA

```

6 References

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7 Acknowledgments





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	1128	1129	112A
0	𑂀 11280	𑂁 11290	𑂂 112A0
1	𑂃 11281	𑂄 11291	𑂅 112A1
2	𑂆 11282	𑂇 11292	𑂈 112A2
3	𑂉 11283	𑂊 11293	𑂋 112A3
4	𑂌 11284	𑂍 11294	𑂎 112A4
5	𑂏 11285	𑂐 11295	𑂑 112A5
6	𑂒 11286	𑂓 11296	𑂔 112A6
7		𑂕 11297	𑂖 112A7
8	𑂗 11288	𑂘 11298	𑂙 112A8
9		𑂚 11299	𑂛 112A9
A	𑂜 1128A	𑂝 1129A	
B	𑂞 1128B	𑂟 1129B	
C	𑂠 1128C	𑂡 1129C	
D	𑂢 1128D	𑂣 1129D	
E			
F	𑂤 1128F	𑂥 1129F	

Vowels

- 11280 𑂀 MULTANI LETTER A
- 11281 𑂁 MULTANI LETTER I
- 11282 𑂆 MULTANI LETTER U
- 11283 𑂉 MULTANI LETTER E

Consonants

- 11284 𑂃 MULTANI LETTER KA
- 11285 𑂏 MULTANI LETTER KHA
- 11286 𑂒 MULTANI LETTER GA
- 11287  <reserved>
- 11288 𑂜 MULTANI LETTER GHA
- 11289  <reserved>
- 1128A 𑂝 MULTANI LETTER CA
- 1128B 𑂞 MULTANI LETTER CHA
- 1128C 𑂠 MULTANI LETTER JA
- 1128D 𑂢 MULTANI LETTER JJA
- 1128E  <reserved>
- 1128F 𑂤 MULTANI LETTER NYA
- 11290 𑂀 MULTANI LETTER TTA
- 11291 𑂁 MULTANI LETTER TTHA
- 11292 𑂆 MULTANI LETTER DDA
- 11293 𑂊 MULTANI LETTER DDDA
= tra
- 11294 𑂍 MULTANI LETTER DDHA
- 11295 𑂐 MULTANI LETTER NNA
- 11296 𑂓 MULTANI LETTER TA
- 11297 𑂕 MULTANI LETTER THA
- 11298 𑂘 MULTANI LETTER DA
- 11299 𑂚 MULTANI LETTER DHA
- 1129A 𑂝 MULTANI LETTER NA
- 1129B 𑂟 MULTANI LETTER PA
- 1129C 𑂡 MULTANI LETTER PHA
- 1129D 𑂣 MULTANI LETTER BA
- 1129E  <reserved>
- 1129F 𑂥 MULTANI LETTER BHA
- 112A0 𑂂 MULTANI LETTER MA
- 112A1 𑂅 MULTANI LETTER YA
- 112A2 𑂈 MULTANI LETTER RA
- 112A3 𑂋 MULTANI LETTER LA
- 112A4 𑂎 MULTANI LETTER VA
- 112A5 𑂑 MULTANI LETTER SA
- 112A6 𑂔 MULTANI LETTER HA
- 112A7 𑂖 MULTANI LETTER RRA
- 112A8 𑂙 MULTANI LETTER RHA

Punctuation

- 112A9 𑂛 MULTANI SECTION MARK

Figure 1: Proposed code chart and names list for Multani.

	A	B	C	D		A	B	C	D
A	ਅ	ਅ	ਅ	ਅ	TA	ਤ	ਤ	ਤ	ਤ
I	ੳ	ੳ	ੳ	ੲ	THA	ਠ	ਠ	ਠ	ਠ
U	ਊ	ਊ	ਊ	ਊ	DA	ੲ	ੲ	ੲ	ੲ
E	ੲ	—	ੲ	—	DHA	—	—	ੲ	—
KA	ਕ	ਕ	ਕ	ਕ	NA	ਨ	ਨ	ਨ	ਨ
KHA	ਖ	ਖ	ਖ	ਖ	PA	ਪ	ਪ	ਪ	ਪ
GA	ਗ	ਗ	ਗ	ਗ	PHA	ਘ	ਘ	ਘ	ਘ
GHA	ਘ	ਘ	—	ਘ	BA	ਬ	ਬ	ਬ	ਬ
CA	ਚ	ਚ	ਚ	ਚ	BHA	ਭ	ਭ	—	ਭ
CHA	ਛ	ਛ	ਛ	ਛ	MA	ਮ	ਮ	ਮ	ਮ
JA	ਜ	ਜ	ਜ	ਜ	YA	ਯ	—	ਯ	—
JJA	ਯ	ਯ	—	—	RA	ਰ	ਰ	ਰ	ਰ
NYA	—	ੲ	—	ੲ	LA	ਲ	ਲ	ਲ	ਲ
TTA	ਟ	ਟ	—	ਟ	VA	ਵ	ਵ	ਵ	ਵ
TTHA	ਠ	—	—	—	SA	ਸ	ਸ	ਸ	ਸ
DDA	ੲ	ੲ	ੲ	ੲ	HA	ਹ	ਹ	ਹ	ਹ
DDDA	ੲ	ੲ	ੲ	—	RRA	ੲ	ੲ	ੲ	—
DDHA	ੲ	ੲ	—	ੲ	RHA	ੲ	—	—	ੲ
NNA	ਨ	ਨ	ਨ	ੲ					

Table 1: Comparison of Multani letterforms from (A) Baptist Mission Press 1819: printed; (B) Prinsep 1837: hand-written; (C) Bagster 1848 and Faulmann 1880a: printed; (D) Grierson 1919: hand-written.

	Multani	Arabic		Multani	Arabic
A	آ	ا، آ، اے	TA	ت	ت
I	اِ	اِ، اِی، ی	THA	تھ	تھ
U	اُ	اُ، او، و	DA	د	د، دھ
E	اَ	اَ، اَے، او	DHA	دھ	دھ
KA	ک	ک	NA	ن	ن
KHA	کھ	خ، کھ	PA	پ	پ
GA	گ	گ، گگ، گگ	PHA	پھ	پھ
GHA	گھ	گھ	BA	ب	ب، بپ
CA	چ	چ، چھ	BHA	بھ	بھ
CHA	چھ	چھ	MA	م	م
JA	ج	ج، جج، جج	YA	ی	ی
JJA	جج	ج	RA	ر	ر، رڑ
NYA	ن	ن، نج	LA	ل	ل
TTA	ٹ	ٹ، ٹھ	VA	و	و
TTHA	ٹھ	ٹھ	SA	س	س، سش
DDA	ڈ	ڈ، ڈڈ	HA	ہ	ہ
DDDA	ڈڈ	ڈڈ، ڈڈر	RRA	ڑ	ڑ
DDHA	ڈھ	ڈھ، دھ	RHA	ڑھ	ڑھ
NNA	نن	ن			

Table 2: Correspondences between the Arabic script used at present for writing Seraiki and letters of the Multani script (based upon Shackle 1983: 56, 59).

LADAKHI

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Tibetan characters

ཅིའཕེད་ན། ལུས་ཡང་དགོན་མཚན་གྱི་ལྷན་པས་
 འཇམ་མཉམས་ལྷན་པས་མཚོན། དེ་མཚོན་དམིགས་ཅི་དང་།
 སྲིད་མོ་དང་། ཨ་མ་མཉམས་ལྷན་པས་།

Mk. 3:35; 1919

Spoken in eastern Kashmir, near the borders of Tibet, northern India. First publication, St. Mark's Gospel in 1905 at Leh, Ladakh; tr. by Rev. A. H. Francke of the Moravian Mission; lithographed by the BFBS, Calcutta, 1908.

LAEWOMBA

505

(No specimen available.)

Spoken on the Markham River, New Guinea. First publication, a reader containing Scripture stories in 1917 at Logaweng; tr. by K. Pazzler.

LAHNDA: Hindko

506

Persian characters

کیوں ہے خدا دنیا دے نال ایڈی محبت کیتی
 ہے اوس اپنا کوئی پتر چا ورتا۔ تاں جو کوئی اوس اُتے
 ایمان آنے ہلاک نہ ہووے پر ہمیشہ دنی زندگی بٹھے۔

Spoken by about 800,000 people in Peshawar and Hazara, North West Frontier Province, India. First publication, St. John's Gospel in 1930 at Lahore by the BFBS; tr. by Miss C. L. Robertson of the Women's Industrial Mission and two native pastors.

LAHULI: Bunan dialect

509

Tibetan characters

མི་སྲུ་ཉི་ཀེ་རྩེ་ཀོན་ཚོག་གི་ལྷན་པས་ཨ་མ་ཉེ་མིག་དང་། བ་བྱ་མི་ཉེ་གྱི་ཉི་
 བེད་དང་སྲིད་དང་ཨ་མ་ཉེ་དང་དྲན་དྲུག་སྲིམ་ཀ་ཉི་མེལ་ཟ།

Mk. 3:35; 1911

Spoken by about 2,900 people on the borders of Kashmir and Western Tibet. First publication, Selections in 1905 by the BFBS; tr. by Rev. A. W. Heyde. St. Mark's Gospel, 1911, at Herrnhut by the BFBS, tr. by Rev. A. F. Francke, of the Moravian Mission.

LAHNDA: Multani

507

Landa characters

۲۴۲۴ ۶۴۸۲۰ ۲۲۰۲۰ ۴۵ ۳۵ ۴۸۸ ۲۳ ۲۶ ۴۵۲۰
 ۴۴۰۱ ۵۲ ۴۴۲ ۴۲۲۰ ۴۳ ۲۶ ۳۰ ۵۸۵۲ ۴۲ ۴۶ ۴۵
 ۳۳ ۴۵۳۶۳ ۲۸۲۵۰ ۴۵ ۲۴ ۲۰۴۵ ۴۸۲۴ ۳۵۰۱ ۴۵۲

1819

Persian characters

کیونجو خدا جهان کون ایجاں پیار کیتا جو اوس
 پڑاں کتو پتر چا ورتا نامجو ہرک جو اوندے اُتے ایمان
 آنے ہلاک نہ تھیوے پر ہمیشہ دنی حیاتی پاوے

1898

Spoken in the western Panjab, India. First publication, the New Testament in Landa characters in 1819 at Serampore by the Mission Press; tr. by the Serampore missionaries (See No. 87). Persian characters: St. Mark's Gospel, BFBS, Labore, 1888; tr. by A. Jukes of the CMS; St. Matthew's, St. Luke's and St. John's Gospels, 1898. CP: BFBS.

LAHU

508

Awlawñ ko^h leh: hka: yon ve: chaw:
 hka: pg'e, chaw: ya' o' ve: awhkaw: lo: co: ti, ha:
 ti, g'a: tu, ve: awlawñ yo:. G'ui, sha: Ya' hpu:
 hta' yon ve: chaw: hui: hka: pg'e, lu, kui, she' kui,
 lo: ma' g'a: ga,, co: ti, ha: ti, hta' g'a: tu,, G'ui,
 sha: leh:; yaw' lo: te' g'a' ti' Ya' hpu: hta' pi' kai:
 hta' hka: ga,, myigui, ya' hta' yaw' ha' ve: yo..
 Myi gui, ya' hta' ciyan tu,, G'ui, sha: leh: yaw' Ya'
 hpu: hta' myi gui, hko' peu: la' ve: ma' he'. Myi-
 gui, ya' te' hpa yaw' hta' pa: taw: myi co yu kui
 lo: g'a: ga, tu, yaw' peu: la' ve: yo:. Yaw' hta'
 yon ve: chaw: hui:, vin'ba' ciyan ve: hta' ma' g'a:
 hkan. Ma'yon ve: chaw: hui:, G'ui, sha: lo: Ya'
 hpu: te' g'a: ii' awmeh: hta' ma' yon ve: pa: taw:,
 chi' beu' vin'ba' ciyan ve: hta' g'a hkan ve: yo:.
 Vin'ba' ciyan ve: hta' g'a: hkan ve: aw lawñ leh:
 awg'eu' ba: leh: chi: myigui, hko' lo' e: la ve:.
 myi gui, ya' leh: awg'eu' ba: ve: hta' akeh' leu leh:
 na' ho' ve: hta' yaw' hui: ni: ma: hkaw: caw' ve:
 yo:. Awlawñ ko'leh: yaw'hui: hka: te: ve: kan

Jn. 3:15-19

Spoken by about 60,000 people in the southern Shan States near Kentung, Burma, and in Yunnan, China. Reduced to written form by Dr. H. H. Tilbe, American Baptist Foreign Mission Society. First publication, St. Mark's Gospel in 1924 at Rangoon, by the American Baptist Mission Press; tr. by J. H. Telford of the ABFMS, with native assistants. New Testament, 1932.

Figure 6: A few lines from the New Testament printed in Multani (from The American Bible Society 1938: 202.) A specimen of the text is given here in Figure 4.

CLASS III.]		ALPHABETS.		[INDO-EUROPEAN.			
SINDHEE.		MOULTAN OR WUCH.		CASHMERIAN.			
म	a	ਅ	a	अ	a	ग	jha
८	i			आ	sa	ग	na
ॐ	u			इ	i	ग	ta
३	ka	८	i	ई	i	०	tha
५	kha			उ	u	८	da
५	ga	ॐ	u	उ	u	५	dha
५	gha			ऊ	u	५	na
४	ca	२	ka	८	r	५	ta
७	cha			८	r	उ	tha
३	ja	२	ka	८	i	८	da
५	jha	५	kha	५	i	८	dha
५	na	५		५	८	e	८
३	ta	५		८	ai	८	pa
३	tha	५		८	o	८	pha
५	da	५	ga	८	au	८	ba
५	na	५		.	m	८	bha
७	ta	५	ca	:	h	८	ma
५	tha	५		क	ka	५	ya
५	da	५	cha	प	kha	८	ra
८	dha	५		ग	ga	८	la
५	na	५	ja	घ	gha	८	va
५	pa	५		ण	na	८	ca
५	pha	५	da	ट	ca	८	sha
५	ba	५		ठ	cha	८	sa
५	bha	५	na	ड	ja	८	ha
५	ma	५					
५	ya	५	ta				
२	ra	५					
२	la	५	tha				
०	va	५	da				
५	sa						
५	ha						
५	tra						

Ligatures.			
क	kya	प	pra
ग	cu	भ	mpa
घ	jya	ल	rja
झ	tma	स	cu
ड	tu	म	sma
ड	ncu	ष	sva
न	nu	ह	hya
न	nya	ॳ	vowel omitted

Figure 7: Table showing the Khudawadi ('Sindhee'), Multani ('Moultan'), and Sharada ('Cashmerian') scripts (from Bagster 1848: xliv).

SINDH- UND MULTANSCHRIFT.

Sindh		Multan		Sindh		Multan		Sindh		Multan	
Zeichen	Wert	Zeichen	Wert	Zeichen	Wert	Zeichen	Wert	Zeichen	Wert	Zeichen	Wert
ᳵ	a	ᳶ	a	ᳶ	ña, ña			ᳶ	pha	ᳶ	pha
᳷	i	᳸	i	᳸	ṭa			᳸	ba	᳸	ba
᳹	u	ᳺ	u	ᳺ	ṭha			ᳺ	bha		
᳼	ka	᳽	ka	᳽	ḍa	᳽	ḍa	᳽	ma	᳽	ma
᳾	kha	᳿	kha	᳿	ṇa	᳿	ṇa	᳿	ya	᳿	ya
᳿	ga	᳾	ga	᳾	ṭa	᳾	ṭa	᳾	ra	᳾	ra
᳽	gha			᳽	ṭha	᳽	ṭha	᳽	la	᳽	la
᳽	tṣa	᳽	tṣa	᳽	ḍa	᳽	ḍa	᳽	va	᳽	va
᳽	tṣha	᳽	tṣha	᳽	dha	᳽	dha	᳽	sa	᳽	sa
᳽	dṣa	᳽	dṣa	᳽	na	᳽	na	᳽	ha	᳽	ha
᳽	dṣha			᳽	pa	᳽	pa	᳽	tra	᳽	tra

Die vorstehenden Schriften sind in doppelter Art beachtenswert, erstens weil sie in gleicher Weise wie die semitischen Schriften die Vokale in der Mitte der Wörter nicht schreiben, z. B. Sindhisch ᳶ᳾᳽ *tuhūḍzo*, zweitens weil ihre Zeichen sich an die semitischen Schriften anlehnen, andererseits sich in der Devanagarschrift vorfinden, wenn diese von der Paliform abweicht; so hat ᳽ dieselbe Bedeutung auf Pehlewi-Münzen, ᳾ entspricht dem ᳾ im Aramäischen, ᳽ erinnert an die phönikische Form ᳽ , ᳽ an das phönikische ᳽ . Den von den Inschriftformen abweichenden Devanagarizeichen ᳽ *ka* entspricht Multan ᳽ , dem ᳽ *kha* (Inschrift ᳽) entspricht Sindh ᳽ *gha*, ᳽ kann ebensowohl von der Inschrift ᳽ , wie von Sindh ᳽ *ga* abstammen, dem ᳽ *tṣha* entspricht Sindh ᳽ *tṣha*, dagegen Inschrift ᳽ *tṣha* dem Devanagari ᳽ *ṭa*, Devanagari ᳽ hat seine Analogie nur in Sindh ᳽ (dagegen Inschrift ᳽ *ṇa*), ebenso ᳽ Sindh ᳽ (Inschrift ᳽), ᳽ *p*, Sindh ᳽ (Inschrift ᳽).

Die auffallenden Abweichungen der beiden Schriften von Sindh und Multan beweisen, dass von einer einfachen Entlehnung keine Rede sein kann, denn wir finden Sindh ᳽ *tṣa* als Multan ᳽ *ra*, Sindh ᳽ *tha* als Multan ᳽ *pha*, dagegen befindet sich Multan ᳽ *tṣha* in Übereinstimmung mit Sindh ᳽ *tṣa*.

Mit Rücksicht auf die Einwanderung der arischen Stämme von Norden liegt die Vermuthung nahe, dass die vorstehenden Schriften des nördlichen Indiens den Grundstock der vedischen Schrift abgaben. Durch die Herrschaft der magadhischen Schrift während der Zeit, wo in ganz Vorderindien der Buddhismus herrschte, wurde die heimische Schrift in den Schatten gestellt. Man zog die fremde Schrift wegen ihres Reichthums an Zeichen und wegen ihrer festen Schreibregeln vor. So kam es, dass die heimische Schrift, welche sich trotzdem im Volke erhielt, zu den gelehrten Werken nicht verwendet und diesfalls die Devanagarschrift vorgezogen wurde.

Figure 8: Description of Multani and 'Sindhi', showing metal fonts (from Faulmann 1880a: 121). These types are identical to those shown in Figure 7.

6	ا و	٦	ج جھ ز	٦	٦
٧	ا	٧	چ	٧	ب ب
٨	و	٨	ٹ	٩	٦
6	ی	6	ٹھ	٦	٦
٧	س ش	٦	ڈ ڈھ	٧	ی
5	ہ	١١	ٹن	٧	ر
٢	ک	3	ت	٧	ل
٧	خ کھ	٧	تتر تھ	٧	و
٨	گ گھ	٧	ٹھ	٧	ڑ
٧	گھ	٧	ر رھ	٧	ڑھ
٧	چ	٦	ن		
٧	چھ	٧	پ		

Figure 9: Arabic correspondences for the printed form of Multani used in the Serampore *New Testament* (see figure 4 from 1819 (from Shackle 1983: 59).

٧	ا	٧	چھ	٧	ن
٧	ی	٧	ج جھ ز	٧	ب ب
٧	و	٧	چھ	٧	٦
٧	س ش	٧	ٹ	٧	ب ب
5	ہ	٧	ڈ ڈھ	٧	٦
٢	ک	٧	ٹھ	٧	٦
٧	خ کھ	٧	ت	٧	م
٧	گ گھ	3	تتر تھ	٧	ر رھ
٧	گھ	٧	ٹھ	٧	ل
8	چ	٧	ر رھ	٧	و

Figure 10: Arabic correspondences for the written form of Multani that appears in a specimen in the *Linguistic Survey of India* (see figure 3) from 1919 (from Shackle 1983: 56).

MULTANI OF MULTAN.

311

	Lapda.	Lands of Multan.		Lapda.	Lands of Multan.
a ('āīrā')	ᳵ	ᳶ	da	ᳵ	ᳶ
i ('ēīrā')	᳷	᳸	dha	᳷	᳸
u ('ūīrā')	᳹	ᳺ	va	᳹	ᳺ
ē	ᳶ	ᳶ	ta	ᳶ	ᳶ
ō	᳷	᳷	tha	᳷	᳷
sa	᳸	᳸	da	᳸	᳸
ha	᳹	᳹	dha	᳹	᳹
ka	ᳺ	ᳺ	na	ᳺ	ᳺ
kha	᳻	᳻	pa	᳻	᳻
ga	᳼	᳼	pha	᳼	᳼
gha	᳽	᳽	ba	᳽	᳽
na	᳾	᳾	bha	᳾	᳾
cha	᳿	᳿	ma	᳿	᳿
chha	᳾	᳾	ya	᳾	᳾
ja	᳾	᳾	ra	᳾	᳾
jha	᳾	᳾	la	᳾	᳾
nā	᳾	᳾	va	᳾	᳾
᳾	᳾	᳾	ra	᳾	᳾
᳾	᳾	᳾	rha	᳾	᳾

Figure 11: Comparison of basic Landā with Multani (from Grierson 1919: 311)

Lautwert	Śāradā 804	Kasch- miri	Ṭākri		Laṇḍā		Multani	Gur- mukhi
			Jaun- sari	Cha- meāli	Khu- dāwādi	Sindhi- Schrift		
a	𑆑	𑆑	𑆑	𑆑	𑆑	𑆑	𑆑	𑆑
i	𑆒	𑆒	𑆒	𑆒	𑆒	𑆒	𑆒	𑆒
u	𑆓	𑆓	𑆓	𑆓	𑆓	𑆓	𑆓	𑆓
e	𑆔	𑆔	𑆔	𑆔	𑆔	𑆔	𑆔	𑆔
o	𑆕	𑆕	𑆕	𑆕	𑆕	𑆕	𑆕	𑆕
ā	𑆖	𑆖	𑆖	𑆖	𑆖	𑆖	𑆖	𑆖
ka	𑆗	𑆗	𑆗	𑆗	𑆗	𑆗	𑆗	𑆗
kha	𑆘	𑆘	𑆘	𑆘	𑆘	𑆘	𑆘	𑆘
ga	𑆙	𑆙	𑆙	𑆙	𑆙	𑆙	𑆙	𑆙
gha	𑆚	𑆚	𑆚	𑆚	𑆚	𑆚	𑆚	𑆚
ṅa	𑆛	𑆛	𑆛	𑆛	𑆛	𑆛	𑆛	𑆛
ṣa	𑆜	𑆜	𑆜	𑆜	𑆜	𑆜	𑆜	𑆜
ṣha	𑆝	𑆝	𑆝	𑆝	𑆝	𑆝	𑆝	𑆝
ṭa	𑆞	𑆞	𑆞	𑆞	𑆞	𑆞	𑆞	𑆞
ṭha	𑆟	𑆟	𑆟	𑆟	𑆟	𑆟	𑆟	𑆟
ḍa	𑆠	𑆠	𑆠	𑆠	𑆠	𑆠	𑆠	𑆠
ḍha	𑆡	𑆡	𑆡	𑆡	𑆡	𑆡	𑆡	𑆡
ṇa	𑆢	𑆢	𑆢	𑆢	𑆢	𑆢	𑆢	𑆢
ta	𑆣	𑆣	𑆣	𑆣	𑆣	𑆣	𑆣	𑆣
tha	𑆤	𑆤	𑆤	𑆤	𑆤	𑆤	𑆤	𑆤
ḍa	𑆥	𑆥	𑆥	𑆥	𑆥	𑆥	𑆥	𑆥
ḍha	𑆦	𑆦	𑆦	𑆦	𑆦	𑆦	𑆦	𑆦
na	𑆧	𑆧	𑆧	𑆧	𑆧	𑆧	𑆧	𑆧
pa	𑆨	𑆨	𑆨	𑆨	𑆨	𑆨	𑆨	𑆨
pha	𑆩	𑆩	𑆩	𑆩	𑆩	𑆩	𑆩	𑆩
ba	𑆪	𑆪	𑆪	𑆪	𑆪	𑆪	𑆪	𑆪
bha	𑆫	𑆫	𑆫	𑆫	𑆫	𑆫	𑆫	𑆫
ma	𑆬	𑆬	𑆬	𑆬	𑆬	𑆬	𑆬	𑆬
ya	𑆭	𑆭	𑆭	𑆭	𑆭	𑆭	𑆭	𑆭
ra	𑆮	𑆮	𑆮	𑆮	𑆮	𑆮	𑆮	𑆮
la	𑆯	𑆯	𑆯	𑆯	𑆯	𑆯	𑆯	𑆯
va	𑆰	𑆰	𑆰	𑆰	𑆰	𑆰	𑆰	𑆰
śa	𑆱	𑆱	𑆱	𑆱	𑆱	𑆱	𑆱	𑆱
ṣa	𑆲	𑆲	𑆲	𑆲	𑆲	𑆲	𑆲	𑆲
sa	𑆳	𑆳	𑆳	𑆳	𑆳	𑆳	𑆳	𑆳
ha	𑆴	𑆴	𑆴	𑆴	𑆴	𑆴	𑆴	𑆴

Figure 12: Scripts of the Sharada family (from Jensen 1969: 366). Multani is classified separately from other 'Landa' scripts, ie. Khudawadi and 'Sindhi-Schrift'.

	Multani	Khudawadi	Khojki	Gurmukhi	Devanagari
KA	ਕ	ਖ	ਖ	ਕ	क
KHA	ਖ	ਖ	ਖ	ਖ	ख
GA	ਗ	ਗ	ਗ	ਗ	ग
GGA	—	ਗ	ਗ	—	ग़
GHA	ਘ	ਘ	ਘ	ਘ	घ
CA	ਚ	ਚ	ਚ	ਚ	च
CHA	ਚ	ਚ	ਚ	ਚ	छ
JA	ਜ	ਜ	ਜ	ਜ	ज
JJA	ਜ	ਜ	ਜ	—	झ
JHA	—	ਜ	—	ਝ	झ
NYA	ਨ	ਨ	ਨ:	ਨ	ञ
TTA	ਟ	ਟ	ਟ	ਟ	ट
TTHA	ਟ	ਟ	ਟ	ਠ	ठ
DDA	ਡ	ਡ	ਡ	ਡ	ड
DDDA	ਡ	ਡ	ਡ	—	ड़
DDHA	ਡ	ਡ	ਡ	ਢ	ढ
NNA	ਨ	ਨ	ਨ	ਨ	ण
TA	ਤ	ਤ	ਤ	ਤ	त
THA	ਥ	ਥ	ਥ	ਥ	थ

Table 3: Comparison of Multani, Khudawadi, Khojki, Gurmukhi, and Devanagari letters.

	Multani	Khudawadi	Khojki	Gurmukhi	Devanagari
DA	د	د	د	ਦ	द
DHA	ध	द	ध	ਧ	ध
NA	ن	ن	ن	ਨ	न
PA	پ	پ	پ	ਪ	प
PHA	ف	ف	ف	ਫ	फ
BA	ب	ب	ب	ਬ	ब
BBA	—	ب	ب	—	ब्र
BHA	भ	ب	ب	ਭ	भ
MA	م	م	م	ਮ	म
YA	ي	ي	ي	ਯ	य
RA	ر	ر	ر	ਰ	र
LA	ل	ل	ل	ਲ	ल
VA	و	و	و	ਵ	व
SHA	—	ش	—	ਸ਼	श
SSA	—	—	—	—	ष
SA	س	س	س	ਸ	स
HA	ه	ه	ه	ਹ	ह
LLA	—	—	ل	ਲ	ळ
RRA	ر	ر	—	ੜ	(ड़)
RHA	ر	—	—	—	(ढ़)

Table 4: Comparison of Multani, Khudawadi, Khojki, Gurmukhi, and Devanagari letters.

**ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹**

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

Please read Principles and Procedures Document (P & P) from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

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A. Administrative

1. Title: **Proposal to Encode the Multani Script in ISO/IEC 10646**

2. Requester's name: *Script Encoding Initiative (SEI) / Anshuman Pandey (pandey@umich.edu)*

3. Requester type (Member body/Liaison/Individual contribution): *Liaison contribution*

4. Submission date: *2012-09-25*

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): Yes
Proposed name of script: *Multani*

b. The proposal is for addition of character(s) to an existing block:
Name of the existing block:

2. Number of characters in proposal: 38

3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary	<input 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 checked="" type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic	<input type="checkbox"/>	G-Obscure or questionable usage symbols		<input type="checkbox"/>	<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? *Anshuman Pandey*

b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): *Anshuman Pandey (pandey@umich.edu)*

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

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see 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.

¹ Form number: N4102-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	No
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:	No
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	No
4. The context of use for the proposed characters (type of use; common or rare) Reference:	Common
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	No
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:	N/A
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	Yes
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	No
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:	No
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:	No
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:	No
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)	No
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	No