

Doc Type: Working Group Document

Title: Proposal to encode 10 Latin letters with diagonal stroke

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Status: Individual Contribution

Action: For consideration by JTC1/SC2/WG2 and UTC

Date: 2008-10-30

Additions for pre-1921 Latvian orthography

- Ģ U+A796 LATIN CAPITAL LETTER G WITH DIAGONAL STROKE
- ģ U+A797 LATIN SMALL LETTER G WITH DIAGONAL STROKE
- Ķ U+A798 LATIN CAPITAL LETTER K WITH DIAGONAL STROKE OVERLAY
- ķ U+A799 LATIN SMALL LETTER K WITH DIAGONAL STROKE OVERLAY
- A743 latin small letter k with diagonal stroke
 - "overlay" in the name indicates contrast to U+A743
- Ņ U+A79A LATIN CAPITAL LETTER N WITH DIAGONAL STROKE
- ņ U+A79B LATIN SMALL LETTER N WITH DIAGONAL STROKE
- Ŗ U+A79C LATIN CAPITAL LETTER R WITH DIAGONAL STROKE
- ŗ U+A79D LATIN SMALL LETTER R WITH DIAGONAL STROKE
- Š U+A79E LATIN CAPITAL LETTER S WITH DIAGONAL STROKE
- Also used in pre-1950 Lower Sorbian orthography
- š U+A79F LATIN SMALL LETTER S WITH DIAGONAL STROKE
- A79E latin small letter long s with diagonal stroke
 - Also used for Luiseño (California, USA)

Informative notes and cross references to be added for existing characters:

- U+1E9C LATIN SMALL LETTER LONG S WITH DIAGONAL STROKE
- A79F latin small letter s with diagonal stroke
 - Medievalist use for several abbreviations
 - Also used in Fraktur types of pre-1921 Latvian orthography
 - Also used in Fraktur types of pre-1950 Lower Sorbian orthography
- U+A743 LATIN SMALL LETTER K WITH DIAGONAL STROKE
- A799 latin small letter k with diagonal stroke overlay
 - Medievalist use for abbreviations of "kalendas" and "karta"
 - The diagonal stroke crosses the right leg of the k

All these letters are used in the orthography of Latvia used before 1921 [3] [8] [4], see fig. 1 to 8. The LATIN SMALL LETTER S WITH DIAGONAL STROKE also occurs in a long s form (when used within a Fraktur [Blackletter] font); this form is unified with the already encoded U+1E9C LATIN SMALL LETTER LONG S WITH DIAGONAL STROKE.

The encoding of these letters closes a gap regarding Fraktur (Blackletter) types:

According to [3] (which appeared 1880) pp. 227-234, Fraktur was in common use during the 19th century for the following languages: German, Danish, Swedish, Latvian, Finnish, Czech, Slovak. Even as this list may be incomplete, all letters used for the 19th century orthographies of all major European languages are now included in Unicode, with the exception of Latvian. Encoding the 10 letters proposed here would enable to create Fraktur fonts which cover the complete 19th century and early 20th century usage in Europe.

It should be noted that the proposed letters are not simply presentation forms of some base letters with the overstriking diacritic U+0338 COMBINING LONG SOLIDUS OVERLAY.

All scans show a specific font design for all proposed letters regarding length, angle, and thickness of the stroke, whether the design is straightforward as in fig. 1 or elaborated as in fig. 4, which in no case exactly resemble a solidus (except the Luiseño example, fig. 9).

Moreover, encoding the proposed letters as separate entities is in line with the encoding e.g. of the slashed SENĆOŦEN letters [2], which are in fact composites of a base letter and a solidus (as it is common for North American indigenous languages which got their orthographies after the invention of the typewriter). This encoding was accepted without assigning any canonical or compatibility decomposition to the encoded letters, long after the stopping of encoding really precomposed Latin letters. If this encoding model were changed now in a way that slashed letters are regarded decomposable, a third decomposition type had to be added (as the canonical decomposition is stabilized now) for the already encoded slashed letters.

It should also be noted that U+0338 is not explicitly devised to generate script elements (like viramas etc. are for South Asian scripts), but is usable as graphical element for overstriking in critical typescript editions where it really must appear as a solidus which does not change its shape dependent of the letter which it strikes out.

Besides the historic Latvian use, the s with diagonal stroke has more uses:

- It was used in Lower Sorbian orthography until about 1950 (until the current orthography was introduced) [7].
See fig. 8.
- It is used currently in the orthography of the Luiseño language spoken in California, USA [4].
See fig. 9.

Regarding the representative glyphs, the stroke is presented in a flat angle, according to the glyphs presented in fig. 1. However, for the small and capital S, this led to a problematic design when using the Roman glyphs (as Latin characters are presented usually in a serified Roman font in the code tables), while the flat angle stroke is compatible with the Fraktur glyphs which are mostly used by pre-1921 printed Latvian texts. Thus, a more oblique and solidus-like design was selected for the small and capital s, which also is more appropriate for the modern use in Luiseño.

Properties:

```
A796;LATIN CAPITAL LETTER G WITH DIAGONAL STROKE;Lu;0;L;;;;N;;;A797;
A797;LATIN SMALL LETTER G WITH DIAGONAL STROKE;Ll;0;L;;;;N;;;A796;;A796
A798;LATIN CAPITAL LETTER K WITH DIAGONAL STROKE OVERLAY;Lu;0;L;;;;N;;;A799;
A799;LATIN SMALL LETTER K WITH DIAGONAL STROKE OEVRLAY;Ll;0;L;;;;N;;;A798;;A798
A79A;LATIN CAPITAL LETTER N WITH DIAGONAL STROKE;Lu;0;L;;;;N;;;A79B;
A79B;LATIN SMALL LETTER N WITH DIAGONAL STROKE;Ll;0;L;;;;N;;;A79A;;A79A
A79C;LATIN CAPITAL LETTER R WITH DIAGONAL STROKE;Lu;0;L;;;;N;;;A79D;
A79D;LATIN SMALL LETTER R WITH DIAGONAL STROKE;Ll;0;L;;;;N;;;A79C;;A79C
A79E;LATIN CAPITAL LETTER S WITH DIAGONAL STROKE;Lu;0;L;;;;N;;;A79F;
A79F;LATIN SMALL LETTER S WITH DIAGONAL STROKE;Ll;0;L;;;;N;;;A79E;;A79E
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Bibliography:

- [1] ALLEN, C. G.: A Manual of European Languages for Librarians. London & New York 1981, ISBN 0-85935-028-2
- [2] ELLIOT, John, BRAND, Peter, HARVEY, Chris, 2004: Proposal to Add Four SEN ĆOTEN Latin Characters. Unicode Document L2/04-170
- [3] FAULMANN, Carl: Das Buch der Schrift. Wien 1880. Reprint Nördlingen 1985, ISBN 392156851X
- [4] HELLWIG, Wilhelm: Der Satz und die Behandlung fremder Sprachen. 5th. ed., Frankfurt/M. 1930
- [5] HELZEL, Gerhard: MarsFrakturLett (a TrueType font). Hamburg 2002. <http://www.romana-hamburg.de/Fraktur.htm>
- [6] HYDE, Villiana: An introduction to the Luiseño language. Edited by Ronald W. Langacker. In collaboration with Pamela Munro [and others]. Malki Museum Press 1971.
- [7] KAULFÜRST, Fabian (Sorbisches Institut / Serbski Institut, Bautzen/Budyšin, Germany): personal communication 2005-09-06.
- [8] REICHSDRUCKEREI: Alphabete und Schriftzeichen des Morgen- und des Abendlandes. Berlin 1924.
- [9] WISCHMANN, Johann: Der Unteutsche Opitz. Oder Kurtze Anleitung zur Lettischen Dicht ꝛKunst. (The Not-German [i.e. Latvian] Opitz. Or, Short Guidance to the Latvian Art of Poetry.) Rīga 1697
- [10] Skohlas-Likkumi. Rīga 1789.

Acknowledgements:

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Gunars Lucans

Andreas Stötzner (Signographisches Institut Andreas Stötzner, Pegau/Sa., Germany)

and all members of the Unicode mailing list who participated in the discussion.

LETTISCH.

Antiqua	Fraktur	Wert	Antiqua	Fraktur	Wert	Antiqua	Fraktur	Wert
A a	Ɑ a	a	J j	ᶚ i	y	Pj pj	ᶚj ᶚj	p'
Â â	Ɑ̄ â	ā	K k	ᶚ k	k <i>hart</i>	R r	ᶚ r	r
B b	ᶚ b	b	ᶚ k	ᶚ k	k <i>lind</i>	ᶚ r	ᶚ r	r'
Bj bj	ᶚj ᶚj	b'	L l	ᶚ l	l	S s	ᶚ s	z
D d	ᶚ d	d	L l	ᶚ l	l'	S s	ᶚ s	s
Ds ds	ᶚs ᶚs	dz	M m	ᶚ m	m	Sch sch	ᶚsch ᶚsch	ž
Dsch dsch	ᶚsch ᶚsch	dž	Mj mj	ᶚmj ᶚmj	m'	Sch sch	ᶚsch ᶚsch	š
E e	ᶚ e	e	N n	ᶚ n	n	T t	ᶚ t	t
Ê ê	ᶚê ê	ē	ng	ng	ñ	Tschtsch	ᶚtsch ᶚtsch	tš
G g	ᶚ g	g <i>hart</i>	ᶚ n	ᶚ n	n'	U u	ᶚ u	u
ᶚ g	ᶚ g	g <i>lind</i>	ᶚ n	ᶚ n	n'	Ū ū	ᶚ ū	ū
H h	ᶚ h		O o	ᶚ o	o	W w	ᶚ w	w
I i	ᶚ i	i	Ô ô	ᶚ ô	ō	Wj wj	ᶚwj ᶚwj	w'
Î î	ᶚî î	ī	P p	ᶚ p	p	Z z	ᶚ z	dz

Fig. 1: Scan from [3], p. 231, listing all letters of the Latvian orthography valid at its date of original print (1880), including all letters proposed here (the LATIN SMALL LETTER S WITH DIAGONAL STROKE is found in its round form in the Fraktur column).

LETTISCH

Zeichen alte Orthogr.		neue Orthogr.	Lautwert	Zeichen alte Orthogr.		neue Orthogr.	Lautwert	Allgemeines. Die lettische Sprache wird in Kurland, im südlichen Livland und in einem kleinen Teil des Gouvernements Witebsk gesprochen. Zu ihrer Wiedergabe bedient man sich meist der Fraktur. Seit 1921 ist eine neue Rechtschreibung eingeführt, die die Antiqua verwendet. Sie ist eine rein phonetische und bedient sich u. a. der Zeichen ž, š und ž für die entsprechenden Zeichen ᶚsch, ᶚsch und ᶚsch der alten Orthographie.
ā	ā	ā	a	ᶚ	ᶚ	n	n (fast wie w)	
â	ā̄	ā̄	ā	ᶚ	o	o	o	
b	b	b	b	ᶚ	ō	ō	ō	Interpunktion. Wie im Deutschen.
d	d	d	d	p	p	p	p	
e	e	e	e	r	r	r	r	Literatur. Grammatiken von Bielenstein (1863) und Brentano; Wörterbuch von Ulmann u. Brasche. Endselin u. Mühlenbach, Latwenšu gramatika (1907).
ê	ē	ē	ē	ᶚ	ᶚ	r	r (fast wie w)	
f	f	f	f	ᶚ	z	z	z	
g	g	g	g	ᶚsch	ž	sch	sch (stimmhaft)	
ᶚ g	ᶚg	g (fast wie p)		f, ᶚ	s	β	β	
h	h	Hilfszeichen		ᶚsch	š	sch	sch	
i	i	i	i	t	t	t	t	
î	ī	ī	ī	u	u	u	u	
ĳ	j	j	j	ū	ū	ū	ū	
k	k	k	k	w	v	w	w	
ᶚ k	ᶚk	k (fast wie k)		z	c	z (= tβ)	z (= tβ)	
l	l	l (dumpf)	l	ᶚsch	dž	dsch	dsch (stimmhaft)	
ᶚ l	ᶚl	l (fast wie l)		ᶚsch	dz	dz	dz	
m	m	m	m	ᶚsch	č	č	č	
n	n	n	n	ᶚsch	č	č	č	

Fig. 2: Scan from [8], p. 76, showing the small letterforms and documenting the date until the old Latvian orthography was valid (starting in the sixth line of the right column, translating "Since 1921, a new orthography is introduced ...")

– Special thanks to Andreas Stötzner (Signographisches Institut Andreas Stötzner, Pegau/Sa., Germany), who provided the reference and the scan to the author of this proposal.

Schriftzeichen		Lautwert	Schriftzeichen		Lautwert
Alte Rechtschreibung	Neue Rechtschreibung		Alte Rechtschreibung	Neue Rechtschreibung	
a	a	a	н	n	n ^j
â	ā	ā (lang)	(o)	(ó)	o
b	b	b	õ	õ	õ (lang)
ð	d	d	p	p	p
e	e	e	r	r	r
ê	ē	ē (lang)	ŗ	ŗ	ŗ ^j
	f	f	ſ	z	sanftes s
g	g	g	ſch	ž	stimmhaftes sch (wie franz. j)
g	g	g ^j	ſ	s	ß
h	h	(nur Hilfszeichen)	ſch	š	sch
i	i	i	t	t	t
î	ī	ī (lang)	u	u	u
j	j	j	û	û	û (lang)
k	k	k	w	v	w
ķ	ķ	ķ ^j	z	c	z, tß
l	l	l	dſch	dž	dsch (stimmhaft)
ł	ł	ł	bſ	dz	df (sanft)
m	m	m	tſch	č	tsch
n	n	n			

Mehrere unserer Laute kommen im Lettischen nicht vor, wie ch ö ü, andere werden umschrieben, z. B. q = kw, x = h, y = i, ä = e. Auch h wird als selbständiger Buchstabe nicht gebraucht, sondern nur beim ſch und als Dehnzeichen bei Selbstlauten, c nur in der neuen Rechtschreibung und als Hilfsbuchstabe bei ſch.

Akzent- und Sonderbuchstaben 2. Die Selbstlaute tragen in der alten Rechtschreibung bei langer Aussprache den Zirkumflex: â ê î ô û, mit Trema können ſi und ſi vorkommen, und außerdem gibt es noch mehrere gestrichene Buchstaben: ġ ģ ģ ģ ģ, welche auch als Versalien gebraucht werden: Ģ Ģ Ģ Ģ Ģ.

Fig. 3: Scan from [4], p. 186, showing the small letterforms in the table and the capital forms in the text (last line).

– Special thanks to Andreas Stötzner (Signographisches Institut Andreas Stötzner, Pegau/Sa., Germany), who provided the reference and the scan to the author of this proposal.

Antiqua	—	ā	ē	ī	ū	ķ	č	ž	š	ņ	ļ	á	é	í	ó	ú
Fraktur	—	â	ê	î	û	ķ	tſch	ſch	ſch	ņ	ļ	à	è	ì	ò	ù
Antiqua	↑	Ā	Ē	Ī	Ū	Ķ	Č	Ž	Š	Ņ	Ļ	É	È	Ì	Ó	Ú
Fraktur	↑	Â	Ê	Î	Û	Ķ	Tſch	ſch	ſch	ņ	ļ	à	è	ì	ò	ù
Antiqua	alt	ġ	ģ	[]	ķ	ö	<	>								
Fraktur	alt	g	r	[]	ķ	ö	ij	ff								
Antiqua	alt↑	@	#	ſ	˘	^	±	ã	ñ	õ	{ }	Œ	Ŕ	Ŗ	Ÿ	Ź
Fraktur	alt↑	ſi	ſt	ſi	<	Œ	š	ã	ñ	õ	ſi	ſ	Œ	Ŕ	Ŗ	Ź

Fig. 4: Excerpt from the accompanying PDF file supplied with the TrueType Fraktur (Blackletter) font "MarsFrakturLett" (using a proprietary encoding), downloadable (as of 2008-10-28) from [5] as <http://www.romana-hamburg.de/FrakturLett.ZIP>

This font shows elaborated forms for all proposed letters.

Latvijai tāpat kā mīšai Kreemijai mīša meh-
 riba bija jāgrieš uš kara-laiku, tādeht warbuht
 pašai pašs lauzinš palīta neaptoptš. Lomehr
 jāfata, fa ta dešgan zensfuteš, šawas buhššanas

Fig. 7: Scan from [1], p.595, showing a sample text of Latvian (set in Fraktur), showing some of the proposed letters.

Š takim bēšcho nowe towatstwo ja Dolnu Lužyzu
 hustawjone, fa tym ako to stare psched 27 lētami lēdma
 2 lēšche stare hušnušo bēšcho. To nēto mlode goletko
 bu š wēlīkeju lubošēzu wot šwojich gōrejšnych bratšchow
 kublane a mējascho juž tak tu wēstosēž we še, až bužo
 hušche starstwo dobyšch, ako ten nēgajšch bratšchif. Wošebny
 nadawš nēto bēšcho, ab še mjas dolnyimi Šserbami tež
 zlonki namakali. Š tomu jo spišowat how tych kniglizkow
 taki lēšchezy list napīšat a we 100 hobalkach 1000 exem-
 plarow rozpošlat: „Dla šchīšchēžāna a wendawaņa
 rēdnych a hužytnych kniglow.“ Wože šlowo naš

Fig. 8: Scan from a Lower Sorbian text of 1905, provided by [3].
 As this text is set in Fraktur, it shows the s with diagonal stroke in its long form only.

Toošaxit pi 'ano Yot

This story tells how a small but clever cottontail rabbit gets rid
 of his hungry enemy, a big coyote. To do this, the rabbit needs an ally.
 So he makes friends with a rancher from whom the coyote has been stealing
 chickens. Once the coyote has been killed, no one mourns him. The ran-
 cher is happy because his chickens are safe. The rabbit is happy that he
 can never be the coyote's dinner.

Toošaxit paivunnga 'aw'quš pi 'ano yot neshkin waniinga 'aw'quš.
 Cho'on temeti wunaal 'ano toošaxiti chaqwivichuquš. 'ano yot toošaxiti
 kwa'vichuquš. Pi toošaxit 'anoyi yoti naalaquš. Pi toošaxit 'ayalkawut
 miiquš pi wunaal ranchoyk wukal'ya.

Rancheero toošaxiti tiw'yax.

"Miiyu," yaa poyk toošaxit, "Micha šu 'iiq?"

"Looviqan, 'omšan?" yaa rancheero.

"Looviqan 'iiq," yaa poyk toošaxit. "Poloov temet."

"'ohoo, yawaywish temet," yaa rancheero.

Pi yaa toošaxit rancheero poyk, "'ano yot ranchoyk wuko'axlut. Wunaal
 'o'aashmi gayiinami 'oyootovichuq."

Pa pi rancheero toošaxit weh 'anoyi kwaatiquš. Pi rancheero 'anoyi
 tiw'yax pi poy patyax.

"Looviq," yaa rancheero. "Wunaal 'oyootokat no'aashmi gayiinami qay
 'oyootolut."

"Looviq," yaa toošaxit. "Wunaal 'ano yot qay ney chaqwilut. Wunaal
 qay ney kwa'lowut."

Pa pi toošaxit pokiyk wukalaym pi kupu'ya.

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Fig. 9: Scan from [6], p.121
 – Special thanks to Chris Harvey (Indigenous Language Institute, Santa Fe, NM, USA) who provided
 the reference and the scan to the author of this proposal.

**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.

Please ensure you are using the latest Form from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

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

A. Administrative

1. Title: **Proposal to encode 10 Latin letters with diagonal stroke**

2. Requester's name: *Karl Pentzlin*

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

4. Submission date: *2008-10-30*

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): No
Proposed name of script:

b. The proposal is for addition of character(s) to an existing block: Yes
Name of the existing block: *Latin Extended-D*

2. Number of characters in proposal: 10

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

A-Contemporary	B.1-Specialized (small collection)	<input checked="" type="checkbox"/>	B.2-Specialized (large collection)
C-Major extinct	D-Attested extinct	<input type="checkbox"/>	E-Minor extinct
F-Archaic Hieroglyphic or Ideographic	G-Obscure or questionable usage symbols		

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. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard? *Karl Pentzlin*

If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used: *<http://www.pentzlin.com/proposalfont.zip> (more information in the text file included in that archive)*

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)? No

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 <http://www.unicode.org/Public/UNIDATA/UCD.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N3152-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)

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:	Yes <i>see references in the text</i> <i>see references in the text</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	Yes <i>see text</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>see text</i> <i>see text</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	Yes <i>see text</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	Yes Yes <i>Keeping in line with other Latin characters</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	<i>Preferred</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	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 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 n/a
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 character(s)? If YES, is the equivalent corresponding unified ideographic character(s) identified? If YES, reference:	No