

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

Doc Type: Working Group Document

Title: Proposal to encode Latin letters for the Komi Latin alphabet (supplementing L2/19-224)

Author: Karl Pentzlin

Based on: L2/12-045: Revised proposal to encode Latin letters used in the Former Soviet Union (Nurlan Joomagueldinov, Karl Pentzlin, Ilya Yevlampiev)

Supplements: L2/19-224 = SC2/WG2 N5101: Komi Latin letters missing in Unicode (Jack Michael Rueter)

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

Date: 2019-07-09

Terminology used in this document:

"Descender" refers to the specially formed appendage on letters like the one in the already encoded letter U+A790 LATIN CAPITAL LETTER N WITH DESCENDER.

"Typographical descender" refers to the part of a letter below the baseline, thus resembling the term "descender" as used in typography.

1. Introduction

In 2012, the document L2/12-045 "Revised proposal to encode Latin letters used in the Former Soviet Union" was presented, proposing a larger set of Latin letters for several languages used in the Soviet Union. For several reasons, the work was not continued at that time.

Now, the document L2/19-224 is presented, which proposes letters for two single languages, Komi-Zyrian (simply referenced as "Komi" in L2/12-045) and Komi-Permyak. All the proposed letters are contained in L2/12-045 or documents referenced there.

This proposal supports L2/19-224 by presenting parts of L2/12-045 regarding Komi, and supplements it by listing the proposed letters as requested for valid Unicode proposals.

1.1 Deviations from L2/19-224

- The letters named "Latin capital/small Letter Komi Back I" in L2/19-224 are here named "LATIN CAPITAL/SMALL LETTER YERU", as they are common in Latin alphabets devised for languages in the Soviet Union during the 1920s/1930s. See e.g. L2/12-045.
- As the stroke overlay on the S is actually short and not oblique in every case, U+A7A8/A7A9 LATIN CAPITAL/SMALL LETTER S WITH SHORT STROKE OVERLAY (proposed elsewhere; accepted according to L2/19-250) seems more appropriate than U+A7C9/A7CA LATIN CAPITAL LETTER S WITH OBLIQUE STROKE.

1.2 Deviations from L2/12-045

- For the letter pairs named "Latin capital/small letter C with middle tilde" and "Latin capital/small letter Ze with descender" in L2/12-045, the namings of L2/19-224 are proposed: "Latin capital/small Komi cha" resp. "Latin capital/small letter reversed open e with descender".

2. Encoding Considerations

All characters proposed here are Latin letters in case pairs without special properties.

2.1 The descender

A common feature of the letters newly created for the 1920s/1930s Latin orthographies of the Soviet Union is the descender.

It is an appendage put on the bottom of the letter to create a new one, which usually is phonetically related to the original one. Obviously, it has its model in the appendage which distinguishes the Cyrillic letters Ш (SHA) and Щ (SHCHA).

In the Latin orthographies, it has no precedence and therefore no typographic tradition. Thus, in the evidence presented here and L2/12-045, it shows many different forms (rectangle, triangle, Щ-descender, hook similar to a palatal hook, cedilla, or comma below). Most often, it is placed at the right end of the bottom of the base character, but small right displacements from the central line or exact central placements also occur (especially on letters with round bottom like C/D/S).

Usually (but not in every case), it is more prominent than the Ш/Щ difference in common Cyrillic fonts, probably to support eyes which are not accommodated to the Ш/Щ difference.

This variation occurs within samples of the same orthography and even also within the same book (see e.g. fig. 3).

Therefore, all forms of the same Latin base letter with descender are unified.

In accordance with the already encoded Latin H/K/N/Z with descender, and as the descender has no characteristic shape by itself, all letters with descender are proposed as individual atomic letters, rather than to propose a new diacritical mark "DESCENDER BELOW".

2.1.1 Descender vs. cedilla

This is also done for C and S. These letters, while occasionally show a form of the descender resembling a cedilla or comma below, in most of the specimens show a form resembling the descender form used for the other letters (e.g. triangle). Also, the horizontal placement is right from the vertical center in many cases. The examples show such variations even in the same book.

We deliberately do not propose a unification of the descender with the cedilla or the comma below. In contexts where only one diacritical mark attached at the bottom of letters prevails in everyday use, it is commonly observed that there prevails no carefulness regarding of the exact form. This e.g. can be observed in modern Turkey and Romania, where the cedilla and comma below are often confused or reduced to more simple forms like a vertical line. This, however, does not affect the basic identity of the diacritical marks, which are a cedilla for Turkish and a comma below for Romanian.

We have a similar situation here. Komi uses the descender, which in its essential form is attached at the bottom of the base character as rightmost as typographically acceptable. For characters with a symmetric round bottom like C, S, or 3, this position may in fact be the middle, and then a cedilla or "comma below" form may be considered adequate.

This does not change the underlying identity of the "descender". If the descender were unified with the cedilla or the "comma below" for the letters with round bottom, no longer can a font be made which is conformant to the majority of the designs which retain the descender form used for N, Z, and so on.

Also, a unification with either "cedilla" or "comma below" hampers the identity of these two

diacritics, as font designers have to be free in their decision whether they give the descender the form of either a cedilla or a "comma below" when they would address the design of any original font doing this. In the case of a unification, they had to give a "cedilla" the form of a "comma below" or vice versa, instead of being able to preserve the identity of these diacritical marks while giving the form they want to the descender only, which in fact has this larger glyph variation bound to its character identity.

2.2 Character forms similar to Cyrillic ones

The Latin and Cyrillic alphabets share several letters which commonly have identical forms, independent whether they usually denote the same phoneme (A/a) or different ones (P/p). Also, in several cases, the complete case pair resembles (e.g. C/c), while in other cases only the capital letters resemble (e.g. T/t vs. Т/т).

Thus, it is no surprise that some of the additional letters proposed here also resemble Cyrillic letterforms.

This leads to the possibility of unifying the Latin characters proposed here with the existing Cyrillic letters, to save a few code points.

However, we consider such script mixing being a bad thing for the following reasons:

- The issue of identically looking letters in different scripts is understood and handled very well already (e.g. for URL spoofing).
- Script mixing within one orthography (i.e. within one locale) makes issues like sorting and searching (and specifying the rules for this) unnecessary complicated. It is expected that people will create library catalogs and archive pages using the original titles of publications using these orthographies (e.g., this fact was emphasized in private communication with people of the Bayerische Staatsbibliothek [Bavarian National Library]).
- Script mixing irritates the common user: When they know that they have to use Cyrillic letters in Latin text anyway, they will do so for any letters when the outcome shows correct to them. Thus, they will use Cyrillic characters even when an appropriate Latin one exists (e.g. Cyrillic small в instead of Latin small capital B, to give an example not as trivial as mixing Cyrillic P/p with Latin P/p in the same text although in fact only the latter one was yielded).
- Besides the heritage of Unicode 1.0, script mixing within European Alphabetic Scripts was done in no case for orthographies (i.e. character sets which are intended for use in everyday life, as opposed to scientific sets like the Uralic Phonetic Alphabet). As an example, U+A698/A699 CYRILLIC CAPITAL/SMALL LETTER DOUBLE O were accepted (see WG2 N4107), instead of unifying them with U+A74E/A74F LATIN CAPITAL/SMALL LETTER OO which exactly look the same.

3. Proposed letters

(Note: Explanations given in italics are intended to be not included in the final standard text.)

Block: Latin Extended-D

Letters for orthographies of the Soviet Union used in the 1920s/1930s

Ɔ U+A7C0 LATIN CAPITAL LETTER YERU

ɔ U+A7C1 LATIN SMALL LETTER YERU
→ 0131 latin small letter dotless i
→ 0185 latin small letter tone six
→ 044B cyrillic small letter yeru
→ 044C cyrillic small letter soft sign
• in Tatar and other Janalif-based orthographies, it denotes sounds like those denoted by the dotless i in Turkish or the yeru (ы) in Russian

(this letter pair may be unified with Latin letter tone six (U+0184/0185), if the representative glyphs of the latter will be changed according to the “Proposal B” contained in L2/19-258 “Proposal to change the representative glyphs of the Latin letter tone six (U+0184/0185)”.

Letters for the Komi Latin alphabet and other historical Latin based orthographies used in the 1920s/1930s in the Soviet Union

(the annotations regarding other orthographies than Komi are taken from L2/12-045)

Ɔ U+A7CB LATIN CAPITAL LETTER KOMI CHA

ɛ U+A7CC LATIN SMALL LETTER KOMI CHA
= latin small letter c with middle tilde
→ 0454 cyrillic small letter ukrainian e
• Komi

Ɔ U+A7CD LATIN CAPITAL LETTER C WITH DESCENDER
→ 2185 roman numeral six late form

ɔ U+A7CE LATIN SMALL LETTER C WITH DESCENDER
→ 0481 cyrillic small letter koppa
→ 04AB cyrillic small letter es with descender
• Abkhaz, Adyghe, Kabardian, Komi, Udi
• the descender shape differs from the shape of U+04AB

Ɔ	U+A7CF	LATIN CAPITAL LETTER D WITH DESCENDER
ɔ	U+A7D0	LATIN SMALL LETTER D WITH DESCENDER • Adyghe, Komi
ƚ	U+A7D1	LATIN CAPITAL LETTER L WITH DESCENDER
ɭ	U+A7D2	LATIN SMALL LETTER L WITH DESCENDER • Abaza, Kabardian, Komi
Ɲ	U+A7D3	LATIN CAPITAL LETTER S WITH DESCENDER
ɟ	U+A7D4	LATIN SMALL LETTER S WITH DESCENDER • Abaza, Abkhaz, Avar, Bashkir, Komi
Ƨ	U+A7D5	LATIN CAPITAL LETTER T WITH DESCENDER
ɨ	U+A7D6	LATIN SMALL LETTER T WITH DESCENDER • Abaza, Abkhaz, Avar, Komi, Kurdish, Tsakhur, Udi
ƨ	U+A7D7	LATIN CAPITAL LETTER REVERSED OPEN E WITH DESCENDER
ɩ	U+A7D8	LATIN SMALL LETTER REVERSED OPEN E WITH DESCENDER → 025E latin small letter reversed open e → 0499 cyrillic small letter ze with descender • Komi • the descender shape differs from the preferred shape for U+0499

Letters already accepted due to another proposal according to L2/19-250

(See also: L2/19-260 “Supplemental proposal on the Latin letter S with short stroke overlay”)

Ɔ	U+A7C9	LATIN CAPITAL LETTER S WITH SHORT STROKE OVERLAY
ɟ	U+A7CA	LATIN SMALL LETTER S WITH SHORT STROKE OVERLAY → A7A9 latin small letter s with oblique stroke • Gaulish • Komi, Kumyk, Tsakhur (historical orthographies) • stroke may be diagonal, vertical or horizontal

Properties

A7C0;LATIN CAPITAL LETTER YERU;Lu;0;L;;;;;N;;;A7C1;
A7C1;LATIN SMALL LETTER YERU;Ll;0;L;;;;;N;;;A7C0;;A7C0
A7CB;LATIN CAPITAL LETTER KOMI CHA;Lu;0;L;;;;;N;;;A7CC;
A7CC;LATIN SMALL LETTER KOMI CHA;Ll;0;L;;;;;N;;;A7CB;;A7CB
A7CD;LATIN CAPITAL LETTER C WITH DESCENDER;Lu;0;L;;;;;N;;;A7CE;
A7CE;LATIN SMALL LETTER C WITH DESCENDER;Ll;0;L;;;;;N;;;A7CC;;A7CC
A7CF;LATIN CAPITAL LETTER D WITH DESCENDER;Lu;0;L;;;;;N;;;A7D0;
A7D0;LATIN SMALL LETTER D WITH DESCENDER;Ll;0;L;;;;;N;;;A7CF;;A7CF
A7D1;LATIN CAPITAL LETTER L WITH DESCENDER;Lu;0;L;;;;;N;;;A7D2;
A7D2;LATIN SMALL LETTER L WITH DESCENDER;Ll;0;L;;;;;N;;;A7D1;;A7D1
A7D3;LATIN CAPITAL LETTER T WITH DESCENDER;Lu;0;L;;;;;N;;;A7D4;
A7D4;LATIN SMALL LETTER T WITH DESCENDER;Ll;0;L;;;;;N;;;A7D3;;A7D3
A7D5;LATIN CAPITAL LETTER T WITH DESCENDER;Lu;0;L;;;;;N;;;A7D6;
A7D6;LATIN SMALL LETTER T WITH DESCENDER;Ll;0;L;;;;;N;;;A7D5;;A7D5
A7D7;LATIN CAPITAL LETTER REVERSED OPEN E WITH DESCENDER;Lu;0;L;;;;;N;;;A7D8;
A7D8;LATIN SMALL LETTER REVERSED OPEN E WITH DESCENDER;Ll;0;L;;;;;N;;;A7D7;;A7D7

4. Acknowledgements

Many thanks to the Russian Wikipedia user "Geoalex" for supplying many valuable information. We respect his wish to not publish his full name here.

Also; special thanks to Juris Cibuls for providing many examples from his collection of historic primers, and for his critical remarks based on them.

Also, special thanks to Vit Serguievski, the maintainer of the site <http://www.foto11.com/> from where we got several valuable information about Komi orthographies.

Also, special thanks to Еnye Lav (Ӧньӧ Лав), who gave us valuable information on the Komi-Permyak language.

5. Examples and Figures

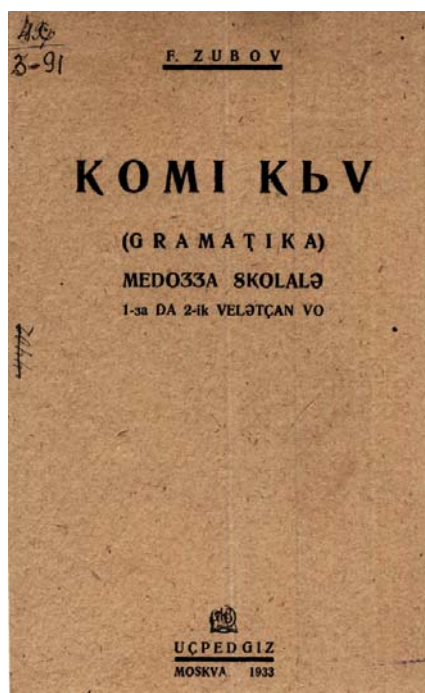
Fig. 1: Komi alphabet table, retrieved 2011-09-28 from <http://foto11.com/komi/docs/latin1930thfont.htm> (<http://foto11.com> is an internet page dedicated to Komi culture).

Латинский алфавит Коми языка 1930-тых годов

Aa - а	Ff - ф	Ŋŋ - нь	Uu - у
Bb - б	Gg - г	Oo - о	Vv - в
Cc - ц	Ii - и, i	Pp - п	Xx - х
Çç - ч	Jj - й	Rr - р	Zz - з
Єє - тш	Kk - к	Ss - с	ƷƷ - зь
Dd - д	Ll - л	Şş - сь	ƷƷ - ж
ƉƉ - дь	ƘƘ - ль	Ss - ш	ƷƷ - дж
Ee - э	Mm - м	Tt - т	ƷƷ - дз
Əə - ө	Nn - н	ƦƦ - ть	Ьь - ы

Алфавит Коми языка на латинской основе был официальным в 1930–1935. Алексей Грен (1862–1932), основатель Общества изучения

Fig. 2: Title page and excerpt from p.17 of a Komi grammar printed in 1933. The excerpt shows LATIN CAPITAL/SMALL LETTER KOMI CHA.



§ 6. Sьez S da Є.

Zadaça 45. Lьddə viştsə. Gizə sija tetradə. Gizikas kьrəvtsьslə ulьsaŋ S sьpassə ətik kьrələn, a Є sьpassə kьk kьrələn.

Skoləə loktikə.

Misa kotərtə skoləə. Kəz vьln pьkalə kaəa. Misa çagokən supkis kaəasə. Kaəa ləvzis.

Zadaça 46. Gizə viştsə. Gizikas kьrəvtsьslə ulьsaŋ e sьpassesə.

Єakjavtən.

Me radəjta єakjavnь. Tən nələn vetlimə: Masa, Kaeko, Əndrej, Sura da me. Єurəta log dьnəz kajlim. Me eaksə tьr əkti dozjam.

Fig. 3: Showing the outer and inner title page of a book printed 1933. While both pages share the same content, different fonts are used. This proves the existence of considerable glyph variation regarding the positioning and shape of the descenders and the slanting angle of the stroke of LATIN CAPITAL LETTER WITH SHORT STROKE OVERLAY. On the outer title page shown left, U+0044 LATIN CAPITAL LETTER D shows a mirrored glyph variant.



Fig. 4: Ibid., two excerpts from p.51 showing LATIN CAPITAL LETTER S WITH SHORT STROKE OVERLAY, having a vertical stroke in a bold font and a slanted stroke in a common font.

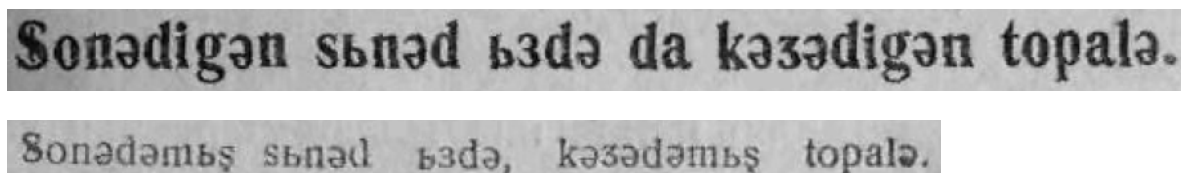
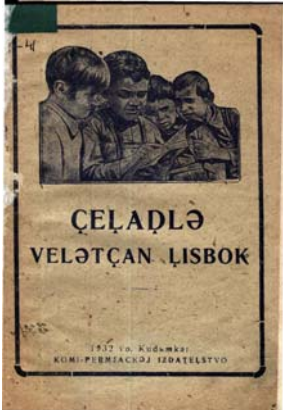


Fig. 7: Title page, p.27 and p.32 from a book printed 1932 in Kudymkar, showing several letters with descender including LATIN CAPITAL/SMALL LETTER REVERSED OPEN E WITH DESCENDER.

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Žugə.

Şuris kolxoza kulak Petra.
Petra pondis žugny iz kolhozyn.
Petra žugdis vundan masina. Guşan vartis nan. Unas petkətis kolhoziş.
Çoza kazalis kolhoz žugəmsə Petraliş. Kulakəs kolhoz as dənış vasətis. Petişsez vər pəri-sə kolxoza.
Şin ožyn pondis vıdmny kolhoz.



Udarņik Tima.

Bura Tima uzalə kolhožyn.
Kər toko Tima uza?
Asylən oz Tima ıv vylın.
Vundə masinaən kolhožyn.
Kokņita tərta norma.
Korə Tima vətşny şaras mədik kolhozņikas.
Vıd uzyn Tima munə ožyn.
Kolhoz prazņik lurə Timalə noznalisa sapoggez.

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VII. KOMI ALFAVIT

Aa	Bb	Cc	Çç	Єe	Dd
Đđ	Ee	Əə	Ff	Gg	İi
Jj	Kk	Ll	Łł	Mm	Nn
Ŋŋ	Oo	Pp	Rr	Ss	Şş
Ss	Tt	Ŧŧ	Uu	Vv	Xx
Zz	Žž	Ẑẑ	Ẓẓ	Ẕẕ	Ьь

Fig. 8: Excerpt of page 22 from: Турисън, F. A.: Orfografija da Grammatika Uprazneņoeza Sbornik. Vol. I: Naçalnəj Škola Ponda 1 da 2 Klassezlä. Kudymkar 1936.

Marked red: LATIN CAPITAL/SMALL LETTER REVERSED OPEN E WITH DESCENDER
 Marked green: LATIN SMALL LETTER KOMI CHA
 See also the numerous LATIN SMALL LETTER C WITH DESCENDER in the two last lines.

63. Sižzə, kыз 62 №, toko pervo giza seeam kыvvez, kытəп em ž, sьvəгьп kытəп з.

Mijan velətçan žыгьs ызьт. Žarəп vizny žьrsə oz ləşav. Žozьs žыгьas kraşitəm vez kras-kaən. Ətik ştena vьлп em zazok.

64. Sižzə, kыз 62 №, toko pervo giza kыvvez, kытəп em bukva ç, sьvəгьп kытəп з.

Žozog—gort pətkə, eməş i vər žozog-gez. Žulim—uçətik kajok, olə kussezьn. Me kazali kəç. Sija jirəm pipu kaç. Uşkətçis kəçьs çassa kolasə.

**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:	<i>Proposal to encode Latin letters for the Komi Latin alphabet</i>
2. Requester's name:	<i>Karl Pentzlin</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual Contribution</i>
4. Submission date:	<i>2019-07-09</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>Yes</i>
(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):	<i>No</i>				
Proposed name of script:					
b. The proposal is for addition of character(s) to an existing block:	<i>Yes</i>				
Name of the existing block:	<i>Latin Extended-D</i>				
2. Number of characters in proposal:	<i>16</i>				
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 checked="" type="checkbox"/>	B.2-Specialized (large collection)	<input type="checkbox"/>
C-Major extinct	<input type="checkbox"/>	D-Attested extinct	<input type="checkbox"/>	E-Minor extinct	<input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic	<input type="checkbox"/>	G-Obscure or questionable usage symbols	<input type="checkbox"/>		
4. Is a repertoire including character names provided?	<i>Yes</i>				
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	<i>Yes</i>				
b. Are the character shapes attached in a legible form suitable for review?	<i>Yes</i>				
5. Fonts related:					
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Karl Pentzlin (on request)</i>				
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>Karl Pentzlin</i>				
6. References:					
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<i>Yes</i>				
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<i>Yes</i>				
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)?	<i>No</i>				

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: N3902-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)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	Yes
If YES explain	<i>See introduction</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?	Yes
If YES, with whom?	<i>Linguists, Librarians</i>
If YES, available relevant documents:	<i>see text</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	Yes
Reference:	<i>once used by several millions of people (see text)</i>
4. The context of use for the proposed characters (type of use; common or rare)	<i>Historically common</i>
Reference:	<i>see text</i>
5. Are the proposed characters in current use by the user community?	Yes
If YES, where? Reference:	<i>see text (e.g. historians, librarians, linguists)</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	Yes
If YES, is a rationale provided?	Yes
If YES, reference:	<i>To keep them in line with already encoded characters</i>
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?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	<i>(besides the long-standing fact that there are Cyrillic letters similar to Latin ones)</i>
11. Does the proposal include use of combining characters and/or use of composite sequences?	No
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:	
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	No
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideographic compatibility characters?	No
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	