Proposal to Encode Slovene Metelko Alphabet 2022

in ISO/IEC 10646 and The Unicode Standard

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2022-11-26 (updated 2023-03-17)

Replaces L2/11-136

1. Introduction
The Metelko alphabet (Slovene: metelčica) was developed by Franc Serafin Metelko in 1825 and presented in [1]. It was designed to overcome the shortcomings of the then used Slovene orthography (bohoričica) by trying to establish an one-to-one relation for phonemes and letters. The alphabet was used by some authors in printed works until 1833. Some of the letters introduced in the basic Latin alphabet are modeled after the Cyrillic letters Ш/ш, ШЩ/щ, З/з, Ж/ж, and Ч/ч. However, these letters are modified to comply with the overall design of Latin letters. All these small letters have descenders while none of the Cyrillic originals have them. Moreover, the designs of Ш/ш, ШЩ/щ, and Ж/ж were considerably reworked by used curved forms where the Cyrillic originals only have straight constituents.

2. Encoding Considerations
The Metelko alphabet uses a letter pair to denote the schwa sound which resembles a reversed S/s. Due to the principle of encoding Latin letters by shape than by meaning, this letter is unified with the existing U+01A7/U+01A8 LATIN CAPITAL/SMALL LETTER TONE TWO, in spite of the fundamentally different meaning.

Regarding U+A7DA/A7DB LATIN CAPITAL/SMALL LETTER ROUND E, U+A7DB LATIN SMALL LETTER ROUND E was modified by having a serif in the middle bar. Even if it is advocated that in pure historic alphabets the use of Cyrillic letters is appropriate to denote Latin letters of an identical form, a cross-script special casing is considered problematic. To avoid this, the capital forms are proposed as Latin letters also, yielding unproblematic case pairs.

UPD: Some of the letters were unified with existing letters in connection with comments from SAP, as well as to free up code positions.

3. Proposed Characters
Annotations in parentheses address special issues for a character, or reference to figures where such special issues are discussed. (These annotations are not intended to be retained in the character list when copied into the standard.)

Block: Latin Extended-D

Additions for the Slovene Metelko Alphabet

€ U+A7DA LATIN CAPITAL LETTER ROUNDED E
→ 0404 cyrillic capital letter ukrainian ie
→ 2108 scruple
→ A792 latin capital letter c with bar
· the serif on the middle bar is sometimes retained or modified in sans-serif fonts
· denotes the sound [tʃ] in the English Phonotypic Alphabet
· denotes the sound [e] in the Slovene Metelko alphabet

\(\text{ε} U+\text{A7DB LATIN SMALL LETTER ROUNDED E} \rightarrow 03F5 \text{greek lunate epsilon symbol} \)

· used in German dialectology

\(\text{Η} U+\text{A7DC LATIN CAPITAL LETTER H WITH NOTCH} \)
\(\text{η} U+\text{A7DD LATIN SMALL LETTER H WITH NOTCH} \)

\(\text{Л} U+\text{A7DE LATIN CAPITAL LETTER L WITH PIGTAIL AT BOTTOM} \)

· resembles the digraph "Lj" in modern Slovene orthography

\(\rightarrow 027A \text{Latin small letter turned r with long leg} \)

lowercase is 027A l

\(\text{Ν} U+\text{A7E0 LATIN CAPITAL LETTER N WITH INWARDS HOOK} \)

· resembles the digraph "Nj" in modern Slovene orthography

\(\text{Ν} U+\text{A7E1 LATIN SMALL LETTER N WITH INWARDS HOOK} \)

· also used in modern Lithuanian dialectology

(NOTE: This letter is identical with U+AB83 as proposed in L2/11-135 "Proposal to add characters used in Lithuanian dialectology to the UCS").

\(\text{Ο} U+\text{A7E2 LATIN CAPITAL LETTER VERTICALLY BARRED O} \)
\(\text{ο} U+\text{A7E3 LATIN SMALL LETTER VERTICALLY BARRED O} \)

\(\text{Ψ} U+\text{A7E4 LATIN CAPITAL LETTER ROUND SHA} \)

\(\rightarrow 0428 \text{cyrillic capital letter sha} \)
\(\rightarrow 05E9 \text{hebrew letter shin} \)
\(\rightarrow 0633 \text{arabic letter seen} \)

\(\text{Ψ} U+\text{A7E5 LATIN SMALL LETTER ROUND SHA} \)

\(\text{Ψ} U+\text{A7E6 LATIN CAPITAL LETTER ROUND SHCHA} \)

\(\rightarrow 042A \text{cyrillic capital letter shcha} \)

\(\text{Ψ} U+\text{A7E7 LATIN SMALL LETTER ROUND SHCHA} \)

\(\text{Ξ} U+\text{A7EA LATIN CAPITAL LETTER ROUND ZHE} \)

\(\rightarrow 0416 \text{cyrillic capital letter zhe} \)

\(\text{Ξ} U+\text{A7EB LATIN SMALL LETTER ROUND ZHE} \)

3.1 Annotations to be added for already encoded characters

\(\text{꜁} U+\text{01A8 LATIN SMALL LETTER TONE TWO} \)

after: · Zhuang (old orthography)
ADD: · used as schwa in the Slovene Metelko alphabet

\(\text{ȝ} U+\text{021D LATIN SMALL LETTER YOGH} \)

after: Middle English, Scots
ADD: · used as ze in the Slovene Metelko alphabet

\(\text{ƞ} U+\text{0220 LATIN SMALL LETTER N WITH RIGHT LONG LEG} \)

after: · Lakota
ADD: · used as tse in the Slovene Metelko alphabet

\(\text{ɻ} U+\text{0265 LATIN SMALL LETTER TURNED H} \)

after: voiced rounded palatal approximant
after: uppercase is `A78D Ɥ`
ADD: · used as che in the Slovene Metelko alphabet

\[ U+027A \text{LATIN SMALL LETTER TURNED R WITH LONG LEG} \]

after: voiced lateral flap
ADD: uppercase is `A7DE Ɥ`

### 3.2 Properties:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U+A7Dx</td>
<td>LATIN SMALL LETTER TURNED R WITH LONG LEG</td>
</tr>
<tr>
<td>U+AB6D</td>
<td>LATIN CAPITAL LETTER ROUND</td>
</tr>
<tr>
<td>U+AB6C</td>
<td>LATIN CAPITAL LETTER ROUND</td>
</tr>
<tr>
<td>A7DE</td>
<td>LATIN SMALL LETTER L WITH PIGTAIL AT BOTTOM</td>
</tr>
<tr>
<td>A7E0</td>
<td>LATIN CAPITAL LETTER N WITH INWARDS HOOK</td>
</tr>
<tr>
<td>A7E1</td>
<td>LATIN SMALL LETTER N WITH INWARDS HOOK</td>
</tr>
<tr>
<td>U+A7E2</td>
<td>LATIN CAPITAL LETTER VERTICALLY BARRED O</td>
</tr>
<tr>
<td>A7E3</td>
<td>LATIN SMALL LETTER VERTICALLY BARRED O</td>
</tr>
<tr>
<td>A7E4</td>
<td>LATIN CAPITAL LETTER ROUND SHA</td>
</tr>
<tr>
<td>A7E5</td>
<td>LATIN SMALL LETTER ROUND SHA</td>
</tr>
<tr>
<td>A7E6</td>
<td>LATIN CAPITAL LETTER ROUND SHCHA</td>
</tr>
<tr>
<td>A7E7</td>
<td>LATIN SMALL LETTER ROUND SHCHA</td>
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<tr>
<td>A7E8</td>
<td>LATIN SMALL LETTER ROUND ZHE</td>
</tr>
<tr>
<td>A7E9</td>
<td>LATIN SMALL LETTER ROUND ZHE</td>
</tr>
</tbody>
</table>

### 4. Code Charts

<table>
<thead>
<tr>
<th>Latin Extended-D</th>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>U+A7Dx</td>
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<tr>
<td>U+A7Ex</td>
<td>N</td>
<td>n</td>
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</tr>
</tbody>
</table>

### 5. Figures

Figure 1.
The Metelko alphabet in the "Textbook of the Slovene language in the Illyrian Kingdom and neighboring provinces", 1825, p. 38
Figure 2.
Tombstone of Mihael Dežman at Navje Memorial Park in Ljubljana, written in the Metelko alphabet.
Figure 3.
Metelko alphabet from http://www2.arnes.si/~mpavle1/mete.html

\[
\begin{align*}
A & B D E C F G H M I S J K L M N O O P R S W Z X T U V Y H \\
A & B d e c f g h m i s j k l m n o o p r s w z x t u v y h
\end{align*}
\]

Figure 4.
The explanation of the special signs of Metelko is in the table below:
Figure 5.
The story of the Frog and the Ox on Metelko Alphabet

\[ \text{\v{S}aba in\v{s} v\v{o}l} \]

\v{S}aba je vid\v{z}la v\v{o}la na travniku, in\v{s} \v{xe}li nemu enaka bit\v{z}. Za\v{z}ne t\v{a}dej svojo g\v{a}rba-sto k\v{c}ko napi\v{z}ev\v{c}ta, ter vpr\v{a}va svoje tovari\v{n}i\v{e}: Ali n\v{e}s\v{z}m tak\v{o} velika kakor v\v{o}l? N\v{e}s\v{z}, ne, ji pravijo. Le we bol se nap\v{c}eva, ter vprava: Sam \v{z}d\v{c}e v\v{a}ndar velaksmu v\v{o}lu en\v{a}ka? Spet ji odgovore, de ne. Pa ne ne\v{z}a; \v{z}a vso moja\v{z} se bol in\v{s} bol nap\v{c}eva in\v{s} razpro\v{s}a.

N\v{a}pa\v{l} v nesre\v{c}jo pa pravpra\v{s}. Kdor sam sebe pr\v{a}v pozn\v{a}, se n\v{e}ma v\v{z}m\v{u} napi\v{z}ev\v{c}ta.
Figure 6.
Mathematical textbook “Education for Slovenian schools” (Štěvilstvo za slověnske šóle) 1830 by Fran Serafin Metelko:

**UTŠVILSTVO**

3a

**Slověnske wóle**

Figure 7.
Task from “Education for Slovenian schools”

115. *Navedaj.* Če se 3 vátle sèkna dobi 3a 42 gl. 30 kr., za kóleko se ga dobi 27 ½ válla?

Figure 8.
Solving the problem from "Education for Slovenian Schools"

**Odgovor:** 389 gl. 35 kr.
Figure 9.
Valentin Stanič's adaptation of the poem "Der Kaiser und der Abt" by Gottfried August Bürger

**NESAR IN OPAT.** ¹)

**13 BÜRGERJA.**

Prašljivo povėdal hom neve postave:
Enkrat je bil nesor prebrisane glave;
Opat je tuž bil, mond mogojen takrat,
Al ukoda, ovpur je bil zvit bil k’ opat.

Boš’ nesor prestal je vrovin in mraza,
Spal malo, pa bil skož’ vesel’ga obraza;
Je vede in vzen krzh komaj imel,
To vognkat je xejo in lakot terpel.

Opatu je mogla bit’ druga postreža,
Bogato napitan na mehko se vlega,
Na totem obraž se lina bleuje;
Obselga trdhuha mu neso trije.

¹) To balada, katero je Bürgar iz stare pari povestila,
"King John and the Abbot of Canterbury" vzeli, jo
se tuda V. St. *K. prestovinil ino v leta 1828 ve
Terela na ovalebo dal.
Figure 10. Screenshot from [https://en.wikipedia.org/wiki/Metelko_alphabet](https://en.wikipedia.org/wiki/Metelko_alphabet) showing the letters of the Metelko alphabet (most of the proposed letters are shown as pictures due to lack of Unicode).

Special letters are explained in the following table (other letters have the same meaning as in modern Slovene):

<table>
<thead>
<tr>
<th>Metelko's alphabet</th>
<th>majuscule</th>
<th>minuscule</th>
<th>IPA</th>
<th>modern Slovene</th>
</tr>
</thead>
<tbody>
<tr>
<td>η</td>
<td>η</td>
<td>nj</td>
<td>c</td>
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<td>ny</td>
<td>IFY</td>
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<td>Ν</td>
<td>n</td>
<td>mj</td>
<td>nj</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>e</td>
<td>tʃ</td>
<td>e (open e; also é)</td>
<td></td>
</tr>
<tr>
<td>€</td>
<td>€</td>
<td>lʃ</td>
<td>e (close e; also é)</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>s</td>
<td>lʃ</td>
<td>ǝ (schwa, also ǝ)</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>o</td>
<td>lʃ</td>
<td>o (close o; also ǝ)</td>
<td></td>
</tr>
<tr>
<td>Ø</td>
<td>Ø</td>
<td>lʃ</td>
<td>o (open o; also ǝ)</td>
<td></td>
</tr>
</tbody>
</table>
Figure 11.

Shows the pixel font in which the Metelko alphabet is represented
https://fontstruct.com/fontstructions/show/2129423/metelko

6. References

2. L2/11-136 Proposal to encode Latin letters for the Slovene Metelko alphabet in the UCS
**ISO/IEC JTC 1/SC 2/WG 2**  
**PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646**  
Please fill all the sections A, B and C below.  
Please ensure you are using the latest Form from [http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html](http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html).  

### A. Administrative

<table>
<thead>
<tr>
<th><strong>1. Title:</strong></th>
<th>Proposal to Encode Slovene Metelko Alphabet 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2. Requester's name:</strong></td>
<td>Nikta Manulov</td>
</tr>
<tr>
<td><strong>3. Requester type (Member body/Liaison/Individual contribution):</strong></td>
<td>Individual Contribution</td>
</tr>
<tr>
<td><strong>4. Submission date:</strong></td>
<td>2022-11-26</td>
</tr>
<tr>
<td><strong>5. Requester's reference (if applicable):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>6. Choose one of the following:</strong></td>
<td>This is a complete proposal: Yes</td>
</tr>
</tbody>
</table>

### B. Technical – General

<table>
<thead>
<tr>
<th><strong>1. Choose one of the following:</strong></th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. This proposal is for a new script (set of characters):</td>
<td></td>
</tr>
<tr>
<td>Proposed name of script:</td>
<td></td>
</tr>
<tr>
<td>b. The proposal is for addition of character(s) to an existing block:</td>
<td>Latin Extended-D</td>
</tr>
<tr>
<td>Name of the existing block:</td>
<td></td>
</tr>
<tr>
<td><strong>2. Number of characters in proposal:</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>3. Proposed category (select one from below - see section 2.2 of P&amp;P document):</strong></td>
<td></td>
</tr>
<tr>
<td>A-Contemporary</td>
<td>X</td>
</tr>
<tr>
<td>B.1-Specialized (small collection)</td>
<td></td>
</tr>
<tr>
<td>C-Major extinct</td>
<td></td>
</tr>
<tr>
<td>D-Attested extinct</td>
<td></td>
</tr>
<tr>
<td>F-Archaic Hieroglyphic or Ideographic</td>
<td></td>
</tr>
<tr>
<td>G-Obscure or questionable usage symbols</td>
<td></td>
</tr>
<tr>
<td><strong>4. Is a repertoire including character names provided?</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&amp;P document?</td>
<td>Yes</td>
</tr>
<tr>
<td>b. Are the character shapes attached in a legible form suitable for review?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>5. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?</strong></td>
<td></td>
</tr>
<tr>
<td>If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:</td>
<td><a href="https://catrinity-font.de/downloads/Catrinity.otf">https://catrinity-font.de/downloads/Catrinity.otf</a></td>
</tr>
<tr>
<td><strong>6. References:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?</td>
<td></td>
</tr>
<tr>
<td>b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>7. Special encoding issues:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>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)?</td>
<td>No</td>
</tr>
</tbody>
</table>

### 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](http://www.unicode.org) for such information on other scripts. Also see [http://www.unicode.org/Public/UNIDATA/UCD.html](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.

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## C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?  
   Yes
   L2/11-136

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
   Peter Weiss, Ljubljana, Slovenia

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?  
   Yes
   People in Slovenia

4. The context of use for the proposed characters (type of use; common or rare)  
   Specialized
   See text

5. Are the proposed characters in current use by the user community?  
   Yes
   See text

6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?  
   Yes
   To keep them in line with similar characters

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?  
   No

9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?  
   No

10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?  
    Yes
    See text

11. Does the proposal include use of combining characters and/or use of composite sequences?  
    No

12. Does the proposal contain characters with any special properties such as control function or similar semantics?  
    No

13. Does the proposal contain any Ideographic compatibility character(s)?  
    No