Proposal to Encode Slovene Metelko Alphabet 2022

in ISO/IEC 10646 and The Unicode Standard

Nikita Manulov, pacancuvak15@gmail.com

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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, Щ/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, Щ/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

Ɛ 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

Ꞓ U+A7DB LATIN SMALL LETTER ROUNDED E
 → 03F5 greek lunate epsilon symbol
 · used in German dialectology

Ⱨ U+A7DC LATIN CAPITAL LETTER H WITH NOTCH

ⱨ U+A7DD LATIN SMALL LETTER H WITH NOTCH

Ꞝ U+A7DE LATIN CAPITAL LETTER L WITH PIGTAIL AT BOTTOM
· resembles the digraph "Lj" in modern Slovene orthography
 → 027A latin small letter turned r with long leg
lowercase is 027A ɺ

Ꞡ U+A7E0 LATIN CAPITAL LETTER N WITH INWARDS HOOK
· resembles the digraph "Nj" in modern Slovene orthography

ꞡ U+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".)

Ꞣ U+A7E2 LATIN CAPITAL LETTER VERTICALLY BARRED O

ꞣ U+A7E3 LATIN SMALL LETTER VERTICALLY BARRED O

Ꞥ U+A7E4 LATIN CAPITAL LETTER ROUND SHA
 → 0428 cyrillic capital letter sha
 → 05E9 hebrew letter shin
 → 0633 arabic letter seen

ꞥ U+A7E5 LATIN SMALL LETTER ROUND SHA

Ꞧ U+A7E6 LATIN CAPITAL LETTER ROUND SHCHA
 → 042A cyrillic capital letter shcha

ꞧ U+A7E7 LATIN SMALL LETTER ROUND SHCHA

Ꞵ U+A7EA LATIN CAPITAL LETTER ROUND ZHE
 → 0416 cyrillic capital letter zhe

ꞵ U+A7EB LATIN SMALL LETTER ROUND ZHE

3.1 Annotations to be added for already encoded characters

ƨ U+01A8 LATIN SMALL LETTER TONE TWO
 after: · Zhuang (old orthography)
ADD: · used as schwa in the Slovene Metelko alphabet

ȝ U+021D LATIN SMALL LETTER YOGH
 after: Middle English, Scots
ADD: : · used as ze in the Slovene Metelko alphabet

ƞ U+0220 LATIN SMALL LETTER N WITH RIGHT LONG LEG
 after: · Lakota
ADD: · used as tse in the Slovene Metelko alphabet

ɥ U+0265 LATIN SMALL LETTER TURNED H
after: voiced rounded palatal approximant

after: uppercase is A78D Ч

ADD: · used as che in the Slovene Metelko alphabet

Ɪ U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG

after: voiced lateral flap

ADD: uppercase is A7DE ⅃

3.2 Properties:

```
027A;LATIN SMALL LETTER TURNED R WITH LONG LEG;Ll;0;L;;;;;N;;;;A7DE;
A7DA;LATIN CAPITAL LETTER ROUNDED E;Lu;0;L;;;;;N;;;;AB6D;
A7DB;LATIN SMALL LETTER ROUNDED E;Ll;0;L;;;;;N;;;AB6C;;AB6C
A7DC;LATIN CAPITAL LETTER H WITH NOTCH;Lu;0;L;;;;;N;;;;A7DD;
A7DD;LATIN SMALL LETTER H WITH NOTCH;Ll;0;L;;;;;N;;;A7DC;;A7DC
A7DE;LATIN CAPITAL LETTER L WITH PIGTAIL AT BOTTOM;Lu;0;L;;;;;N;;;;027A;
A7E0;LATIN CAPITAL LETTER N WITH INWARDS HOOK;Lu;0;L;;;;;N;;;;A7E1;
A7E1;LATIN SMALL LETTER N WITH INWARDS HOOK;Ll;0;L;;;;;N;;;A7E0;;A7E0
A7E2;LATIN CAPITAL LETTER VERTICALLY BARRED O;Lu;0;L;;;;;N;;;;A7E3;
A7E3;LATIN SMALL LETTER VERTICALLY BARRED O;Ll;0;L;;;;;N;;;A7E2;;A7E2
A7E4;LATIN CAPITAL LETTER ROUND SHA;Lu;0;L;;;;;N;;;;A7E5;
A7E5;LATIN SMALL LETTER ROUND SHA;Ll;0;L;;;;;N;;;A7E4;;A7E4
A7E6;LATIN CAPITAL LETTER ROUND SHCHA;Lu;0;L;;;;;N;;;;A7E7;
A7E7;LATIN SMALL LETTER ROUND SHCHA;Ll;0;L;;;;;N;;;A7E6;;A7E6
A7EA;LATIN CAPITAL LETTER ROUND ZHE;Lu;0;L;;;;;N;;;;A7EB;
A7EB;LATIN SMALL LETTER ROUND ZHE;Ll;0;L;;;;;N;;;A7EA;;A7EA
```

4.Code Charts

Latin Extended-D	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
U+A7Dx											Є	є	Ħ	ħ	⅃	
U+A7Ex	Ꞡ	ꞡ	Ꝋ	ꝋ	Ɯ	ɯ	Ꮮ	ꮮ			Ꞛ	ꞛ				

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

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

Ӝaba inᴢ vøl

Ӝaba je vidᴢla vøla na travnᴣkᴣ, inᴣ ӝelí ᴎemu enaka bitᴣ. Заүne tᴣdej svøjo gárbasto kóӝo napiһᴣvátᴣ, tᴣr vráɰa svøje tovariɰíᴎe: Alᴣ nésᴣm takó velíka kakor vøl? Nésᴣ, ne, ji pravijo. Le ɰe boЈ se napéᴎa, tᴣr vraɰa: Sᴣm ᴣdé vᴣndᴣr velᴣkᴣmu vølu enáka? Spᴇt ji odgovorᴇ, de ne. Pa ne neһa; ᴣᴣ vso moүjó se boЈ inᴣ boЈ napéᴎa inᴣ raᴣpoүᴣ.

Nápᴣһ v nesreүo pᴣrpravᴣ. Kdor sam sebe pràv poᴣná, se néma үᴣmú napiһᴣvátᴣ.

Figure 6.

Mathematical textbook "Education for Slovenian schools" (Štęvilstvo za slovénske šóle) 1830 by Fran Serafin Metelko:

Ⱳ T Ƨ V I L S T V O

3ᵃ

Slovénske ⱳóle

Figure 7.

Task from "Education for Slovenian schools"

> 115. *Navdáj.* Ƴe se 3 vátle sèkna dobí 3ᵃ 42 gl. 3o kr., 3ᵃ kólⱬko se ga dobí $27\frac{1}{2}$ vátla ?

Figure 8.

Solving the problem from "Education for Slovenian Schools"

Ⱳtétev

sⱬ pⱬrhítlejem.

v.	gl.	kr.	v.
3 :	42.	3o =	$27\frac{1}{2}$: X

$27\frac{1}{2}$

294
84
13. 3o
21. 15
—————
1168. 45

3————
gl. 389. 35 kr.

breȝ pⱬrhítleja.

v.	gl.	kr.	v.
3 :	42.	3o =	$27\frac{1}{2}$: X

6   6o   55
2550
55
—————
12750
1275 6o kr. gl.
6│140250│23375│389
„20   „53
„22   „57
„45   „35 kr.
„3o
„„„

Odgóvor: 389 gl. 35 kr.

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Figure 9.

Valentin Stanič's adaptation of the poem "Der Kaiser und der Abt" by Gottfried August Bürger

ЧЕSАR IN ФРАТ. [1]

(I3 BÜRGЕRJA).

———

Pravliɳo povédal bom nove postave:
Enkrat je bil ɳesar prebrisane glave;
Opàt je tud' bil, mož ɱogoyen takràt,
Al škoda, ovyar je bel zvit bil k' opat.

Beət' ɳesar prestal je vroyine in mraza,
Spal malo, pa bil skoz' vesel'ga obraza;
Je vedo in yeren kreh komaj imel,
Ше veykrat je xejo in lakot terpel.

Opatu je mogla bit' druga postréga,
Bogato napiten na mehke se vlega,
Na tolstem obraze so liɳa bleuye;
Obsegle trébuha mu néso trije.

———

[1] To balado, katero je Bürgar iz stare parpovéste:
„King John and the Abbot of Canterbury" vzel, je
xe (ada V. St** K. presloveɳil ino va léto 1828 va
Tersta na ovatlobe dal.

Figure 10. Screenshot from 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)

A B D E Є F G H Ⱨ I Ƨ J K L ⊥ M N Ɲ O ⱺ P R S Ш Ⱜ 3 ж T U V ŋ Ɥ

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

Metelko's alphabet

majuscule	minuscule	IPA	modern Slovene
ŋ	ŋ	/ts/	c
Ɥ	ɥ	/tʃ/	č
S	s	/s/	s
Ш	ш	/ʃ/	š
Ⱜ	ⱜ	/ʃtʃ/	šč
3	3	/z/	z
ж	ж	/ʒ/	ž
H	h	/h/	h
Ⱨ	ⱨ	/x/	h
⊥	J	/lj/	lj
Ɲ	ɲ	/nj/	nj
E	e	/ɛ/	e (open e; also ê)
Є	є	/e/	e (close e; also é)
Ƨ	ƨ	/ə/	e (schwa; also ə)
O	o	/o/	o (close o; also ó)
ⱺ	ⱺ	/ɔ/	o (open o; also ô)

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Figure 11.

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

6.References

1. Metelko, Franz Seraph: Lehrgebäude der slowenischen Sprache im Königreiche Illyrien und in den benachbarten Provinzen. Laibach (now Ljubljana) 1825.

2. L2/11-136 Proposal to encode Latin letters for the Slovene Metelko alphabet in the UCS

3. http://www2.arnes.si/~mpavle1/mete.html

4. https://en.wikipedia.org/wiki/Metelko_alphabet

5. Metelko, Franz Seraph: Štęvilstvo za slovénske šóle Ljubljana 1830.

6. https://fontstruct.com/fontstructions/show/2129423/metelko

<table>
<tr><td colspan="2">

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
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*.

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A. Administrative

1. **Title:**	***Proposal to Encode Slovene Metelko Alphabet 2022***
2. Requester's name:	*Nikta Manulov*
3. Requester type (Member body/Liaison/Individual contribution):	*Individual Contribuion*
4. Submission date:	*2022-11-26*
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:	
Name of the existing block:	*Latin Extended-D*
2. Number of characters in proposal:	**15**

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

A-Contemporary	B.1-Specialized (small collection) X	B.2-Specialized (large collection)
C-Major extinct	D-Attested extinct	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?	
If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used: *https://catrinity-font.de/downloads/Catrinity.otf*	
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.

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[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?	*Yes*
If YES explain	*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*
If YES, with whom?	*Peter Weiss, Ljubljana, Slovenia*
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	*Yes*
Reference:	*People in Slovenia*
4. The context of use for the proposed characters (type of use; common or rare)	*Specialized*
Reference:	*See text*
5. Are the proposed characters in current use by the user community?	See text
If YES, where? Reference:	
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:	*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*
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?	*Yes*
If YES, is a rationale for its inclusion provided?	*Yes*
If YES, reference:	*See text*
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 character(s)?	*No*
If YES, is the equivalent corresponding unified ideographic character(s) identified?	
If YES, reference:	