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

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This proposal replaces N3999 (2011-01-21). It contains the proposal summary form. Please send any response to this proposal to Gábor Hosszú (email: ~~hosszu@eet.bme.hu~~).

Contents

1.   Summary

The *Khazarian Rovas* /qasarɪən rovaːʃ/ (KR) is an extinct script that was mainly used in the area of the Khazar Empire (from 6th century CE to 965) by the different constituent nations and after the Settlement of Magyars (Hungarians) in the Carpathian Basin in the 10th century by the Hungarians, Khavars (Khazar subjects rebelled against the Khazar Khagane and than joined the Hungarians) and other joined tribes.[1] There are known relics mainly in *Turkic* including *Common Turkic* and *Ogur*, and in *As* or *Alan*.[2]

KR is exclusively right-to-left; there is no casing and known numerals in the known relics. It belongs to the family of the Rovas scripts, including the *Szekely-Hungarian Rovas* (SHR) and the *Carpathian Basin Rovas* (CBR). Their

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[1] Vásáry, 2003; Erdélyi, 2004, p. 76
[2] Kyzlasov, I.L., 1994

simplified genealogy is shown below. The *Proto-Rovas script is a hypothetical common ancestor used North of the Caucasus and the Black See by the As-Alans from the 1st c. AD,[3] it is finally derived from the Aramaic script.
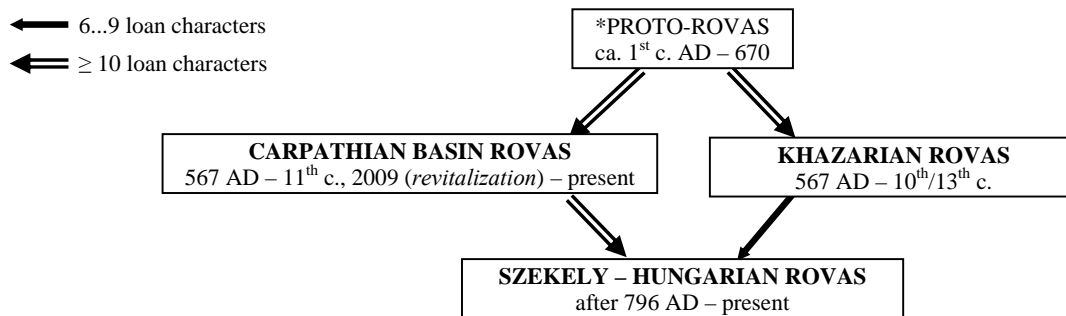
Some Khazarian Rovas characters being identical to the appropriate SHR or CBR characters are not proposed to encode individually. Instead of this the appropriate SHR or CBR characters will be used.[4]

2. Some relics

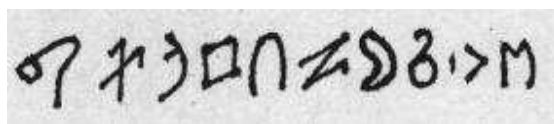Khumara is an old Khazar Fortress on the right side of the Kuban River. Two inscriptions are presented on *Fig. 2-1/a* and *b*.

Figure 2-1/a: Drawing of the one-row inscription from Khumara[5]

Written with Khazarian Rovas font	ꟼꭓꞡꝈꝆ ꞡꝺꞣ ꞇ ꞡꝿ
IPA phonetic transcription	øð t^{e}g^{i}n d^{a}ratï
Translation from Common Turkic (Khazar)	'Öd Tegin made (it).'

The word ꟼꭓꞡꝈꝆ /d^{a}ratï/ is the ancestor of the Hungarian word *gyárt* /ɟaːrt/ 'produce, make'. The Öz /øz/ is a well-known Turkic personal name.[6] According to Vékony, the transition /z/>/ð/ happened in Khazar. Therefore, Öd /øð/ was identical with Öz /øz/. The /tegin/ was a Khazar title (dignitary name). There is an example for this dignitary name in the sources, the name "*Er Tegin*" from the 680s.[7] In the Western Turkic Khaganate, the title *tegin* was also used, as it is attested in the inscriptions of East Iran.[8] The word *tegin* survived as a personal name in the 10th century: a leader of the Magyars (Hungarians) was called *Tétény* (its other form: *Tühütüm*).[9]
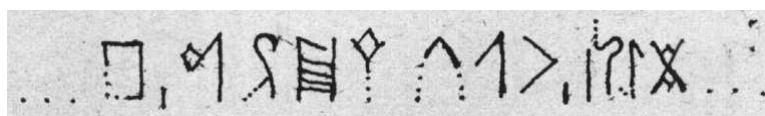

Figure 2-1/b: Drawing of an inscription from Khumara fortress.

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[3] Hosszú, 2011a
[4] Hosszú, 2011b & 2011c
[5] Vékony, 1987a, p. 27; Vékony, 2004b
[6] Nadeljaev et al (ed.), 1969, p. 395
[7] Golden, 1980, pp. 186-187
[8] Harmatta, 1994, pp. 149.164
[9] Györffy, 1998, p. 135

Written in Khazarian Rovas Font	𐰃 , ⟨Rovas characters⟩ ⟨Rovas⟩ , ⟨Rovas⟩
IPA phonetic transcription	tᵘɣᵃlᵃs, d͡ʒᵃpd͡i, bᵗʃigi ˈr
Translation from Ogur	Tughalas made (built), wrote its inscription.

The word /tᵘɣᵃlᵃs/ is an ethnic name according to Ibn Rustah.[10] The last word /ˈïr/ is the Ogur version of the Common Turkic verb /yaz/ 'write'. The verb /d͡ʒᵃpdi/ (< Proto-Turkic /yap/) means 'built, did', KR ⟩ D is transcribed with /d͡ʒ/, supposing that the inscription is in Ogur.[11]

Figure 2-2 A drawing of the Mayaki amphora inscription (made by I. L. Kyzlasov), 8th-9th centuries[12]

Written in Khazarian Rovas Font	:⟨Rovas characters⟩:[⟨Rovas⟩]
IPA phonetic transcription	[bu ᵃ]nᵃr xᵃɣᵃnïm d͡ʒ ˈrem βᵒn
Translation from Ogur	(This is) of Khagan Nar [*or* Anar]. Twenty *won*.

The Ogur word '*won*' was a measurement unit. The first two characters of the inscription were damaged; their transcription presumably is *bu*. The name *Nar* (or *Anar*) was an ancient Turkic personal name.[13]
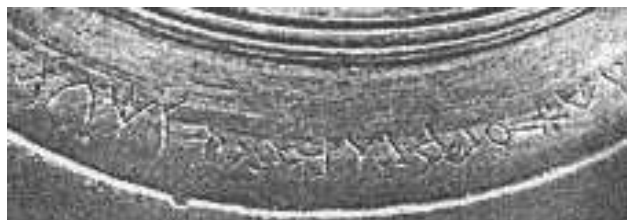
Figure 2-3/a: The Novocherkassk clay flask (9th-10th centuries)[14]

Figure 2-3/b: The drawing of the Novocherkassk inscription[15]

Written in Khazarian Rovas Font	⟨Rovas characters⟩
IPA phonetic transcription	a ˈʃɛrmˈð bˈð ˈʃɛrmˈð boʃᵃdᵃn
Translation from Kypchak	'Oh. Let us drink. We drink from [this] bosha.'

The word *bosha* was the name of a fermented alcoholic drink; its current version is '*boza*' in Hungarian and Turkic.[16]

Figure 2-4. The Stanitsa Krivyanskoe inscription (8th-10th c.)[17]

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[10] De Goeje, M. J. (ed.), 1892
[11] Róna-Tas, 1992, pp. 12-13
[12] Klyashtorny, S.G., SA. 1979, № 1;
[13] Vékony, 2004
[14] Baichorov, 1989, Table 113
[15] Vékony, 2004, p. 243
[16] http://mek.niif.hu/02700/02790/html/92.html
[17] Turchaninov, 1964, pp. 83-84 and 1971, pp. 75-77

Written in Khazarian Rovas Font	ႃ�XႃႧ⧩:И⸸ᒐ·ᗩ⸸Ⴖ⟩·ꓕႃ⥾⦶·⟩ꓥᑎ⸸·ᖗ⋔·ᒐꓱ⟩·ᖗ⋔ᒐ⫽ᒐꓱ
IPA phonetic transcription	βoʃo<u>danu</u> ðᵃβu: <u>danu</u> ʧᵃrið <u>niᵘzᵃg</u> ðᵃxⁱʧᵃn uᵃʧᵃg bᵃfⁱst<u>a-a</u>
Translation from As or Alan	'Wosho drink is yours. [This] drink should keep alive one who drinks. For you, Uachag wrote this.'

In this relic, the form *wosho* of the drink *boza* occurs. The sound /a/ was Preossetic common determiner, meaning 'this'. This /a/ is written in the duplication of ꓥ FORKED E /a/ (ႃ /<u>a-a</u>/) at the end of the row, where the other /a/ is the last vowel of the word /bᵃfⁱsta/

In 1962 Norman Golb discovered a non-Hebrew inscription on the left bottom corner of the Kievan Letter.[18] Due to the historical reasons, the Kievan letter is dated to the period between 955 and 961 CE.[19] *Fig. 2-5* shows the precise drawing copied directly from the photo of the original text.[20]

Figure 2-5. The photo of the original KR inscription on the Kievan Letter and its drawing[21]

Written in Khazarian Rovas Font	⟩⟩ Ꮲ⟩Иꓨ
IPA phonetic transcription	oɣⁱðïɑ <u>ilⁱk</u>
Translation from Khazar	We have read. Ilik.

"*Ilik*" was the name of the vice-king in the Khazar Empire,[22] who was in charge of the day-to-day operations of the Khaganate.[23] This inscription most probably functioned as reconfirmation of the letter.
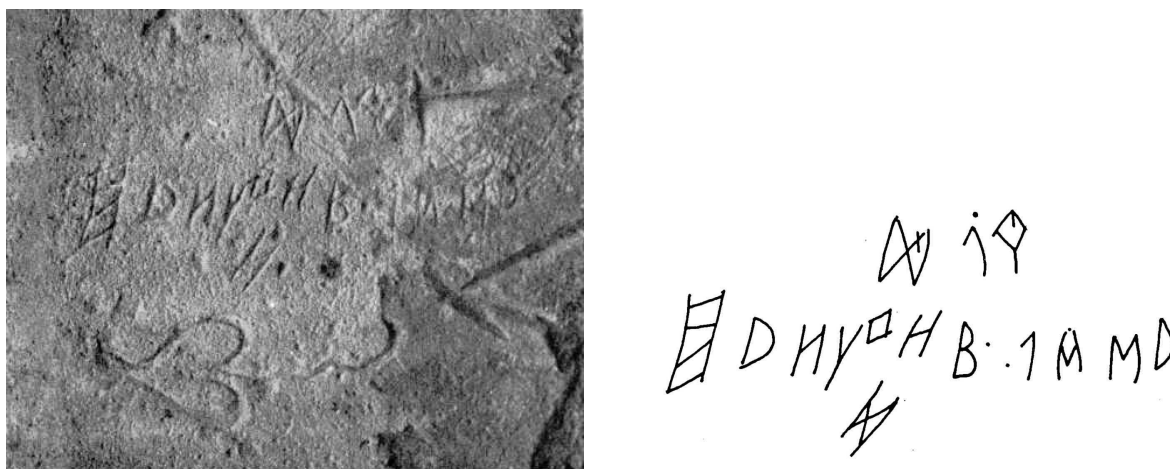

Figure 2-6: Photo[24] and the drawing of the Alsószentmihály (Transylvania, Romania) inscription, 920-950 CE.[25]

[18] Golb-Pristak, 1982
[19] Róna-Tas, 2001, p. 181
[20] Vékony, 2004
[21] Brook, web site; Vékony, 2004, p. 278
[22] Golden 1980. p. 162, pp. 184-185
[23] Golden 1984, pp. 474-486
[24] Benkő,1972a, p. 453 and Appendix; Benkő, 1972b
[25] Moravcsik, 1984, p. 85

Written in Khazarian Rovas Font	*First line:* ⋈ †⊹ *Second line:* ⧻ DℍΥⵀ ℍβ 1ⵊMD
IPA phonetic transcription	*First line:* $^{\varepsilon}$bi ^{a}t̠l̠^{ï}χ *Second line:* jy$\underline{e}$di • k̠y̠r̠ qar^{a}j
Translation from Khazar	*First line:* 'His mansion is famous.' *Second line:* 'Jüedi Kür (the) Karaite.'

The word /ɛb/ was used for larger buildings in the Khazar building inscriptions;[26] therefore, its meaning is 'mansion'. The word /jy$^{e}\underline{di}$/ meant *Jewish* in Khazar language, in this case it was probably used as a personal name. The /k̠y̠r̠/ means 'courageous' and 'fearless' in Turkic, such personal names are typical in Turkic languages. The symbol ⧻ is a typical punctuation mark in KR and the symbol in the third row was probably a tamgha, according to archaeologist Vékony.[27]

Figure 2-7. The drawing of the inscription of Ermen Tolga (magic text).[28]

Written in Khazarian Rovas Font	*Second line (upside down):* ... ⟩: Υ⟩⟩ΥⵊⵕΥ⟩Υ⟩⟩ ⋀ⵜ1ⵀ1⋀ *First line (upside down):* ⟩ Υ⟩⟩ ⋂⧻ *Third line:* ⟩ ⟩ⵕ⋂ⵀ ⟩ⵕ : Υ Υ⟩⟩ ⵕ⟩ ⋀ Υ⟩ Υⵕ⟩: ⟩ Υ
IPA phonetic transcription	*Second line:* $\underline{de}$β ^{i}di $\underline{de}$β ø abam ^{y}gɛ $^{\varepsilon}$b-^{a}ba ø ... *First line:* . ^{u}d byʃi ^{a}b[a] ... *Third line:* ... a ø : ømɛ b^{a}ʃ $\underline{de}$ ^{a}b^{a}m byʃi iʃ : m^{a}ŋ^{a} ^{e}dið ... ø ...
Translation from Khazar	*Second line:* ''Lord spirit, spirit, think! My father, wise house-father, think!' *First line:* . bovine-wizard father ...' *Third line:'* Oh : think! Don't think, Head! Eat! My wizard father, drink! For my highly ...think...'

The Achiktash inscription is presented on *Fig. 2-8*. The inscription is on the four sides of a wooden stick. The stick was broken into three parts, and the middle one is lost. Therefore, the middle part of the text in each row is missing.[29]

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[26] Vékony, 1997, p. 110;
[27] Vékony, 1987, pp. 108-117; 1997, pp. 108-117; 2004, pp. 217-230
[28] Erdniev, 1982, *Fig. 2-7;* Kyzlasov, 1990a, Fig. 13, 14, pp. 42-47; Klyashtornyi & Vásáry, 1987
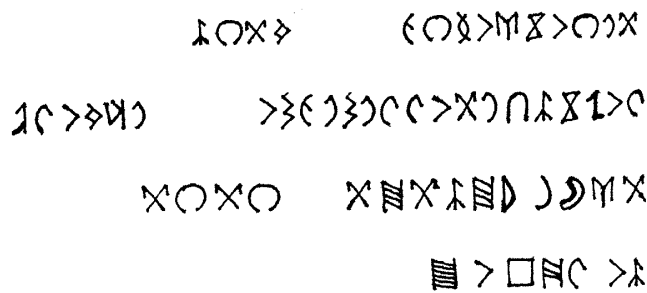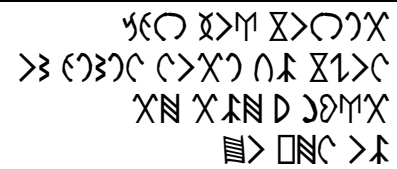[29] Vékony, 1986, *Fig. 1*

Figure 2-8 The Achiktash inscription (first half of the 8th c.)

In the inscription the glyph ⟳, a variant of the 𝛺 ARCHED R /r/rʲ/ was in use.

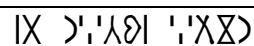| Written in Khazarian Rovas Font | ᚷ⟳ᚷⴵ
ᛁᚳ >ⴵᛟᚲ
ᚷ ⟳ᚷ⟳ | ᛃᚳ⟳ ᚾ>ᛋᛘ ᚾ>⟳ᚳᚷ
>ᛃ ᚳ⟳ᛃⴵᚳ ᚳ>ᚷᛟ ᚾᚦ ᚾᚴ>ᚳ
ᚷᛚ ᚷᚦᚾ ᛞ ⴵᚦᛘᚷ
🗏> ⬜ᚾᚳ >ᚦ |
| IPA phonetic transcription | tir ᶦðu͟q εðe ᵒrᶦn …
qᵃðᵧu͟q hᶦd͟ε ïtðᶦq ᵒqïmïn mᶦð…
tεgᶦl ᵃj sᵘht ᵒsʸt …
hᶦð qᵃsᵃr ᵘðᵘs͟ï | bᶦtᶦrh[ᵋŋ/ᶦŋᶦð]
i͡ʃiðᶦbᶦð qᵒp
ᵋrtᵋr t [ᵃnᶦŋ] |
| Translation from Common Turkic | 'He says: the throne of the holy dominus
We … reading the written stick sent by you
Ay! Say it: Sogdian vengeance …
You, Khazars. Good (=true, credible). End.' | you write [*singular or plural*]
we all heard it
avoid [you], [you] k[now] |
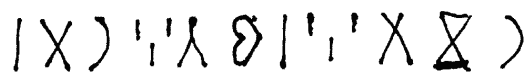
Figure 2-9 The drawing of the inscription on the bone-plate of quiver from Homokmégy-Halom[30]

It was transcripted by archaeologist G. Vékony and the transcription was improved by Turkologist I. Vásáry.[31] According to Vásáry, its text could be either in Common Turkic or Ogur.

Written in Khazarian Rovas Font	ᛁᚷ ⴵᶦᶦᚴᛟᛁ ᶦᶦᚷᚾⴵ
IPA phonetic transcription	ᵒno͟qlᶦɣ sᵃɣdᵃɣᶦn bᵃs
Translation from Turkic	'Triumph with quiver with ten arrows.'

In 1978 during excavations of the Mayatskoe Gorodishche (Russian: Маяцкое городище, its other name: Mayaki citadel) S.A. Pletneva and G.E. Afanasyev found the longest known KR inscription.[32] *Fig. 2-8* shows the drawing of the architect B. Erdélyi, a participant of the excavation.[33]

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[30] Vékony, 1992, p. 42.
[31] Vékony, 2004, pp. 56-57; Vásáry, 2010-2011; Hosszú, 2011a
[32] Erdélyi, 2004, p. 76
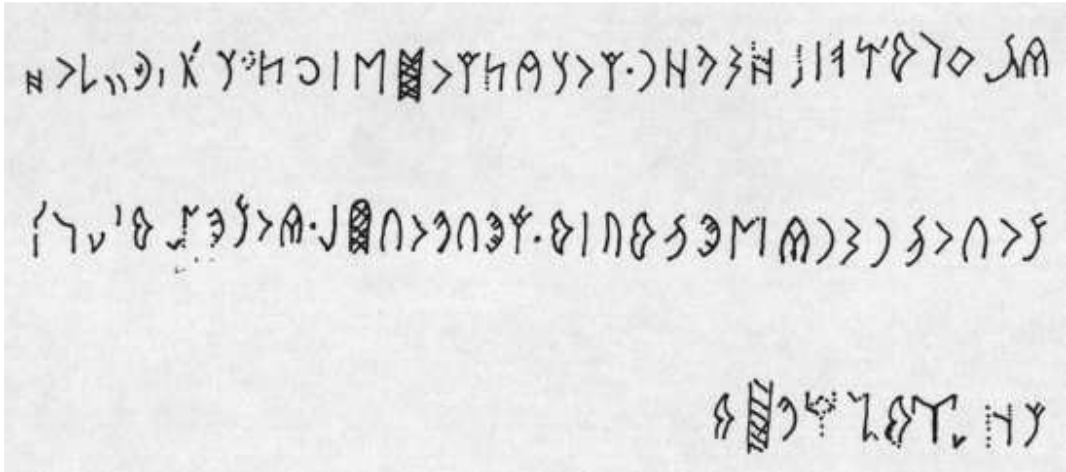[33] Kyzlasov, 1990; p. 16

Figure 2-10: The drawing of the inscriptions of Mayatskoe Gorodishche made by architect Balázs Erdélyi.

The ends of the first and second rows may show characters of a different script; those were probably engraved later. The transcription of the texts is the following:

Written in Khazarian Rovas Font	*First row:* … ꝸ[ꝺ]ʟ� M ꙮ ᐳᏅᏞ ᏕᐳᏪ • ᏬᏁᏕ ᏕᏁ ᏚᏞ ᏗᏖ Ꮥᐳ ᗬ ᏞᏈ *Second row:* … ᏕᏞᏬ ᏕᏁᏈ•Ꮼ ꙮ ᏁᐳᏬᏁᏕᏖ • ᏕᏚ ᏁᏕᏕ ᏕᏈ ᏈᏕᏕ Ꮼ ᏕᐳᏁ ᐳᏕ *Third row:* Ꮥ ꙮ ᏬᏖ ᏞᏕᏕᏂ ᏁᏈ
IPA phonetic transcription	*First row:* <u>da</u> <u>nu</u> ᵃq ᵚðˠg sᵘβ ᵃsⁱl ᵋt͡ʃⁱm xᵃɣᵃn bⁱðⁱŋ <u>derⁱ</u>bⁱð ᵃ<u>lt</u>ⁱ sᵃβⁱrïŋ […] *Second row:* uð dⁱðy ᵒn mᵘ<u>nda</u> ⁱ<u>lt</u>ɛ ygˠʃ ⁱsⁱg bɛdiðᵋdⁱ ᵒl <u>da</u>ðu inᵋg […] *Third row:* <u>on</u>ᵃχ tᵉgⁱn ᵋbi ᵚg
Translation from Khazar	*First row:* 'Don [River], white Ödüg River, As Country, [oh] my brother-khagan, our land of the Six-Savirs …' *Second row:* 'Ud Didü On, here, in [this] country, ornamented many works. This inscription made by Ineg…' *Third row:* 'Mansion of Onagh Tegin. Extol it.'

In 1948, a rounded stone of a spindle was explored during the archaeological excavations of V. P. Levasova near Minusinsk. The relic is from the 8ᵗʰ-9ᵗʰ centuries. *Fig. 2-11* presents the photo of the spindle disk[34] and the drawing of the inscription made by G. Vékony. The transcription was improved by Turkologist I. Vásáry.[35]

Figure 2-11: The photo of the spindle of Minusinsk (left) and the inscription broken into two rows (right).

Written in Khazarian Rovas Font	•𐎐⬚⬚N𐎐ND•𐎐⋏D𐌗⋏ 𐎌𐌗N𐌕𐎊•⋋𐎌𐌕N✝⬚𝄒
IPA phonetic transcription	ip-jig jygyrr^{y}g ^{ø}rtylm^{ε}ð (a)s^{u}ɣ^{a}p^{a}m
Translation from Turkic	'(This) thread-spindle [is] fast. My aunt (A)sugh does not hide.'

An interesting feature is the use of the mirrored glyph Ͷ for the GH /ɣ/. A glyph variant of the Khazarian Rovas 𐎈 Z /t/z/ was used here: ✝. The personal name in the inscription can be *Asugh* /asuɣ/ or *Sugh* /suɣ/.

In 1985, Kochkina published the inscription on the handle of a vessel (see *Fig.* below)*,* estimating its epoch to the 11th -12th centuries.[36] The reading /d^{y}ʃ/ 'dream' was proposed by the author of this document. Turkologist I. Vásáry improved it to /d^y✝/ and gave another possible meaning: 'noon'.[37] He stated that the /dy✝/ could be the Ogur version of the Common Turkic /dyʃ/ 'dream/noon'. The second part of the inscription is still unsolved.[38]

It is noteworthy that despite of the formal similarity, the Khazarian Rovas ꞉COLON was a full stop-like *punctuation mark* in this inscription and its function is totally unrelated to the punctuation mark colon (:) of the Latin-based orthography, which first appeared in late fourteenth century, according to Reimer.[39]

Written with Khazarian Rovas font	꞉)𐎐𐎐 ✝⟩
IPA phonetic transcription	d^y✝ (b…t…n)
Translation from Ogur	'dream/noon' (*second part is unciphered*)

Figure 2-12: The Bilyar inscription (11th -13th c.) and its transcription

3. Unicode Character Properties

In the following the proposed naming and coding of the KHAZARIAN ROVAS script is listed. These charts contain only proposed assignments and should not be considered valid until such time as the Unicode Consortium formally accepts them and ISO/IEC JTC1/SC2 formally approves them after an international ballot.

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[36] Khalikov, 1988
[37] Vásáry, 2010-2011
[38] Vásáry, 2010-2011
[39] Reimer, 1998, *Ch. IV.vii.* Paleography: Punctuation

3.1. Code chart of the KHAZARIAN ROVAS in the SMP

	1xx0	1xx1	1xx2
0	◊ 1xx00	ካ 1xx10	M 1xx20
1	∪ 1xx01	Χ 1xx11	ⵊ 1xx21
2	ⵁ 1xx02	T 1xx12	1xx22
3	ℕ 1xx03	M 1xx13	1xx23
4	∩ 1xx04	O 1xx14	1xx24
5	⅄ 1xx05	⅄ 1xx15	1xx25
6	M 1xx06	Ƴ 1xx16	1xx26
7	⟩ 1xx07	⑀ 1xx17	1xx27
8	φ 1xx08	ℂ 1xx18	1xx28
9	ᔭ 1xx09	Ω 1xx19	1xx29
A	᛫ 1xx0A	⋀ 1xx1A	1xx2A
B	⟩ 1xx0B	⋀ 1xx1B	1xx2B
C	⊓ 1xx0C	ⵟ 1xx1C	1xx2C
D	∩ 1xx0D	ⵢ 1xx1D	1xx2D
E	ⵧ 1xx0E	᠑ 1xx1E	1xx2E
F	⟩ 1xx0F	Ⅹ 1xx1F	▤ 1xx1F

1xx00 KHAZARIAN ROVAS Characters 1xx2F

1xx00; ◊ KHAZARIAN ROVAS LETTER ANGLED B

1xx01; ∪ KHAZARIAN ROVAS LETTER ARCHED B

1xx02; ⵁ KHAZARIAN ROVAS LETTER RAISED B

1xx03; ℕ KHAZARIAN ROVAS LETTER CS

1xx04; ∩ KHAZARIAN ROVAS LETTER ARCHED D

1xx05; ⋋ KHAZARIAN ROVAS LETTER FORKED D

1xx06; ⋔ KHAZARIAN ROVAS LETTER ANGLED E

1xx07; ⟩ KHAZARIAN ROVAS LETTER ARCHED E

1xx08; ⏀ KHAZARIAN ROVAS LETTER F

1xx09; ⧔ KHAZARIAN ROVAS LETTER CLOSE G

1xx0A; ⦙ KHAZARIAN ROVAS LETTER TRIPLE GH

1xx0B; ⋗ KHAZARIAN ROVAS LETTER FORKED CH

1xx0C; ⊓ KHAZARIAN ROVAS LETTER ANGLED CH

1xx0D; ∩ KHAZARIAN ROVAS LETTER ARCHED CH

1xx0E; ⌀ KHAZARIAN ROVAS LETTER K

1xx0F; ⟩ KHAZARIAN ROVAS LETTER ANGLED K

1xx10; ⅄ KHAZARIAN ROVAS LETTER ARCHED L

1xx11; ⋋ KHAZARIAN ROVAS LETTER CROSSED L

1xx12; ⊤ KHAZARIAN ROVAS LETTER FORKED L

1xx13; Μ KHAZARIAN ROVAS LETTER LT

1xx14; Ο KHAZARIAN ROVAS LETTER ROUND M

1xx15; ⅄ KHAZARIAN ROVAS LETTER ANGLED N

1xx16; ⋋ KHAZARIAN ROVAS LETTER O

1xx17; ⟩ KHAZARIAN ROVAS LETTER OE

1xx18; ⊂ KHAZARIAN ROVAS LETTER ARCHED Q

1xx19; Ω KHAZARIAN ROVAS LETTER ARCHED R

1xx1A; ⋌ KHAZARIAN ROVAS LETTER SH

1xx1B; ⋂ KHAZARIAN ROVAS LETTER ARCHED SH

1xx1C; ⅄ KHAZARIAN ROVAS LETTER SHL

1xx1D; ⋎ KHAZARIAN ROVAS LETTER FORKED SZ

1xx1E; ⋷ KHAZARIAN ROVAS LETTER ARCHED T

1xx1F; ⋊ KHAZARIAN ROVAS LETTER CENTRAL T

1xx20; Μ KHAZARIAN ROVAS LETTER UE

1xx21; ⋊ KHAZARIAN ROVAS LETTER Z

1xx22; (This position shall not be used)
1xx23; (This position shall not be used)
1xx24; (This position shall not be used)
1xx25; (This position shall not be used)
1xx26; (This position shall not be used)
1xx27; (This position shall not be used)
1xx28; (This position shall not be used)
1xx29; (This position shall not be used)
1xx2A; (This position shall not be used)
1xx2B; (This position shall not be used)
1xx2C; (This position shall not be used)
1xx2D; (This position shall not be used)
1xx2E; (This position shall not be used)
1xx2F; ⧻ KHAZARIAN ROVAS SEPARATOR LARGE

3.2. Code chart of the SEPARATOR DOT ABOVE in Combining Diacritical Marks Supplement block (BMP)

1DC0   Combining Diacritical Marks Supplement (portion)   1DFF

	1Dxx
x	◌̇ 1Dxx

1Dxx   ◌̇   SEPARATOR DOT ABOVE
- used historically in Khazarian Rovas script as word separator
→ 0307 Combining Dot Above

4. Fundamental decisions taken in the encoding

4.1. Description of the character repertoire

The use of the Khazarian Rovas script for different languages led to the duplication of some Khazarian Rovas characters. In the following the parts of the character repertoire are detailed, see *Table* below.

Glyph	Name of the Khazarian Rovas character	IPA symbol	Examples of the glyph in the relics
Υ	A	a/ɛ	Ermen Tolga, 8th-10th c., *Fig. 2-7*, in Khazar
Χ	B	b	Homokmégy-Halom, *Fig. 2-9*, in Turkic
◊	ANGLED B	b	Novocherkassk, 9th-10th c., *Fig. 2-3/a & b*, in Kypchak Bilyar, 11th-13th c., *Fig. 2-12*, in Ogur
∪	ARCHED B	b/β	Mayatskoe G. large inscr., 9th c.*, Fig. 2-10*, in Khazar
Ϋ	RAISED B	b	Alsószentmihály, 920-950 CE, *Fig. 2-6*, in Khazar
ℕ	CS	t͡ʃ/s	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4*, in As/Alan
›	D	d/ð /d͡ʒ	Kievan letter, between 955-961 CE, *Fig. 2-5*, in Khazar Bilyar, 11th-13th c., *Fig. 2-12*, in Ogur
∩	ARCHED D	d/di/dɛ/ɟ/d͡ʒ	Novocherkassk, 9th-10th c., *Fig. 2-3/a & b*, in Kypchak
⅄	FORKED D	d	Homokmégy-Halom, *Fig. 2-9*, in Turkic
ꝯ	E	ɛ	Mayaki amphora, 8th-9th c., *Fig. 2-2*, in Ogur Mayatskoe Gorodishche, *Fig. 2-10* in Khazar*, glyph:* ꜽ
ꟿ	ANGLED E	ɛ	Achiktash, first half of the 8th c., *Fig. 2-8*, in Bashkir
ꜱ	ARCHED E	a/a:/ɛ	Khumara, *Fig. 2-1/a*, in Khazar
Υ	FORKED E	a/ɛ	Alsószentmihály, 920-950 CE, *Fig. 2-6*, in Khazar
Ꭓ	CLOSE E	e	Achiktash, first half of the 8th c., *Fig. 2-8*, in Bashkir
φ	F	f	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4*, in As/Alan
ꝱ	CLOSE G	g/ɣ	Ermen Tolga, 8th-10th c., *Fig. 2-7*, in Khazar Minusinsk, 8th-9th c., *Fig. 2-11, 12*, in Turkic
⅄	FORKED G	g	Khumara, cc. 9th c., *Fig. 2-1/b*, in Ogur

Glyph	Name of the Khazarian Rovas character	IPA symbol	Examples of the glyph in the relics
N	GH	ɣ, *in As/Alan language:* g	Khumara, cc. 9th c., *Fig. 2-1/b,* in Ogur Kievan letter, between 955-961 CE, *Fig. 2-5,* in Khazar Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4,* in As/Alan
','	TRIPLE GH	ɣ	Homokmégy-Halom, *Fig. 2-9,* in Turkic
⅄	CH	h	Achiktash, first half of the 8th c., *Fig. 2-8,* in Bashkir
⟩	FORKED CH	x	Mayatskoe Gorodishche, 9th c.*, Fig. 2-10* in Khazar
⊓	ANGLED CH	x	Mayaki amphora, 8th-9th c., *Fig. 2-2,* in Ogur
∩	ARCHED CH	x	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4,* in As/Alan
1	ANGLED I	i, *in ligature also* /e/	Alsószentmihály, 920-950 CE, *Fig. 2-6,* in Khazar
⟩	ARCHED I	i/ï	Alsószentmihály, 920-950 CE, *Fig. 2-6,* in Khazar
⊣	CIRCLE ENDED I	ï/i	Khumara, cc. 9th c., *Fig. 2-1/a,* in Khazar Khumara, cc. 9th c., *Fig. 2-1/b,* in Khazar Minusinsk, 8th-9th c., *Fig. 2-11, 12,* in Turkic
D	J	j	Alsószentmihály, 920-950 CE, *Fig. 2-6,* in Khazar
⊘	K	q	Alsószentmihály, 920-950 CE, *Fig. 2-6,* in Khazar
⟩	ANGLED K	k	Kievan letter, between 955-961 CE, *Fig. 2-5,* in Khazar
ß	KUE	ky	Alsószentmihály, 920-950 CE, *Fig. 2-6,* in Khazar
↳	ARCHED L	l	Khumara, cc. 9th c., *Fig. 2-1/b,* in Khazar
X	CROSSED L	l	Homokmégy-Halom, *Fig. 2-9,* in Turkic
T	FORKED L	l	Minusinsk, 8th-9th c., *Fig. 2-11, 12,* in Turkic
⟩	SIMPLE L	l/ɭ	Mayatskoe Gorodishche, 9th c.*, Fig. 2-10* in Khazar
M	LT	lt	Mayatskoe Gorodishche, 9th c.*, Fig. 2-10* in Khazar
⟩	M	m	Ermen Tolga, 8th-10th c., *Fig. 2-7,* in Khazar
O	ROUND M	m	Novocherkassk, 9th-10th c., *Fig. 2-3/a & b,* in Kypchak
⟩	N	n	Homokmégy-Halom, *Fig. 2-9,* in Turkic Bilyar, 11th-13th c., *Fig. 2-12,* in Ogur
⅄	NY	n	Novocherkassk, 9th-10th c., *Fig. 2-3/a & b,* in Kypchak Achiktash, *Fig. 2-8,* in Bashkir, *glyph:* ⟨
⅄	ANGLED N	n	Khumara, cc. 9th c., *Fig. 2-1/a,* in Khazar, *glyph variant:* ⅙
⟩	NG	ŋ	Ermen Tolga, 8th-10th c., *Fig. 2-7,* in Khazar
⅄	O	o/u	Kievan letter, between 955-961 CE, *Fig. 2-5,* in Khazar Mayatskoe G., 9th c.*, Fig. 2-10* in Khazar, *glyph variant:* ⟩
⟩	OE	ø/y	Ermen Tolga, 8th-10th c., *Fig. 2-7,* in Khazar
Ⅎ	P	p	Achiktash, *Fig. 2-8,* in Bashkir, glyph: ⅃
↑	SIMPLE P	p	Khumara, cc. 9th c., *Fig. 2-1/b,* in Khazar
Ⅹ	Q	q/oq/uq	Achiktash, first half of the 8th c., *Fig. 2-8,* in Bashkir Homokmégy-Halom, *Fig. 2-9,* in Turkic
Ϲ	ARCHED Q	q	Achiktash, first half of the 8th c., *Fig. 2-8,* in Bashkir

Glyph	Name of the Khazarian Rovas character	IPA symbol	Examples of the glyph in the relics
Ͱ	R	r	Alsószentmihály, 920-950 CE, *Fig. 2-6*, in Khazar
Ω	ARCHED R	r/rʲ (*palatal r*)	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4*, in As/Alan Achiktash, 8th c., *Fig. 2-8*, in Bashkir, *glyph variant* ◯
⫠	CLOSE R	r	Minusinsk, 8th-9th c., *Fig. 2-11, 12*, in Turkic
⋏	SH	∫	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4*, in As/Alan
⋔	ARCHED SH	∫	Mayatskoe Gorodishche, 9th c., *Fig. 2-10* in Khazar
Ψ	ZS	∫	Novocherkassk, 9th-10th c., *Fig. 2-3/a & b*, in Kypchak
Ѱ	SHL	ɬ	Bilyar, 11th-13th c., *Fig. 2-12*, in Ogur
I	SZ	s	Homokmégy-Halom, *Fig. 2-9*, in Turkic
Ϋ	FORKED SZ	s	Mayatskoe Gorodishche, 9th c., *Fig. 2-10* in Khazar Minusinsk, 8th-9th c., *Fig. 2-11, 12*, in Turkic
Χ	ANGLED T	t	Khumara, cc. 9th c., *Fig. 2-1/a*, in Khazar Mayatskoe G., 9th c., *Fig. 2-10* in Khazar, *glyph variant:* Υ
Ȣ	ARCHED T	t	Khumara, cc. 9th c., *Fig. 2-1/a*, in Khazar
Ӿ	CENTRAL T	t	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4*, in As/Alan
◊	CLOSE T	t	Bilyar, 11th-13th c., *Fig. 2-12*, in Ogur
M	UE	y/ø	Alsószentmihály, 920-950 CE, *Fig. 2-6*, in Khazar Minusinsk, *Fig. 2-11, 12*, in Turkic, *glyph variant:* N Khumara, *Fig. 2-1/a*, in Khazar
૧	OPEN V	β/b	Ermen Tolga, 8th-10th c., *Fig. 2-7*, in Khazar
Ӽ	Z	z/t	Minusinsk, *Fig. 2-11*, in Turkic, *glyph:* ✝, *sound:* /t/ Stanitsa Krivyanskoe, *Fig. 2-4*, in As/Alan, *sound:* /z/

The characters in the following Table are identical to the appropriate Szekely-Hungarian Rovas or Carpathian Basin Rovas characters. Thus, there is no urge to encode them individually. Instead, the appropriate Rovas characters from the Szekely-Hungarian Rovas script (latest proposal: N4007, 2011-01-21) or the Carpathian Basin Rovas script - proposed separately (latest proposal: 2011-05-19) - might be used here.

Glyph	Name of the identical other Rovas character
Υ	CARPATHIAN BASIN ROVAS CAPITAL LETTER A
Χ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER B
〉	CARPATHIAN BASIN ROVAS CAPITAL LETTER D
Ɛ	CARPATHIAN BASIN ROVAS CAPITAL LETTER E
Υ	CARPATHIAN BASIN ROVAS CAPITAL LETTER FORKED E
Ӿ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER CLOSE E
⋋	CARPATHIAN BASIN ROVAS CAPITAL LETTER FORKED G
N	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER GH
⋏	CARPATHIAN BASIN ROVAS CAPITAL LETTER CH
1	CARPATHIAN BASIN ROVAS CAPITAL LETTER ANGLED I

Glyph	Name of the identical other Rovas character
ꭥ	CARPATHIAN BASIN ROVAS CAPITAL LETTER ARCHED I
ꔾ	CARPATHIAN BASIN ROVAS CAPITAL LETTER CIRCLE ENDED I
Ꝺ	CARPATHIAN BASIN ROVAS CAPITAL LETTER J
ꞵ	CARPATHIAN BASIN ROVAS CAPITAL LETTER KUE
ꜱ	CARPATHIAN BASIN ROVAS CAPITAL LETTER SIMPLE L
ꝫ	CARPATHIAN BASIN ROVAS CAPITAL LETTER M
Ɡ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER N
ꜿ	CARPATHIAN BASIN ROVAS CAPITAL LETTER NY
ꝕ	CARPATHIAN BASIN ROVAS CAPITAL LETTER NG
ꝭ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER P
ꞁ	CARPATHIAN BASIN ROVAS CAPITAL LETTER SIMPLE P
Ⴟ	CARPATHIAN BASIN ROVAS CAPITAL LETTER Q
Ͱ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER R
꒕	CARPATHIAN BASIN ROVAS CAPITAL LETTER CLOSE R
Ⴣ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER ZS
I	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER SZ
Ж	CARPATHIAN BASIN ROVAS CAPITAL LETTER ANGLED T
ꝑ	CARPATHIAN BASIN ROVAS CAPITAL LETTER CLOSE T
ꝯ	SZEKELY-HUNGARIAN ROVAS CAPITAL LETTER OPEN V

4.2. Diacritic mark

There is only one diacritic mark in Khazarian Rovas script, the SEPARATOR DOT ABOVE $\dot{\circ}$ is a diacritic; its role is signing the end of the word. It was used in the Alsószentmihály inscription, see *Fig. 2-4*.

4.3. Punctuation

Table 4.4-1 presents the punctuation marks of the Khazarian Rovas script.

Glyph	Name	Examples of the glyph in the relics
·	WORD SEPARATOR MIDDLE DOT	Alsószentmihály, 920-950 CE, *Fig. 2-6*, in Khazar Novocherkassk, 9th-10th c., Fig. *2-3/a & b*, in Kypchak Minusinsk, 8th-9th c., *Sec. 4.2.15*, in Turkic Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-4*, in As/Alan
:	COLON	Mayaki amphora, 8th-9th c., *Fig. 2-2*, in Ogur Bilyar, 11th-13th c., *Fig. 2-12*, in Ogur
⋮	TRICOLON	Stanitsa Krivyanskoe, 9th-10th c., *Fig. 2-7*, in As/Alan
ꞏ	WORD SEPARATOR VERTICAL BAR	Khumara, cc. 9th c., *Fig. 2-1*, in Ogur

Glyph	Name	Examples of the glyph in the relics
𐾀	KHAZARIAN ROVAS SEPARATOR LARGE	Alsószentmihály, 920-950 CE, *Fig. 2-6*, in Khazar Minusinsk, 8th-9th c., *Sec. 2-11, 12*, in Turkic, *with also a glyph variant:* 𐾁

Table 4.4-1: The *Khazarian Rovas* separators and the origin of each glyph

Table 4.4-2 shows the already existing Unicode encoded characters corresponding to the appropriate Khazarian Rovas punctuation marks.

Glyph	Name of the Khazarian Rovas character	Name and code point of the Unicode Character
.	WORD SEPARATOR MIDDLE DOT	'WORD SEPARATOR MIDDLE DOT' (U+2E31) from the Supplemental Punctuation block
:	COLON	COLON (U+003A) from the Basic Latin block
⁝	TRICOLON	'TRICOLON' (U+205D) from the General Punctuation block

Table 5.4-2: The *Khazarian Rovas* and the corresponding Unicode coded characters.

The KHAZARIAN ROVAS SEPARATOR LARGE 𐾀 is script-specific and therefore belongs into the KHAZARIAN ROVAS block, it used mostly at the end of the sentences. The ɪ WORD SEPARATOR VERTICAL BAR is proposed in the encoding proposal of the Carpathian Basin Rovas script (2011-05-19).[40]

4.4. Ligatures

Ligatures were frequently used in the Khazarian Rovas script. These ligatures do not need individual code points, since they are stylistic, only, that is, whether the text means the same if somebody substitute ligatures, or remove them. Two ligatures are systematic, used regularly, similarly to the Arabic LAM-ALEF or the CH in Fraktur.

Glyph	Name	Transcription	Constituents of the systematic ligatures
𐾰	DA	<u>da</u>	∩ ARCHED D /d/ + Y A /a/
𐾱	DI	de/di/ed	∩ ARCHED D /d/ + 1 ANGLED I /i/e/

The rest of the ligatures are not systematic, they are applied on occasion. Therefore, they can be represented by sequences of characters. Their implementations will need to give the user localized control over ligation (perhaps by supporting ZWJ). Following *Table* presents some examples of the non-systematic ligatures from the relics.

Glyph	Name	Transcription	Constituents of the non-systematic ligatures
Ψ	AA	<u>aa</u>	Υ FORKED E /a/ + Υ FORKED E /a/
𐾲	ATLIGH	^atl^ïɣ	𐊾 ANGLED T /t/ + ⊃ SIMPLE L /l/ + И GH /ɣ/
𐾳	BAN	<u>ban</u>	𐾴 RAISED B /b/ + Y A /a/ + ⊃ N /n/
𐾵	CSI	<u>t͡ʃi</u>	И CS /t͡ʃ/ + 1 ANGLED I /i/
→	DKE	<u>ðkɛ</u>	⟩ D /ð/ + 𐾶 K /k/ + ⟩ ARCHED E /ɛ/
𐾷	ER	<u>ɛr</u>	Υ FORKED E /ɛ/ + Ͷ R/r/
⟩	IL	<u>il</u>	1 ANGLED I /i/ (*mirrored glyph*) + ⊃ SIMPLE L /l/

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[40] Hosszú, 2011b

Glyph	Name	Transcription	Constituents of the non-systematic ligatures
≥	IN	ïn	ꟃ ARCHED I /i/ + Ꞔ NY /n/
ꟼ	IQ	ïq	ꟷ ANGLED I /i/ (*mirrored glyph*) + ꟊ K /q/
Ʂ	JI	ji	꟱ J /j/ + ꟷ ANGLED I /i/ (*mirrored glyph*)
ⵤ, ⵤ	ISHAD	ⁱꭍᵃð	Ⲩ ZS /ʃ/ + ꟾ D /ð/
ꞕ	RAT	rat	꟒ CLOSE R /r/ + ꟿ ARCHED E /ɛ/ + Ⲭ ANGLED T /t/
ⵥ	TEGH	tᵉχ	Ⲭ ANGLED T /t/ + � GH /ɣ/

4.5. Ordering

In ordering the Common Template Table defined in the International Standard ISO/IEC 14651 is adapted.[41] The ordering requires different levels:

Level 1

The first level renders the texts to be sorted case-insensitive and insensitive to diacritical marks, and to all special characters. In the case of the Khazarian Rovas the following order is required:

Ⲩ A < Ⲭ B < ꟙ ANGLED B < Ꙅ ARCHED B < ꟛ RAISED B < ꟽ CS < ꟾ D < ꟲ ARCHED D < ꟳ FORKED D < ꟴ E < ꟞ ANGLED E < ꟿ ARCHED E < ꟷ FORKED E < ꟥ CLOSE E < ꟍ F < Ꟑ CLOSE G < ꟑ FORKED G < Ⲛ GH < ꞏꞏ TRIPLE GH < Ƛ CH < ꟝ FORKED CH < ꟒ ANGLED CH < ꟲ ARCHED CH < ꟷ ANGLED I < ꟃ ARCHED I < Ꟙ CIRCLE ENDED I < ꟱ J < ꟊ K < ꟞ ANGLED K < ꟟ KUE < ꟠ ARCHED L < Ⲭ CROSSED L < Ꟑ FORKED L < ꟡ SIMPLE L < ꟞ LT < ꟢ M < Ꝋ ROUND M < ꟣ N < Ꞔ NY < ꟤ ANGLED N < ꟥ NG < ꟦ O < ꟧ OE < ꟨ P < ꟷ SIMPLE P < Ⲭ Q < ꟩ ARCHED Q < Ⲛ R < Ꞷ ARCHED R < ꟒ CLOSE R < ꟪ SH < ꟫ ARCHED SH < Ⲩ ZS < ꟬ SHL < ꟰ SZ < ꟭ FORKED SZ < Ⲭ ANGLED T < ꟮ ARCHED T < Ⲭ CENTRAL T < ꟯ CLOSE T < ꟞ UE < ꟰ OPEN V < ꟱ Z

Level 2

This breaks ties on quasi-homographs (strings differ only because they have different diacritical marks). In the case of the Khazarian Rovas there is only one diacritical mark, the called SEPARATOR DOT ABOVE ◌̇. However, it is not an accent, but a word separator. It has the same effect as writing -- in other scripts -- a space after the character, it is recommended to process this combining character itself as a space, i.e. assign it a level 1 weight equivalent to that of the space, with also a level 2 weight indicating it is not a space but something else (to distinguish with the case one enters a real space after the character). The basic characters should nevertheless have a level 2 weight indicating a base character (for hypothetical cases where other combining characters are used).[42]

Level 3

This level breaks ties for quasi-homographs that differ only because uppercase and lowercase characters are used. In case of the Khazarian Rovas script there is not casing. Therefore this level is not required.

Level 4

The fourth level breaks the final tie that, in general, does not correspond to any strong tradition, namely, the tie between quasi-homographs differing only because they contain special characters. In the case of the Khazarian Rovas the Level 4 of the ordering does not differ from similar level in the case of the usual European Latin orthography.

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[41] LaBonté, 2007a & 2007b
[42] LaBonté, 2010

5. Acknowledgement

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7. Appendix: Proposal Summary Form

<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.[43].
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 <i>Roadmaps</i>.
</td></tr>
</table>

A. Administrative

1. **Title:**	**Proposal for encoding the Khazarian Rovas script in the SMP of the UCS**
2. Requester's name:	**Hungarian Standards Institution**
3. Requester type (Member body/Liaison/Individual contribution):	Member body
4. Submission date:	19 May 2011
5. Requester's reference (if applicable):	*http://www.mszt.hu/angol/index_eng.htm*
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:	**Khazarian Rovas**
b. The proposal is for addition of character(s) to an existing block:	*No*
Name of the existing block:	
2. Number of characters in proposal:	*36*

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

A-Contemporary	B.1-Specialized (small collection)	B.2-Specialized (large collection)
C-Major extinct X	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?	*Dr. Gábor Hosszú*
If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools	
used:	*Dr. Gábor Hosszú, FontCreator 5.6, hosszu@eet.bme.hu*
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:	

.[43]. 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)

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 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. – **See below.**

C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? — *No*
   If YES explain

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?
   National Standardisation Technical Committee called Informatics (MSZT/MB 819) of the Hungarian Standards Institution

   Rovas Foundation

   Péter Füzi, Dr. Gábor Hosszú, Angéla Ócsai, Tamás Rumi, László Sípos, Tamás Somfai, Levente Sütő, Erik Vida, Árpád Zubrits et al.

   If YES, available relevant documents: — *Yes*

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

   Reference: *Scholars and researchers.*

4. The context of use for the proposed characters (type of use; common or rare) — *Rare*
   Reference:
   Historical use, some examples: http://rovasirashonlap.fw.hu

   Rovas Info News Site: http://rovas.info

5. Are the proposed characters in current use by the user community? — *Yes*
   If YES, where? Reference: *Scholarly and popular publications.*

6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely
   in the BMP? — *No*

   If YES, is a rationale provided?

   If YES, reference:

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:

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?   *No*

        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: