### $ISO/IEC \ JTC1/SC2/WG2 \ N1947$

1999-01-29

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

Doc Type:Working Group DocumentTitle:Revised proposal for encoding the Old Permic script in the UCSSource:Michael Everson, EGT (IE)Status:Expert ContributionAction:For consideration by JTC1/SC2/WG2 and UTCDate:1999-01-29Replaces:N1687

This document is a revision of N1687 based on additional research, and contains the proposal summary.

## A. Administrative

Title
 Revised proposal for encoding the Old Permic script in the UCS.
 Requester's name
 Michael Everson, EGT (WG2 member for Ireland).
 Requester type
 Expert contribution.
 Submission date
 1999-01-29.
 Requester's reference
 Ga. Completion
 This is a complete proposal.
 More information to be provided?
 No.
 No.
 No.
 Description
 Michael Every of the proposal of the provided of the

## **B.** Technical -- General

1a. New script? Name? Yes. Old Permic. 1b. Addition of characters to existing block? Name? No. 2. Number of characters 38 3. Proposed category Category D. 4. Proposed level of implementation and rationale Level 1 noncombining. 5a. Character names included in proposal? Yes. 5b. Character names in accordance with guidelines? Yes. 5c. Character shapes reviewable? Yes (see below).

#### Proposal for the Universal Character Set

6a. Who will provide computerized font?Michael Everson.6b. Font currently available?

Yes.

#### 6c. Font format?

TrueType.

7a. Are references (to other character sets, dictionaries, descriptive texts, etc.) provided?

Yes, see bibliography below.

7b. Are published examples (such as samples from newspapers, magazines, or other sources) of use of proposed characters attached?

Yes, see below.

8. Does the proposal address other aspects of character data processing?

Yes; see Unicode properties below.

# **C. Technical -- Justification**

### 1. Contact with the user community?

Yes: There is contact with a major centre for Uralic studies, Kotimaisten kielten tutkimuskeskus, Helsinki. I have no contact in the Komi Republic. The proposal is being circulated on uralist@helsinki.fi. The principle authors of some of the materials used to prepare the proposal (chiefly Лыткин 1952 and Stipa 1961), are deceased.

#### 2. Information on the user community?

Scholars and Komi language enthusiasts.

#### 3a. The context of use for the proposed characters?

Old Permic was used chiefly to write Komi texts, but a number of Russian texts are also found in Old Permic script.

**3b. Reference** 

See bibliography.

### 4a. Proposed characters in current use?

The script is extinct. Old Permic does not appear ever to have been set in type before the present time. I do not know of any computer implementations. However, it can be said to have some use nevertheless.

#### 4b. Where?

Scholars and Komi language enthusiasts (one presumes).

### 5a. Characters should be encoded entirely in BMP?

No.

### **5b. Rationale**

Rarity and accordance with the Roadmap.

6. Should characters be kept in a continuous range?

Yes.

# 7a. Can the characters be considered a presentation form of an existing character or character sequence?

No; though this is a Greek-derived script like Coptic, Cyrillic, Armenian, Georgian, and Gothic.

#### 7b. Where?

7c. Reference

# 8a. Can any of the characters be considered to be similar (in appearance or function) to an existing character?

No.

8b. Where?

**8c. Reference** 

9a. Combining characters or use of composite sequences included?

No; but see issues listed below for possible null use of COMBINING DIAERESIS.

**9b. List of composite sequences and their corresponding glyph images provided?** No.

**10.** Characters with any special properties such as control function, etc. included? No.

# **E.** Proposal

The Old Permic script was devised in the 14th century by Russian missionary Stefan of Perm (*fl.* 1373-1395), and was used to write Komi and Komi-Permyak languages. Its model was based on the Greek and Cyrillic alphabets (as can be seen from the order of the letters) but many of the glyphs were taken from the "Tamga signs", used in indigenous Komi religious practices, by Stefan as a way of linking traditional signs, which had a great deal to do with the self-identity of the Komi, with Christian traditions.

The term "Old Permic" is suggested as the name for this script. Stipa calls it "Permisch"; Pillu uses the terms "vanapermi", "древнепермский", and "Old-Permian" in Estonian, Russian, and English respectively. Haarmann calls it "Abur" and "Altsyrjänisch" (= 'Old Komi'); "Abur" is a name derived from the names of the first two characters AN and BUR (so  $7 \sqrt{-6} \gamma \nabla$  is equivalent to  $\alpha \lambda \phi \alpha - \beta \eta \tau \alpha$  and aзбуки).

## Structure

Old Permic is a simple alphabetic script, read from left to right in horizontal lines running from top to bottom. In the manuscripts, Old Permic glyphs are often shown with a diaeresis, but this doesn't seem to be significant in the regular way it is for, for example, the German letters u and  $\ddot{u}$ . Old Permic is caseless.

## Ordering

Alphabetical ordering is a little bit erratic in the sources, especially toward the end of the alphabet. This proposal follows the order 1–34 given in Лыткин 1952, where 1–24 are primary letters and 25–34 are supplementary (see the reproduction of Лыткин's tables below). Four characters are considered to be subordinate in the order to another character, as seen in the pairs 0365/0366 (SHOOI  $\land$  and SHCHOOI  $\sqcup$ ), 0367/0368 (YRY  $\neg$  and YERU  $\neg$ ), 0369/036A (O  $\land$  and OO  $\cup$ ), and 0374/0375(YA  $\neg$  and IA  $\forall$ ). Of these only SHCHOOI hasn't (yet) been identified as corresponding to its Cyrillic equivalent 0449, though it appears in a number of sources. The name SHCHOOI is not attested. The others correspond to 044B, 0460, and 0467.

## Use of combining characters

In the table,  $\overleftarrow{0}$  036B (EF) and  $\neq$  036C (HA) are given with glyphs which are not the most commonly found ones. More common representation of the corresponding phonetic entities makes use of combining characters:  $\overleftarrow{b}$  is represented by 035F PEEI  $\overleftarrow{b}$  + " and  $\overleftarrow{\zeta}$  is represented by 03FA KOKE  $\angle +$  ". Note the similarity of  $\overleftarrow{0}$  and  $\neq$  to Greek  $\overleftarrow{\omega}$  and  $\overleftarrow{\chi}$ . Five combining characters may be found with Old Permic characters: COMBINING DIAERESIS, COMBINING DOT ABOVE, COMBINING BREVE, COMBINING COMMA ABOVE, and COMBINING THREE DOTS ABOVE (the last makes us ask whether 20DB can be used with letters in Unicode). The use of diacritical marks is peculiar in Old Permic. Sometimes it appears that the diacritic is semantically zero, analogous to the use of a breve in German handwriting (especially the angular handwritten script Fraktur) over lower-case *u* to differentiate it from *n* (that is, where  $\breve{u}$  is not really supposed to be *u* + *breve* and would not be so encoded in text). Sometimes, particularly in wordinitial position, vowel quality or consonant palatalization may be marked, apparently indifferently, by these diacritics. There may be more information on this in Лыткин 1952 but the Russian is slow going for me. Characters like COMBINING CYRILLIC TITLO may be used, e.g. to indicate abbreviation or numeric use of a character (see sample texts below). Code positions proposed in the table are based on my Roadmap to the BMP, version 3.0, 1999-01-26.

## Unicode Character Properties

Spacing letters, category "Lo", bidi category "L" (strong left to right) 0001 0350 - 0001 0375

## Bibliography

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## Proposal for the Old Permic Script

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#### **TABLE XXX - Row 03: OLD PERMIC**

Proposal for the Universal Character Set

Michael Everson

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**Figure 1.** Part 1 of Table from Лыткин 1952, showing glyph variants of Old Permic characters. Note columns 1 and 2 which give ordering of primary (1–24) and secondary (25–34) characters.

#### **Proposal for the Universal Character Set**

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**Figure 2.** Part 2 of Table from Лыткин 1952, showing glyph variants of Old Permic characters. Note that the first three columns from the Nomokanon 1510 are repeated from Part 1 of the table.

UP ZEVUNA 71 TYPHTFULU NTY: 6771 HUM ATTERAL ZAVATZON ALIVICITAN JUAN IZVAN SHV RAZA XTITIEAVLEVET VVTV TV TESSIZEEL ZVWALDE TEVERICTIVEVA. CETZACZVIPTCHZA 42 PTTLHANOVIN TLUHASON IN INLATTRY AZVETUA (A TIPTIG VAT VVZ ITAL JUCON KAEV. J. HAIFA. FIFFUT AND VITIVNU ANT TTOTSIVILL - ANTTITIVINT . NA VIA אנא אוו אראיז אזחדהעזגעדעד=ווא אור אבא עבחניריעעדא געא איזאיזעראין - אואעע האדעדא איזאיזעראעראין איזעראין איזעראעראין איזעראער איזעראער איזעראער איזערא אוא אואעעועאאיזעיזנעעגניו אשדעבארד אייא AGAUFNOTVILTOFATA IVI INTETLIVOUNA הועאידדדדר זא איזא איז אידדדד אחעא אערע געריודא דדדעאאנ יענ יערו אאלע אר אוריו שאירנזאידיני ואאיידיאידיני אאיידיאידי. AATRZICI/ 600TZIN VINT NYA NG A" ATI A" ZILTLAFTTL VI HHIT VIER TLVZ6 8 a VVZHHILVINIAN .V!

**Figure 3.** Old Permic inscription on the icon "Troitsy". The text is the beginning of a story about Abraham and Sarah (Genesis 18:1–8), from Лыткин 1952.

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Y XEVUNNIL TEHOWNEN WEN DOWS HIMANOLUGHL & ADMUZDHA
6 7.1 ZVOLVO NO VILON YA VAMA. STITIZAVZINZ WTV .
י איזעיויט איזער בד בעסה נאיעד טח.
CTTLAIT.VLPIGILNT. RILP TTUNHITVLVH
זייייעוואצ זהליו ע גר שתצעשיערינעו וו.
דיעריק אועריידיזיטעועראין אייזיעראין אייזיעראין אייזיען איין אייזיען איין אייזיען איין אייזיען איין איין איין א
אחנבחקציתנדת האיאיעה על קענאאטייאי איייאי איייי
WILL WITCH O PI-IL VILLYAUNVIL, ILL THIMIN
SKSVIR MIAV'N 7
1
VIL K 7 TUINVENIFERNOCA IN
IN TRTTCE PENNARTUA
ግድ ፖምተ ባ ል ) \ ድ በ ለነ ነ ባ ም ሻ ሃሠ ፣ ላ ፕ
N N T T JAN ΛΡΛΟΦΗ VAL JAYI TU
17 NHト V/WガマBT1 人人アルフレダ 00057
דא אאזחעל א גלי טיט:
 · 7171 NT INV 2HH2VIR 11V - V
     η υνυμειωντρία κ
 X
```

**Figure 4.** Скворцовский's transcription of the Old Permic inscription on the icon "Troitsy" from Лыткин 1952. Linebreaks here were to get a 40cm by 5cm text to fit on an A4 sheet.

Наше воспроизведение\*

сэс'  ${}^{5}$  вэлмосс'ис  ${}^{6}$  йэн аврамлу мамбри тупу дорын, пукыс'лу сылу оз'ос  ${}^{10}$  во̂ ${}^{2}$ 'ын ч'о́мло́н  ${}^{6}$ сылоён луншо́ро.

ви5'ис авраам ас с'инйасён и ад3'ис ас с'инмён: во̂3'3'а З вэрёс сулалё мадыд сылыс';

адз'ымыс' пышйис воз'з'а нылу ас ч'омлон ойыс<sup>17</sup> дорыс' и йурбыртис муоз'.

и шиис: мз (мэзöcö) йэнмö бара-ö адз'им кö мэдалсö тэ вôз'ад, ас вэрид вылти ин мун.

мэд вайс'ас ва мыс'кыныс подос тийан и сайкодч'адныд тупу дынын и вайс'аснис  $^{20}$  н'ан'йас  $^{22}$ , мэд с'ойадныд сэс' мунадныд ту туйо, кодудлыс' кэжидныд ас вэр ордо. и шиисныс: сиз' у3ал, ку3'ик шиин.

и пышйис аврам сара ордо ч'о́мйо и шиис: тэрмо̀дс'и, лой 3 тас'ти со̀сто̀м пыс' и уǯал 3 ко̀лдо̀м н'ан'.

пышйи авраам мосйос ордо, кутис ч'ол ошос, бурос, и с'этис сийо вэрлы, и рэгыд дас'тис.

и бос'тис вый, ма, йöл, кук, кôдöc дас'тис и пугтис ны вôз'ын; и с'ôисныс; ач'ыс виз'ис ны вôз'ын тупу дынын.

#### Наше чтение\*

1\* Сэ(ш) вѣлмос(ш)ис<sup>7</sup> иэн аурамлу<sup>8</sup> мамбри тупу дорын пукышлу<sup>9</sup> сылу  $\ddot{o}(5'o)$ с  $y(\dot{o})\ddot{3}'$ ын чôмлон сылон луншо(ро)<sup>11</sup> ви5'ис åураäм<sup>12</sup> ä(с) (ш)ин(и)a(сон) й<sup>13</sup> ä(д)3'ис äс (ш)инмон (yô) $\ddot{3}'\ddot{3}'a^{14}$ 

2.  $\vec{r}$  верос сулало (м)атыд сылыш адз'ы мыш<sup>15</sup> пышиис уо́з'з'а нылу<sup>9</sup> ас<sup>16</sup> чо́млон о́ыс д(о)рыш и<sup>13</sup> иврбыртис<sup>8</sup> муо(з')/й<sup>13</sup> шиис мэ иэнмо (ба)ра о адз'им ко мэдал (со́)<sup>18</sup> тэ

3.  $y\hat{o}_{3}$ 'ад  $\ddot{a}(c)$  уәрид<sup>19</sup> уылти  $\ddot{u}_{H}$  муң мәд уаиша(c) у(a) (мыш'к)ыныс п $(\hat{o})$ дос тииан.  $\dot{u}^{13}$  са $\dot{u}(k)$ од-( $\dot{u}_{a}$ )дныд<sup>21</sup> ( $\tau$ )упу ды(ны)н (u) у(a)ишаснис<sup>19</sup> н(a)ниас м $(\hat{e})$ д шо̂иадныд сәш мунад(h)ыд

4. ту <sup>23</sup> туио (кô)дудлыш кѣжидн(ы)д <sup>24</sup> a(c) уэр ордо  $\ddot{u}^{25}$ шийсныс сиз' уўал куз'(ик) <sup>26</sup> (ш)и(й)н/и пы(ш)иис аурам сара ордо (ч)омио и шийс тэрмодши <sup>27</sup> лои

5. г ташти (со)стом пыш<sup>28</sup> и уўал г колдом нан пышии аураам моснос öрдо (к)утис чол ошос бурос й шэтис сино уэрлу<sup>9</sup> и рѣгыд<sup>29</sup> даштис и<sup>10</sup>

6. 60(m)ти(с) у(ыи) м(а) иол кук к( $\hat{0}$ )дос(с) д(ашт)ис и пугтис ны у $\hat{0}_3$ 'ын й ш $\hat{0}$ исныс (ачыс) в( $u_3$ ')ис ны у $\hat{0}_3$ 'ын тупу д(ы)н(ын).

**Figure 5.** Лыткин's Cyrillic transcription of the Old Permic inscription on the icon "Troitsy". On the left ("our reproduction") is the normalized Komi text; on the right ("our reading") is the literal transcription, with additions and corrections in parentheses.

5 . . .

い(え) まちいのし(え)つし リイン アクマンリャ いマいゆマフ エアウト  $An \nabla m \wedge h \mu \Delta m \wedge h \mu \tau m \wedge \mu \pi [in] \tau \mu [w] im \wedge \mathcal{J} w \wedge h \wedge \tau m \wedge n \wedge \tau m \wedge \tau$  $\nabla u \wedge \partial u$  $p_{77} \mathcal{A}_{7}[c] p_{7}[v_{M} \mathcal{A}_{1}] w_{M} c_{1} v_{1} v_{2} v_{1} \dot{r}_{1} v_{2} \dot{r}_{1} v_{2} \dot{r}_{1} \dot{r}_{2} \dot{r}_{2}$ いろ [ヱ]かり ろい[~い]~ [7] り[ア]アペアレ~[ア]~7アレ ~[ア]人 スツフアム- $\nabla M \land \mathcal{V} \land \mathcal{V}$   $m[\mathcal{A}] \gamma \eta \tau \dot{z} p \nabla \dot{z} m \tau z \nabla z n \nabla A n [\dot{\mathcal{Y}}] W m \eta n \eta \mathcal{A} \eta \ddot{\eta} \tau \tau \nabla \eta n A$ אח אחק ד בדאבק [נח]נבחי אשא א קשא ל בחאל-Jn N nanc dronc i ar In con prop 7 obru-א[דאר זר דר אר ארשיאל ר זר ארערער אר  $[z ] \mathcal{M}[\mathcal{M}] \times [\mathcal{M}[\mathcal{M}] \to \mathcal{M}(\mathcal{M}) \to \mathcal{M}(\mathcal{M}) \to \mathcal{M}(\mathcal{M})$ 

**Figure 6.** My typeset version of Лыткин's Cyrillic literal transcription of the Old Permic inscription on the icon "Troitsy". The linebreaks in the text above are the same as those of the text in Figure 3 (hyphens have been added at line-final word breaks). Note the use of COMBINING DOT ABOVE, COMBINING DIAERESIS, COMBINING COMMA ABOVE, and CYRILLIC COMBINING TITLO.

18 τι κά ετινητά ητ γιν γεσγγιρ νηγαση τρηρ Αηγων, μαινήν τωλη τωλη πιπτρωιων μωνλάν τωλάν λρυχάσά.

<sup>2</sup>ציוית דעקדדי דו איזידנאי יד דאוית דו איזיידע דע איזייז אווד 3 צרקאנ נף דאא ידאטא נטישאי; דאוטיטא אטאזיר צעווד יטיד אעויד אטאיזיי איזטו אחקטא ידע איזינ אווד

<sup>3</sup>י איזנ: "אול (אולטהנה) אולמאה לדער האוזאים איזער איז איזער איז איזער איז איזער איז איזער איז איזער איזער איזער א אוודא דג אועדא אטאביי איזער.

<sup>4</sup>" ΜΑ ΣΖΫΆΖΣ ΣΖ ΜΠΆ ΔΠΛΟΓ ΙΨΑΠ ΣΤΊΖΥ Τ ΣΖΊΔΠΑ JZANDA Σμη ΑΠΛΟΛ Τ ΣΖΊ ΆΖΣΝΤ ΝΖΥΊΖΣ, ΜΑ ΆΨΙΖΑΝΟΑ ΣΗΆ ΜηνΖΑΝΟΑ ΣΗ ΣΗΊΠ, ΔΨΑΝΑΝΑ ΔΈΠΤΑΝΟΑ ΖΣ ΣΗΤ ΠΤΑΠ." Τ ΑΠΤΣΝΟΣ: "ΣΤΙ ΗΞΖΊ, ΔΗΠΖ ΑΠΤΥ."

<sup>7</sup>μη κήη 72077 νη μιτήκι ησκή, μρτης μήν ή κής, φροής, η κίτης τητή Σίσνη, η σβτηκ κράτης.

<sup>8</sup> $\gamma$   $dn \dot{\mathcal{A}} \pm \gamma \tau$   $\mathbf{X} = \mathbf{X} \cdot \mathbf{Y} \cdot \mathbf$ 

**Figure 7.** My typeset version of Лыткин's Cyrillic normalized transcription of the Old Permic inscription on the icon "Troitsy". It is possible that this is the first time that a text in this script has ever been typeset with fonts. Linebreaks, punctuation, and numbering follow normal biblical editorial practice. Note the use of COMBINING DOT ABOVE, COMBINING DIAERESIS, and COMBINING BREVE here.